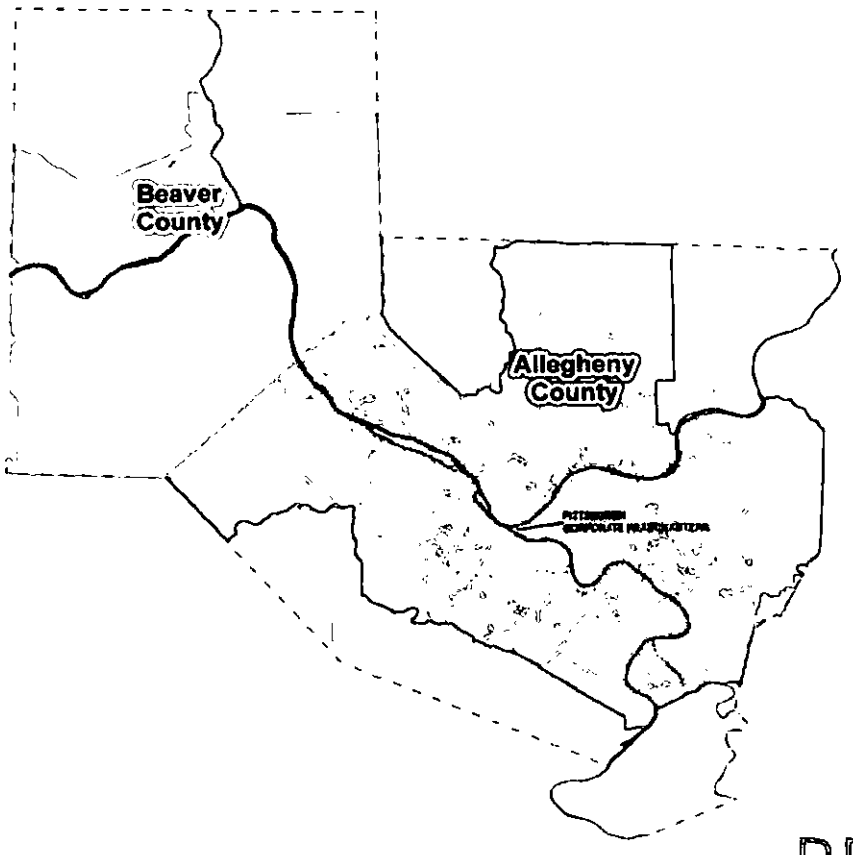
DUQUESNE LIGHT CO.






# *Duquesne Light Company*
# *Fourth Quarter 2019*

# *Electric Reliability Report*

# *to the*

# *Pennsylvania Public Utility Commission*

***January 29, 2020***

## 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 no major events during the fourth quarter of 2019.

**(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 | * |
| **2019 4Q (Rolling 12 mo)** | 106 | 1.01 | 106 | * |

* Sufficient information to calculate MAIFI is unavailable.

**Formulas used in calculating the indices**

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

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

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

**Data used in calculating the indices**

| | |
|---|---|
| Total KVA Interrupted for the Period: (excludes the 2/24/19 Major Event that is listed below) | 7,296,110 KVA |
| Total KVA-Minutes Interrupted: (excludes the 2/24/19 Major Event that is listed below) | 772,081,564 KVA-Minutes |
| System Connected Load as of 12/31/19 | 7,259,129 KVA |
| February 24, 2019 Major Event | 1,682,200 KVA<br>(23% of System Load)<br>784,246,585 KVA-Minutes |

