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M-2016-2522508

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April 28, 2016

Ms. Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
P. O. Box 3265  
Harrisburg, Pennsylvania 17105-3265

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SECRETARY'S BUREAU

Re: **Duquesne Light Company**  
**Quarterly Electric Reliability Report – 1<sup>st</sup> Quarter 2016**

Dear Secretary Chiavetta:

Enclosed please find Duquesne Light Company's Quarterly Electric Reliability Report for the First Quarter of 2016.

The report is submitted in two versions, proprietary and non-proprietary. The proprietary version in the enclosed sealed envelope contains all the information required by 52 Pa. Code § 57.195 and is marked as "Confidential." Duquesne Light Company respectfully requests that the proprietary version of the Quarterly Electric Reliability Report **not** be made available to the public.

If you have any questions regarding the information contained in this filing, please contact the undersigned or Audrey Waldock at 412-393-6334 or [awaldock@duqlight.com](mailto:awaldock@duqlight.com).

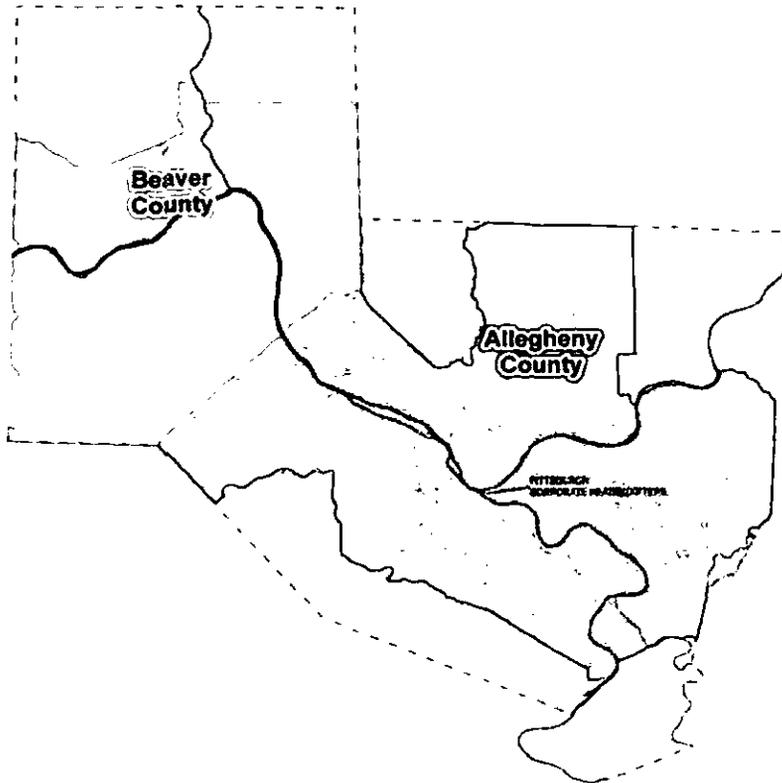
Sincerely,

Shelby A. Linton-Keddie  
Manager, State Regulatory Affairs  
And Senior Legal Counsel

Enclosures

c (w/ redacted version):

- Bureau of Technical Utility Services ([dgill@pa.gov](mailto:dgill@pa.gov), [dsearfoorc@pa.gov](mailto:dsearfoorc@pa.gov), [dawashko@pa.gov](mailto:dawashko@pa.gov))
- Office of Consumer Advocate ([TMcCloskey@paoca.org](mailto:TMcCloskey@paoca.org))
- Office of Small Business Advocate ([jorevan@pa.gov](mailto:jorevan@pa.gov), [swebb@pa.gov](mailto:swebb@pa.gov))



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***Duquesne Light Company***  
***First Quarter 2016***  
***Electric Reliability Report***  
***to the***  
***Pennsylvania Public Utility Commission***

*April 28, 2016*

**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 first quarter of 2016.

**(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.*

<b>Reliability Benchmarks and Standards</b>			
<b>System Performance Measures with Major Events Excluded</b>			
	<b>Benchmark</b>	<b>12-month Standard</b>	<b>1Q 2016 (12 month rolling)</b>
<b>SAIDI</b>	126	182	76
<b>SAIFI</b>	1.17	1.40	0.83
<b>CAIDI</b>	108	130	92
<b>MAIFI<sup>1</sup></b>			

Data used in calculating the indices.

<b>Total KVA Interrupted for the Period:</b>	5,989,464
<b>Total KVA-Minutes Interrupted:</b>	543,836,399
<b>System Connected Load as of 3/31/16:</b>	7,203,346

Formulas used in calculating the indices

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

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

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

<sup>1</sup> Sufficient information to calculate MAIFI is unavailable.

- (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 device lockouts from highest to lowest and then by the number of KVA-Minutes of outage experienced by customers on these circuits (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). Prior Worst Performing Circuits that have not seen recent outages fall to a lower priority within the group, but can remain on the list for monitoring until other circuits replace them.

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 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'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 poorly performing circuit actually experience poor reliability. 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 have actually had good 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 2016 Rolling 12 Month Circuit Data**

<b>Rank, Circuit Name, Device</b>	<b>Outages</b>	<b>Remedial Actions Planned or Taken</b>
<p>1</p> <p>Mt. Nebo 23871</p> <p>WA853</p>	<p>Five Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• Four outages were due to tree fall-ins.</li> <li>• One outage was due to a pothead failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company's Asset Management Department is planning to replace a Scadamate sectionalizer with an IntelliRupter recloser and convert this circuit to all pulse-reclosing operation which will improve its protection and reduce future circuit damage during faults making restoration simpler and faster.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
<p>2</p> <p>Logans Ferry 23921</p> <p>EA625</p>	<p>Four Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• Two outages were due to storms.</li> <li>• Two outages were due to tree fall-ins.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company's Asset Management Department is planning to convert this circuit to pulse-reclosing operation which will improve its protection and reduce future circuit damage during faults making restoration faster.</li> <li>• Routine vegetation maintenance was last performed in 2011 and is tentatively proposed for routine vegetation maintenance in 2016.</li> </ul>
<p>3</p> <p>Findlay 23610</p> <p>BREAKER</p>	<p>Four Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• One outage was due to tree fall-in.</li> <li>• One outage was due to insulator failure.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to tree fall-in.</li> <li>• One outage was due to insulator failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>4</p> <p>Woodville 23679</p> <p>R100</p>	<p>Four Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• Two outages were due to tree fall-ins.</li> <li>• One outage was unknown.</li> <li>• One outage was due to conductors wrapped together.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company's Asset Management Department is planning to convert this circuit to pulse-reclosing operation which will improve its protection and reduce future circuit damage during faults making restoration faster.</li> <li>• Routine vegetation maintenance will be completed by the end of the third quarter of 2016.</li> </ul>
<p>5</p> <p>Universal 23730</p> <p>BREAKER</p>	<p>Four Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• One outage was due to a storm.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to substation equipment failure.</li> <li>• Two outages were due to conductors wrapped together.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company's Asset Management Department is planning to convert this circuit to all pulse-reclosing operation which will improve its protection and reduce future circuit damage during faults making restoration simpler and faster.</li> </ul>
<p>6</p> <p>Mt. Nebo 23870</p> <p>BREAKER</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• One outage was due to a storm.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to contact by an animal.</li> <li>• One outage was due to connector failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• Routine vegetation maintenance was last performed in 2012 with remedial hazard tree removals addressed in 2014. Routine scheduled maintenance is tentatively proposed for 2017.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>

Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>7</p> <p>Midland Cooks Ferry 22869</p> <p>SWR262</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• One outage was due to insulator failure.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to tree fall-in.</li> <li>• One outage was due to a motor vehicle accident.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• Routine vegetation maintenance was last performed in 2012 and is tentatively proposed for 2017.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
<p>8</p> <p>Dravosburg 23752</p> <p>BREAKER</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to transformer failure.</li> <li>• One outage was due to connector failure.</li> <li>• One outage was due to a motor vehicle accident.</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company's Asset Management Department is planning to convert this circuit to pulse-reclosing operation which will improve its protection and reduce future circuit damage during faults making restoration faster.</li> </ul>
<p>9</p> <p>Sewickley 23631</p> <p>R600</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• Three outages were due to tree fall-ins.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• Routine vegetation maintenance was last performed in 2013 and is tentatively proposed for 2017.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
<p>10</p> <p>Oakland 23743</p> <p>ER754</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• One outage was due to lightning.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to a storm.</li> <li>• One outage was due to an insulator failure</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company's Asset Management Department recently replaced a Scadamate sectionalizer with an IntelliRupter recloser and converted this circuit to all pulse-reclosing operation which should improve its protection and reduce future circuit damage during faults making restoration simpler and faster.</li> </ul>