**(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 (SAIFI and 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 operations. 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 2019 Rolling 12 Month Circuit Data**

| Rank, Circuit Name, Device | Outages | Remedial Actions Planned or Taken |
|---|---|---|
| 1<br><br>23701<br>North<br><br>Fuse Link | 9 Total Outages<br><br>Fourth Quarter Outages:<br>• Three outages were caused by tree fall-in, one during a storm.<br>Previous Outages:<br>• One outage was caused by tree fall-in, during a storm.<br>• The cause of three outages were unknown, one during a storm.<br>• One outage was caused by equipment failure.<br>• One outage was caused by wires wrapped together due to high wind. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2016. Proposed for 2021. |
| 2<br><br>23631<br>Sewickley<br><br>Fuse Link | 6 Total Outages<br><br>Fourth Quarter Outages:<br>• Two outages were caused by tree fall-in.<br>Previous Outages:<br>• Four outages were caused by tree fall-in, one during a storm. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q3 2017. Proposed for 2021. |

| Rank, Circuit Name, Device | Outages | Remedial Actions Planned or Taken |
|---|---|---|
| 3<br><br>23770<br>Traverse Run<br><br>Breaker | 5 Total Outages<br><br>Fourth Quarter Outages:<br>• One outage was caused by equipment failure.<br>• The cause of two outages were unknown, one during a storm.<br><br>Previous Outages:<br>• One outage was caused by tree fall-in.<br>• One outage was caused by high current overload. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2016. Proposed for 2020. |
| 4<br><br>23953<br>Evergreen<br><br>Recloser | 5 Total Outages<br><br>Fourth Quarter Outages:<br>• One outage was caused by contact with company equipment by vehicle.<br>Previous Outages:<br>• Three outages were caused by tree fall-in.<br>• One outage was caused by flood. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q3 2016. Proposed for 2020. |
| 5<br><br>23711<br>Pine Creek<br><br>Breaker | 5 Total Outages<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• Four outages were caused by tree fall-in.<br>• One outage was caused by equipment failure. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2015. Proposed for 2020. |

| Rank, Circuit Name, Device | Outages | Remedial Actions Planned or Taken |
|---|---|---|
| 6<br><br>23869<br>Wildwood<br><br>Recloser | 4 Total Outages<br><br>Fourth Quarter Outages:<br>• One outage was caused by tree fall-in.<br>Previous Outages:<br>• Three outages were caused by tree fall-in. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2016. Proposed for 2020. |
| 7<br><br>23716<br>Pine Creek<br><br>Breaker | 4 Total Outages<br><br>Fourth Quarter Outages:<br>• One outage was caused by tree fall-in, during a storm.<br>Previous Outages:<br>• Two outages were caused by equipment failure.<br>• One outage was caused by tree fall-in. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q1 2019. Proposed for 2023. |
| 8<br><br>22869<br>Midland-Cooks Ferry<br><br>Recloser | 4 Total Outages<br><br>Fourth Quarter Outages:<br>• One outage was caused by wires wrapped together.<br>Previous Outages:<br>• One outage was caused by wires wrapped together.<br>• One outage was caused by tree fall-in, during a storm.<br>• One outage was caused by equipment failure. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2017. Proposed for 2022.<br>• This circuit was reviewed by Protection Engineering to identify any potential device coordination issues. Further work to resolve device coordination issues was completed Q1 2019. |

| Rank, Circuit Name, Device | Outages | Remedial Actions Planned or Taken |
|---|---|---|
| 9<br><br>23921<br>Logans Ferry<br><br>Fuse Link | 4 Total Outages<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• Two outages were caused by tree fall-in, one during a storm.<br>• The cause of one outage was unknown.<br>• One outage was caused by wires wrapped together due to high wind. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2016. Proposed for 2020. |
| 10<br><br>23840<br>Arsenal<br><br>Recloser | 4 Total Outages<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• One outage was caused by contact with company equipment by animal.<br>• Two outages were caused by equipment failure.<br>• One outage was caused by wires wrapped together. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Overhead Line Inspection of Arsenal 23840 is slated to be performed in 2020.<br>• Vegetation Management completed Q3 2018. Proposed for 2022. |