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Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>11</p> <p>Pine Creek 23718</p> <p>WR1043</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• One outage was due to connector failure.</li> <li>• One outage was due to tree fall-in.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to tree fall-in.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
<p>12</p> <p>Oakland 23745</p> <p>ER200</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to an insulator failure.</li> <li>• One outage was an unknown.</li> <li>• One outage was due to an unplanned operational outage.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company's Asset Management Department is planning to replace two Scadamates sectionalizers with two IntelliRupter reclosers and convert this circuit to all pulse-reclosing operation which will improve its protection and reduce future circuit damage during faults making restoration simpler and faster. The installation of the new IntelliRupter will be completed at the end of the second quarterly of 2016.</li> </ul>
<p>13</p> <p>Grant 4266</p> <p>BREAKER</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to cable failure.</li> <li>• One outage was due to a pothead failure.</li> <li>• One outage was due to tree fall-in.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>

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Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>14</p> <p>Pine Creek 23713</p> <p>FUSE-65K</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• three outages were due to tree fall-ins.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• Vegetation Maintenance was completed in the 3rd quarter of 2015. Vegetation maintenance is tentatively proposed for 2020.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
<p>15</p> <p>Allison Park 4216</p> <p>BREAKER</p>	<p>Three Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to substation equipment failure.</li> <li>• One outage was due to a tree fall-in.</li> <li>• One outage was due to an unplanned operational outage.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The company installed an IntelliRupter on the overhead conductor side of the distribution circuit and installed stepdown transformers to pick up this circuit as part of 23KV distribution circuit and eliminated the Allison Park 4KV substation circuit.</li> </ul>
<p>16</p> <p>Bruno Island 23698</p> <p>BREAKER</p>	<p>Two Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to cable failure.</li> <li>• One outage was due to a motor vehicle accident.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>

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Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>17</p> <p>Sewickley 23630</p> <p>WA573</p>	<p>Two Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to a tree fall-in.</li> <li>• One outage was due to conductors wrapped together.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company's Asset Management Department is planning to convert this circuit to pulse-reclosing operation which will improve its protection and reduce future circuit damage during faults making restoration faster.</li> <li>• Routine vegetation maintenance was last performed in 2013 and is tentatively proposed for 2017. VM will continue to monitor tree-related issues affecting the circuit.</li> </ul>
<p>18</p> <p>Arsenal 23840</p> <p>FUSE-80E</p>	<p>Two Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to lightning arrester failure.</li> <li>• One outage was due to a tree fall-in.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
<p>19</p> <p>Findlay 23612</p> <p>FUSE-65K</p>	<p>Two Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was an unknown.</li> <li>• One outage was due to guy wire failure.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>

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Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
<p>20</p> <p>Neville 23650</p> <p>ER261</p>	<p>Two Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was due to a tree fall-in.</li> <li>• One outage was due to a storm.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company's Asset Management Department converted this circuit to pulse-reclosing operation in fourth quarter of 2015 which should improve fault protection and reduce circuit damage in the future during faults.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
<p>21</p> <p>North 23705</p> <p>FUSE-65K</p>	<p>Two Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• One outage was an unknown.</li> <li>• One outage was due to cable failure.</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
<p>22</p> <p>Universal 23732</p> <p>BREAKER</p>	<p>Two Total Outages:</p> <p>First quarter 2016 Outages:</p> <ul style="list-style-type: none"> <li>• One outage was due to a tree fall-in.</li> <li>• One outage was due to a storm.</li> </ul> <p>Previous Outage:</p> <ul style="list-style-type: none"> <li>• No outage.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>

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Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
23  Rankin 23882  ER52	Two Total Outages: First quarter 2016 Outages: <ul style="list-style-type: none"> <li>• No outage.</li> </ul> Previous Outage: <ul style="list-style-type: none"> <li>• Two outages were due to storms.</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Permanent repairs were made following each outage.</i></li> <li>• <i>The Company's Asset Management Department converted this circuit to all pulse-reclosing operation in fourth quarter of 2015 which should improve fault protection and reduce circuit damage in the future during faults.</i></li> <li>• <i>The Company will continue to monitor this circuit for reliability issues.</i></li> </ul>
24  Woodville 23680  BREAKER	Two Total Outages: First quarter 2016 Outages: <ul style="list-style-type: none"> <li>• No outage.</li> </ul> Previous Outage: <ul style="list-style-type: none"> <li>• One outage was due to lightning arrester failure.</li> <li>• One outage was due to a tree fall-in.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
25  Rankin 4601  BREAKER	Two Total Outages: First quarter 2016 Outages: <ul style="list-style-type: none"> <li>• No outage.</li> </ul> Previous Outage: <ul style="list-style-type: none"> <li>• One outage was due to a tree fall-in.</li> <li>• One outage was an unknown.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>
26  Bryn Mawr 23769  ER235	Two Total Outages: First quarter 2016 Outages: <ul style="list-style-type: none"> <li>• One outage was due to motor vehicle accident.</li> </ul> Previous Outage: <ul style="list-style-type: none"> <li>• One outage was due to a motor vehicle accident.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</li> </ul>

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Rank, Circuit Name, Device	Outages	Remedial Actions Planned or Taken
27  Rankin 23881  EA233	One Total Outages: First quarter 2016 Outages: <ul style="list-style-type: none"> <li>• No outage.</li> </ul> Previous Outage: <ul style="list-style-type: none"> <li>• One outage was due to a tree fall-in.</li> </ul>	<ul style="list-style-type: none"> <li>• Permanent repairs were made following each outage.</li> <li>• The Company will continue to monitor this circuit for reliability issues.</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, 2015 through March 31, 2016 – 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>
<b>Storms</b>	382	13%	855,997	14%	95,785,758	18%
<b>Trees (Contact)</b>	59	2%	98,365	2%	8,179,465	2%
<b>Trees (Falling)</b>	734	25%	1,322,027	22%	171,948,436	32%
<b>Equipment Failures</b>	835	29%	1,883,866	31%	164,359,491	30%
<b>Overloads</b>	111	4%	220,224	4%	11,072,730	2%
<b>Vehicles</b>	150	5%	400,664	7%	32,408,998	6%
<b>Other</b>	619	22%	1,208,311	20%	60,081,521	10%
<b>TOTALS</b>	<b>2,890</b>	<b>100%</b>	<b>5,989,464</b>	<b>100%</b>	<b>543,836,399</b>	<b>100%</b>

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

**2016 Transmission and Distribution Goals and Objectives**

Program Project	Unit of Measurement	Target for 2016 1Q	Actual for 2016 1Q	Percent Complete	Targets for Year 2016	Actual YTD for 2016
<b>Communications Goals</b>						
Communication Battery Maintenance	Batteries	24	24	100%	96	24
<b>Overhead Distribution Goals</b>						
Recloser Inspections	Circuits	34	38	112%	130	38
Pole Inspections	Poles	0	351	N/A	17,945	351
OH Line Inspections	Circuits	34	38	112%	130	38
OH Transformer Inspections	Circuits	34	38	112%	130	38
Padmount & Below Grade Insp	Circuits	21	63	300%	80	63
<b>Overhead Transmission Goals</b>						
Helicopter Inspections	Number of Structures	0	0	N/A	500	0
Ground Inspections	Number of Structures	0	195	N/A	367	195
<b>Substations Goals</b>						
Circuit Breaker Maintenance	Breakers	160	197	123%	585	197
Station Transformer Maintenance	Transformers	5	8	160%	84	8
Station Battery Maintenance	Batteries	235	241	103%	940	241
Station Relay Maintenance	Relays	525	561	107%	2,081	561
Station Inspections	Sites	510	510	100%	2,040	510
<b>Underground Distribution Goals</b>						
Manhole Inspections	Manholes	400	456	114%	700	456
Major Network Insp (Prot Relay)	Ntwk Protectors	25	27	108%	92	27
Minor Network Visual Inspection (Transformer/Protector/Vault)	Ntwk Transformers	360	505	140%	573	505
<b>Underground Transmission Goals</b>						
Pressurization and Cathodic Protection Plant Inspection	Work Packages	13	15	115%	52	15
<b>Vegetation Management Goals</b>						
Overhead Line Clearance	Circuit Overhead Miles	375	257	69%	1,300	257
<b>Total Units</b>		<b>2,755</b>	<b>3,524</b>	<b>128%</b>	<b>27,825</b>	<b>3,524</b>