| Rank, Circuit Name, Device | Outages | Remedial Actions Planned or Taken |
|---|---|---|
| 11<br><br>23714<br>Pine Creek<br><br>Fuse Link | 4 Total Outages<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• One outage was caused by equipment failure.<br>• One outage was caused by tree fall-in.<br>• One outage was caused by contact with company equipment by animal.<br>• One outage was caused by contact with company equipment by vehicle. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2018. Proposed for 2023.<br>• This circuit was reviewed by Protection Engineering to identify any potential device coordination issues. The devices were coordinating properly and no further action is necessary. |
| 12<br><br>23871<br>Mt Nebo<br><br>Recloser | 4 Total Outages<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• Four outages were caused by tree fall-in, one during a storm. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2017. Proposed for 2021. |
| 13<br><br>23870<br>Mt Nebo<br><br>Fuse Link | 4 Total Outages<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• Four outages were caused by tree fall-in, two during a storm. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2017. Proposed for 2021. |

| Rank, Circuit Name, Device | Outages | Remedial Actions Planned or Taken |
|---|---|---|
| 14<br><br>4484<br>Manchester<br><br>Breaker | 4 Total Outages<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• The cause of two outages were unknown, one during a storm.<br>• Two outages were caused by equipment failure. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Failed substation equipment has been replaced.<br>• Vegetation Management completed Q2 2019. Proposed for 2023. |
| 15<br><br>23882<br>Rankin<br><br>Fuse Link | 3 Total Outages<br><br>Fourth Quarter Outages:<br>• The cause of one outage was unknown.<br>Previous Outages:<br>• Two outages were caused by tree fall-in. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q1 2017. Proposed for 2021. |
| 16<br><br>23679<br>Woodville<br><br>Recloser | 3 Total Outages<br><br>Fourth Quarter Outages:<br>• The cause of one outage was unknown.<br>• One outage was caused by tree fall-in.<br>Previous Outages:<br>• One outage was caused by tree fall-in. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q2 2016. Proposed for 2020. |
| 17<br><br>23630<br>Sewickley<br><br>Recloser | 3 Total Outages<br><br>Fourth Quarter Outages:<br>• Two outages were caused by tree fall-in.<br>Previous Outages:<br>• One outage was caused by tree fall-in. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q3 2017. Proposed for 2021. |

| Rank, Circuit Name, Device | Outages | Remedial Actions Planned or Taken |
|---|---|---|
| 18<br><br>23791<br>Legionville<br><br>Recloser | 2 Total Outages<br><br>Fourth Quarter Outages:<br>• One outage was caused by tree fall-in.<br>Previous Outages:<br>• One outage was caused by tree fall-in, during a storm. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q3 2019. Proposed for 2024. |
| 19<br><br>23732<br>Universal<br><br>Breaker | 2 Total Outages<br><br>Fourth Quarter Outages:<br>• The cause of one outage was unknown.<br>Previous Outages:<br>• One outage was caused by equipment failure. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q3 2016. Proposed for 2021. |
| 20<br><br>23844<br>Arsenal<br><br>Recloser | 2 Total Outages<br><br>Fourth Quarter Outages:<br>• One outage was caused by wires wrapped together, during a storm.<br>• One outage was caused by tree fall-in, during a storm.<br>Previous Outages:<br>• No outages. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2016. Proposed for 2021. |
| 21<br><br>22556<br>Logans Ferry-U.S. Gypsum<br><br>Breaker | 2 Total Outages<br><br>Fourth Quarter Outages:<br>• One outage was caused by tree fall-in, during a storm.<br>Previous Outages:<br>• One outage was caused by tree fall-in, during a storm. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2016. Proposed for 2020. |

| Rank, Circuit Name, Device | Outages | Remedial Actions Planned or Taken |
|---|---|---|
| 22<br><br>23841<br>Arsenal<br><br>Fuse Link | 2 Total Outages<br><br>Fourth Quarter Outages:<br>• One outage was caused by contact with company equipment by animal.<br>Previous Outages:<br>• One outage was caused by equipment failure. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to *monitor this circuit for reliability* issues.<br>• Vegetation Management completed Q4 2018. Proposed for 2022. |
| 23<br><br>23820<br>Highland<br><br>Sectionalizer | 2 Total Outages<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• Two outages were caused by contact with company equipment by vehicle. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q2 2017. Proposed for 2021. |
| 24<br><br>23680<br>Woodville<br><br>Breaker | 2 Total Outages<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• One outage was caused by tree fall-in, during a storm.<br>• One outage was caused by wires wrapped together due to high wind, during a storm. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q2 2016. Proposed for 2020. |
| 25<br><br>23707<br>North<br><br>Fuse Link | 1 Total Outage<br><br>Fourth Quarter Outages:<br>• One outage was caused by contact with company equipment by animal.<br>Previous Outages:<br>• No outages. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q3 2017. Proposed for 2021. |

| Rank, Circuit Name, Device | Outages | Remedial Actions Planned or Taken |
|---|---|---|
| 26<br><br>23781<br>Valley<br><br>Recloser | 1 Total Outage<br><br>Fourth Quarter Outages:<br>• One outage was caused by tree fall-in, during a storm.<br>Previous Outages:<br>• No outages. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q4 2018. Proposed for 2023. |
| 27<br><br>4428<br>Suffolk<br><br>Breaker | 1 Total Outage<br><br>Fourth Quarter Outages:<br>• No outages.<br>Previous Outages:<br>• One outage was caused by tree fall-in. | • Permanent repairs were made following each outage as necessary.<br>• The Company will continue to monitor this circuit for reliability issues.<br>• Vegetation Management completed Q1 2019. Proposed for 2023. |

**(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, 2019 through December 31, 2019**

*Excludes One PUC Major Event that occurred on February 24, 2019*

| CAUSE | NO. OF OUTAGES | OUTAGE PERCENTAGE | KVA TOTAL | KVA PERCENTAGE | KVA-MINUTE TOTAL | KVA-MINUTE PERCENTAGE |
|---|---|---|---|---|---|---|
| **Storms** | 357 | 11% | 933,511 | 13% | 119,004,324 | 15% |
| **Trees (Inside ROW)** | 360 | 11% | 330,331 | 4% | 58,540,342 | 8% |
| **Trees (Outside ROW)** | 845 | 26% | 1,942,015 | 27% | 258,246,809 | 33% |
| **Equipment Failures** | 768 | 24% | 2,102,217 | 29% | 196,429,852 | 25% |
| **Overloads** | 49 | 1% | 20,295 | 1% | 1,462,984 | 1% |
| **Vehicles** | 183 | 6% | 597,611 | 8% | 55,330,726 | 7% |
| **Contact/Dig In** | 20 | 1% | 91,615 | 1% | 3,130,864 | 1% |
| **Animal Contact** | 120 | 4% | 262,093 | 4% | 12,217,572 | 2% |
| **Unknown** | 355 | 11% | 615,090 | 8% | 33,689,339 | 4% |
| **Other** | 183 | 5% | 401,332 | 5% | 34,028,752 | 4% |
| **TOTALS** | 3,240 | 100% | 7,296,110 | 100% | 771,081,564 | 100% |