(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, 2016  
 Favorable/(Unfavorable)

	<b>Total Actual</b>	<b>Total Budget</b>	<b>Variance</b>
<b>Customer Care</b>	13,097,786	13,246,254	148,469
<b>Human Resources</b>	3,478,490	3,922,597	444,107
<b>Operations/Operation Services</b>	14,882,301	17,220,576	2,338,275
<b>Technology</b>	11,768,698	14,548,661	2,779,963
<b>General Corporate*</b>	14,303,837	13,547,907	(755,929)
<b>Total</b>	<b>57,531,111</b>	<b>62,485,995</b>	<b>4,954,884</b>

\*Includes Finance, Supply Chain, 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, 2016  
 Favorable/(Unfavorable)

	<b>Total Actual</b>	<b>Total Budget</b>	<b>Variance</b>
<b>Customer Care</b>	700,560	696,146	(4,414)
<b>Human Resources</b>	2,564,949	2,153,714	(411,235)
<b>Operations/Operation Services</b>	35,628,871	39,198,518	3,569,647
<b>Technology</b>	24,181,832	16,974,006	(7,207,826)
<b>General Corporate*</b>	7,368,963	5,561,177	(1,807,786)
<b>Total</b>	<b>70,445,175</b>	<b>64,583,561</b>	<b>(5,861,614)</b>

\*Includes Finance, Supply Chain, 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<sup>2</sup></b>	<b>Number of Employees</b>
Telecom Splicer/Trouble Tech	6
Electronic Technician	15
Telecom Technician	3
<b>Total Telecom</b>	<b>24</b>
Electrical Equipment Technician	33
Protection & Control Technician	24
Yard Group Leader	3
Rigger	6
Laborer	3
<b>Total Substation</b>	<b>69</b>
UG Splicer	37
UG Cable Inspector	9
Cable Tester	1
Network Operator	11
Equipment Material Handler	1
<b>Total Underground</b>	<b>59</b>
Apprentice T&D	58
Service Center Technician	18
Equipment Attendant	1
Lineworker	128
Service Crew Leader	5
Equipment Material Handler	4
<b>Total Overhead</b>	<b>214</b>
<b>Total Street Light Changer</b>	<b>6</b>
Engineering Technician	19
GIS Technician	3
Right of Way Agent	4
Surveyor	4
T&D Mobile Worker	8
Test Technician, Mobile	5

<sup>2</sup> Beginning in First Quarter 2016 we combined some of the job titles to reduce the various seniority levels and removed the supervisory and administrative positions.

Duquesne Light Company  
First Quarter 2016 Electric Reliability Report

<b>Job Title<sup>2</sup></b>	<b>Number of Employees</b>
<b>Total Engineering</b>	<b>43</b>
Senior Operator	26
Traveling Operator	3
Troubleshooter	20
<b>Total Traveling Operator/Troubleshooter</b>	<b>49</b>
<b>Total Switching Dispatcher</b>	<b>11</b>
<b>Total Employees</b>	<b>475</b>