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

| 2019 Transmission and Distribution Goals and Objectives | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Program** Project | **Unit of Measurement** | **Target for 2019 4Q** | **Actual for 2019 4Q** | **4Q Percent Complete** | **Targets for Year 2019** | **Actual YTD for 2019** | **Year End % Complete** |
| **Communications Goals** | | | | | | | |
| Communication Battery Maintenance | Battery Tasks | 29 | 39 | 134% | 117 | 117 | 100% |
| **Overhead Distribution Goals** | | | | | | | |
| Recloser Inspections | Circuits | 0 | 0 | NA | 130 | 131 | 101% |
| Pole Inspections | Poles | 0 | 0 | NA | 17945 | 18117 | 101% |
| OH Line Inspections | Circuits | 0 | 0 | NA | 130 | 131 | 101% |
| OH Transformer Inspections | Circuits | 0 | 0 | NA | 130 | 131 | 101% |
| Padmount & Below Grade Insp | Circuits | 0 | 0 | NA | 81 | 81 | 100% |
| **Overhead Transmission Goals** | | | | | | | |
| Helicopter Inspections | Number of Structures | 0 | 0 | NA | 576 | 576 | 100% |
| Ground Inspections | Number of Structures | 0 | 14 | NA | 370 | 370 | 100% |
| **Substations Goals** | | | | | | | |
| Circuit Breaker Maintenance | Breaker Tasks | 0 | 76 | NA | 408 | 461 | 113% |
| Station Transformer Maintenance | Transformer Tasks | 0 | 3 | NA | 44 | 48 | 109% |
| Station Battery Maintenance[1] | Battery Tasks | 228 | 226 | 104% | 906 | 903 | 100% |
| Station Relay Maintenance | Relay Tasks | 0 | 208 | NA | 865 | 996 | 115% |
| Station Inspections[2] | Site Visits | 483 | 470 | 97% | 1942 | 1908 | 98% |
| **Underground Distribution Goals** | | | | | | | |
| Manhole Inspections | Manholes | 0 | 4 | NA | 700 | 721 | 103% |
| Major Network Insp (Prot Relay) | Network Protectors | 0 | 0 | NA | 94 | 97 | 103% |
| Minor Network Visual Inspection (Transformer/Protector/Vault) | Network Transformers | 0 | 124 | NA | 572 | 694 | 121% |
| **Underground Transmission Goals** | | | | | | | |
| Pressurization and Cathodic Protection Plant Inspection | Work Orders | 90 | 95 | 106% | 372 | 372 | 100% |
| **Vegetation Management Goals** | | | | | | | |
| Overhead Line Clearance | Circuit Overhead Miles | 210 | 256 | 122% | 1300 | 1300 | 100% |
| | **Total Units** | **1040** | **1356** | **130%** | **26682** | **27154** | **102%** |

1 – Station Battery Maintenance end of year underage due to asset movement and station retirements.
2 – End of year underage due to station retirements.

**(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, 2019
(In Whole Dollars)
Favorable/(Unfavorable)

| | Total Actual | Total Budget | Variance |
|---|---|---|---|
| **Customer Service** | $16,770,766 | $14,625,488 | $(2,145,278) |
| **Human Resources** | 3,934,599 | 4,606,299 | 671,700 |
| **Operations/Operation Services** | 8,513,572 | 16,234,012 | 7,720,440 |
| **Technology** | 15,924,938 | 14,950,395 | (974,543) |
| **General Corporate*** | 17,058,982 | 9,488,352 | (7,570,630) |
| **Total** | $62,202,857 | $59,904,546 | $(2,298,311) |

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

Budget Variance Recap – O&M Expenses
For the Twelve Months Ending December 31, 2019
(In Whole Dollars)
Favorable/(Unfavorable)

| | Total Actual | Total Budget | Variance |
|---|---|---|---|
| **Customer Service** | $59,618,238 | $61,399,832 | $1,781,594 |
| **Human Resources** | 14,355,978 | 15,540,131 | 1,184,153 |
| **Operations/Operation Services** | 60,265,231 | 67,729,498 | 7,464,267 |
| **Technology** | 58,316,586 | 61,672,441 | 3,355,855 |
| **General Corporate*** | 44,509,969 | 36,273,901 | (8,236,068) |
| **Total** | $237,066,002 | $242,615,803 | $5,549,801 |

*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, 2019
(In Whole Dollars)
Favorable/(Unfavorable)

| | Total Actual | Total Budget | Variance |
|---|---|---|---|
| **Customer Service** | $6,703,163 | $2,519,006 | $(4,184,157) |
| **Human Resources** | 2,805,070 | 3,104,529 | 299,459 |
| **Operations/Operation Services** | 89,956,580 | 62,360,871 | (27,595,709) |
| **Technology** | 9,651,871 | 15,599,219 | 5,947,348 |
| **General Corporate*** | 3,928,852 | 7,269,711 | 3,340,859 |
| **Total** | $113,045,536 | $90,853,336 | $(22,192,200) |

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

Budget Variance Recap - Capital
For the Twelve Months Ending December 31, 2019
(In Whole Dollars)
Favorable/(Unfavorable)

| | Total Actual | Total Budget | Variance |
|---|---|---|---|
| **Customer Service** | $18,435,636 | $9,375,101 | $(9,060,535) |
| **Human Resources** | 10,955,064 | 12,198,506 | 1,243,442 |
| **Operations/Operation Services** | 229,016,014 | 264,679,039 | 35,663,025 |
| **Technology** | 50,451,687 | 66,480,721 | 16,029,034 |
| **General Corporate*** | 32,929,179 | 31,233,951 | (1,695,228) |
| **Total** | $341,787,580 | $383,967,318 | $42,179,738 |

*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 | 16 |
| Telecom Technician | 2 |
| **Total Telecom** | **24** |
| Electrical Equipment Technician | 38 |
| Protection & Control Technician | 27 |
| Yard Group Leader | 3 |
| Rigger | 6 |
| Laborer | 2 |
| **Total Substation** | **76** |
| UG Splicer | 39 |
| UG Cable Inspector | 9 |
| Cable Tester | 1 |
| Network Operator | 12 |
| Equipment Material Handler | 1 |
| **Total Underground** | **62** |
| Apprentice T&D | 40 |
| Equipment Attendant | 1 |
| Lineworker | 140 |
| Service Crew Leader | 4 |
| Equipment Material Handler | 5 |
| **Total Overhead** | **190** |
| Right of Way Agent | 4 |
| Surveyor | 4 |
| **Total Real Estate** | **8** |
| **Total Street Light Changer** | **6** |
| Engineering Technician | 34 |
| GIS Technician | 7 |
| T&D Mobile Worker | 3 |
| Test Technician, Mobile | 6 |
| **Total Engineering** | **50** |
| Senior Operator Apprentice | 20 |
| Senior Operator | 2 |
| Traveling Operator | 0 |
| Troubleshooter | 11 |
| **Total Traveling Operator/Troubleshooter** | **33** |
| **Total Switching Dispatcher** | **12** |
| **Total Employees** | **461** |

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

CONFIDENTIAL INFORMATION

**4th Quarter 2019**

Contractor Dollars: $ REDACTED
Contractor Hours: REDACTED

**YTD 2019**

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 2019**

REDACTED

**Amount of Time it Takes to Obtain the Necessary Personnel – 4th Quarter 2019**

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 G. Bucek – General Manager, Asset Management
(412) 393-8878, mbucek@duqlight.com

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

Jason Keller – General Manager, 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.*