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

**CONFIDENTIAL INFORMATION BELOW**

**1st<sup>Quarter</sup> 2016**

Contractor Dollars: \$redacted  
Contractor Hours: redacted

**YTD 2016**

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 BELOW**

**Call-Out Acceptance Rate – 1st Quarter 2016**

**Redacted**

**Amount of Time it Takes to Obtain the Necessary Personnel – 1st Quarter 2016**

**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.*

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Jaime Bachota – Manager, Accounting & Financial Reporting  
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ATTACHMENT A

Rank	Circuit No	Circuit Name	Feeder Device	Device Lockouts	Last Lockout	Circuit KVA	Total KVA Interrupted	Total KVA-Minutes	SAIDI	SAIFI	CAIDI
1	23871	Mt Nebo	WA853	5	09/29/15	17,687	110,493	7,218,267	408.1	6.25	65.3
2	23921	Logans Ferry	EA625	4	11/12/15	30,062	93,267	11,532,207	383.6	3.10	123.6
3	23610	Findlay	BREAKER	4	03/01/16	25,975	95,437	8,685,669	334.4	3.67	91.0
4	23679	Woodville	R100	4	11/07/15	16,057	31,948	7,373,158	459.2	1.99	230.8
5	23730	Universal	BREAKER	4	03/02/16	18,423	60,722	5,713,569	310.1	3.30	94.1
6	23870	Mt. Nebo	BREAKER	3	01/10/16	26,795	237,214	10,016,269	373.8	8.85	42.2
7	22869	Midland-Cooks Ferry	SWR262	3	02/20/16	37,666	139,159	7,023,177	186.5	3.69	50.5
8	23752	Dravosburg	BREAKER	3	11/29/15	18,969	96,813	6,388,692	336.8	5.10	66.0
9	23631	Sewickley	R600	3	11/12/15	31,956	65,627	6,222,860	194.7	2.05	94.8
10	23743	Oakland	ER754	3	03/24/16	23,818	60,239	5,669,736	238.0	2.53	94.1
11	23718	Pine Creek	WR1043	3	03/01/16	21,478	61,187	5,508,126	256.5	2.85	90.0
12	23745	Oakland	ER200	3	07/15/15	28,489	50,550	5,191,355	182.2	1.77	102.7
13	4266	Grant	BREAKER	3	09/29/15	4,418	15,759	5,174,152	1171.2	3.57	328.3
14	23713	Pine Creek	FUSE-65K	3	09/12/15	27,660	31,161	5,132,538	185.6	1.13	164.7
15	4216	Allison Park	BREAKER	3	06/27/15	2,450	17,826	4,991,662	2037.4	7.28	280.0
16	23698	Brunot Is.	BREAKER	2	12/05/15	21,983	89,481	9,346,222	425.2	4.07	104.4
17	23630	Sewickley	WA573	2	06/18/15	26,272	87,101	8,810,638	335.4	3.32	101.2
18	23840	Arsenal	FUSE-80E	2	11/12/15	35,725	62,017	7,167,652	200.6	1.74	115.6
19	23612	Findlay	FUSE-65K	2	04/16/15	22,944	18,696	6,823,422	297.4	0.81	365.0
20	23650	Neville	ER261	2	06/28/15	27,349	44,525	6,583,970	240.7	1.63	147.9
21	23705	North	FUSE-65K	2	09/04/15	26,540	86,370	5,761,442	217.1	3.25	66.7
22	23732	Universal	BREAKER	2	03/02/16	20,755	84,339	5,541,137	267.0	4.06	65.7
23	23882	Rankin	ER52	2	09/29/15	16,932	77,320	5,065,619	299.2	4.57	65.5
24	23680	Woodville	BREAKER	2	10/12/15	23,865	155,375	4,999,333	209.5	6.51	32.2
25	4601	Rankin	BKR	2	09/29/15	7,639	28,048	4,994,570	653.8	3.67	178.1
26	23769	Bryn Mawr	ER235	2	03/23/16	19,429	76,726	4,958,396	255.2	3.95	64.62
27	23881	Rankin	EA233	1	05/11/15	18,912	48,295	9,911,914	524.1	2.55	205.2



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State Regulatory Coordinator  
411 Seventh Avenue, 15-7  
Pittsburgh, PA 15219

Ms. Rosemary Chiavetta, Secretary  
Pennsylvania Public Utility Commission  
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