| Rank | Circuit No | Circuit Name | Feeder Device | Device Lockouts | Last Lockout | Circuit KVA | Total KVA Interrupted | Total KVA-Minutes | SAIDI | SAIFI | CAIDI |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23701 | North | 65K | 9 | 2019-11-01 | 20748 | 103235 | 8352594 | 402.57345 | 4.97566 | 80.90855 |
| 2 | 23631 | Sewickley | 80E | 6 | 2019-12-06 | 32880 | 79843 | 7757217 | 235.92509 | 2.42832 | 97.15588 |
| 3 | 23770 | Traverse Run | BKR | 5 | 2019-12-17 | 28580 | 109028 | 14436061 | 505.11060 | 3.81484 | 132.40691 |
| 4 | 23953 | Evergreen | ER703 | 5 | 2019-11-09 | 31030 | 113835 | 10291025 | 331.64760 | 3.66855 | 90.40300 |
| 5 | 23711 | Pine Creek | BKR | 5 | 2019-06-21 | 22021 | 122059 | 8854816 | 402.10781 | 5.54285 | 72.54538 |
| 6 | 23869 | Wildwood | 100 | 4 | 2019-12-14 | 24841 | 103450 | 9151487 | 368.40252 | 4.16449 | 88.46290 |
| 7 | 23716 | Pine Creek | BKR | 4 | 2019-11-27 | 34563 | 130749 | 13271706 | 383.98594 | 3.78292 | 101.50522 |
| 8 | 22869 | Midland-Cooks Ferry | SWR262 | 4 | 2019-11-02 | 45166 | 191957 | 18868373 | 417.75612 | 4.25003 | 98.29479 |
| 9 | 23921 | Logans Ferry | 100 | 4 | 2019-09-22 | 32477 | 161137 | 16147896 | 497.21021 | 4.96157 | 100.21222 |
| 10 | 23840 | Arsenal | WR453 | 4 | 2019-08-28 | 39579– | 128659 | 8977058 | 226.81366 | 3.25069 | 69.77404 |
| 11 | 23714 | Pine Creek | 80E | 4 | 2019-07-31 | 24285 | 48340 | 13200801 | 543.57838 | 1.99053 | 273.08235 |
| 12 | 23871 | Mt Nebo | WR853 | 4 | 2019-07-11 | 23485 | 73036 | 23685068 | 1008.51897 | 3.10990 | 324.29306 |
| 13 | 23870 | Mt. Nebo | 65K | 4 | 2019-07-11 | 33379 | 77098 | 10931130 | 327.48525 | 2.30978 | 141.78228 |
| 14 | 4484 | Manchester | BKR | 4 | 2019-06-28 | 2940 | 11733 | 8305903 | 2825.13707 | 3.99082 | 707.90957 |
| 15 | 23882 | Rankin | 80E | 3 | 2019-12-01 | 25319 | 77348 | 11005947 | 434.69122 | 3.05494 | 142.29129 |
| 16 | 23679 | Woodville | R100 | 3 | 2019-11-27 | 18070 | 53064 | 7698055 | 426.01300 | 2.93658 | 145.07114 |
| 17 | 23630 | Sewickley | WR601 | 3 | 2019-11-27 | 23425 | 43993 | 7177001 | 306.38211 | 1.87804 | 163.13961 |
| 18 | 23791 | Legionville | 100 | 2 | 2019-12-17 | 16815 | 38050 | 8474019 | 503.95593 | 2.26286 | 222.70746 |
| 19 | 23732 | Universal | BKR | 2 | 2019-12-02 | 22516 | 40431 | 7720999 | 342.91166 | 1.79566 | 190.96730 |
| 20 | 23844 | Arsenal | WR872 | 2 | 2019-11-27 | 30732 | 64187 | 7934071 | 258.16969 | 2.08860 | 123.60869 |
| 21 | 22556 | Logans Ferry-U.S. Gypsum | BKR | 2 | 2019-10-31 | 3750 | 17127 | 7066882 | 1884.50187 | 4.56720 | 412.61645 |
| 22 | 23841 | Arsenal | 65K | 2 | 2019-10-27 | 34765 | 94632 | 9501657 | 273.31100 | 2.72205 | 100.40638 |
| 23 | 23820 | Highland | EA891 | 2 | 2019-08-29 | 29944 | 73650 | 8710791 | 290.90272 | 2.45959 | 118.27279 |
| 24 | 23680 | Woodville | BKR | 2 | 2019-08-15 | 25698 | 111293 | 7592802 | 295.46276 | 4.33080 | 68.22354 |
| 25 | 23707 | North | 15K | 1 | 2019-11-29 | 24830 | 59973 | 7292985 | 293.71667 | 2.41534 | 121.60447 |
| 26 | 23781 | Valley | 100 | 1 | 2019-11-27 | 21397 | 25818 | 8092235 | 378.19484 | 1.20662 | 313.43384 |
| 27 | 4428 | Suffolk | BKR | 1 | 2019-08-17 | 3893 | 4376 | 7443308 | 1911.97226 | 1.12407 | 1700.93876 |