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March 1, 2019

VIA ELECTRONIC FILING

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

Re: Duquesne Light Company's Annual Asset Optimization
Plan Docket No. M-2019-_____

Dear Secretary Chiavetta:

Enclosed please find Duquesne Light Company's ("Duquesne Light" or "Company") Annual Asset Optimization Plan ("Plan"). The Plan details the Company's actual and projected expenditures related to the implementation of its Long Term Infrastructure Improvement Plan ("LTIIIP") for program years 2018 and 2019 respectively. Duquesne Light's LTIIIP is a six year program covering program years 2017 through 2022. Year to date, the Company's LTIIIP expenditures are 8% below the approved plan. Although annual initiative performance may vary, the Company projects that its overall LTIIIP performance will align with filed plan over the six year period.

Should you have any questions please contact me.

Respectfully Submitted

A handwritten signature in black ink, appearing to be "Tishekia E. Williams", written over a horizontal line.

Tishekia E. Williams
Attorney ID#208997

Enclosures

CC: Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing has been served upon the following persons, in the manner indicated, in accordance with the requirements of 52 Pa Code § 1.54 (relating to service by a participant):

FIRST-CLASS MAIL

Bureau of Investigation & Enforcement
Commonwealth Keystone Building
400 North Street, 2nd Floor West
PO Box 3265
Harrisburg, PA 17105-3265

Office of Small Business Advocate
300 North Second Street
Suite 202
Harrisburg, PA 17101

Office of Consumer Advocate
555 Walnut Street
Forum Place, 5th Floor
Harrisburg, PA 17101-1923

Dated: March 1, 2019



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Duquesne Light Company

Annual Asset Optimization Plan

March 1, 2019

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INTRODUCTION

Pursuant to 66 Pa.C.S. § 1356 Duquesne Light Company (“DLC” or the “Company”) hereby files its Annual Asset Optimization Plan (“AAO Plan”). Section 1356 provides that utilities with an approved distribution system improvement charge (“DSIC”) and long-term infrastructure improvement plan (“LTIIP”) are required to file an AAO Plan that includes:

- 1) A description that specifies all eligible property repaired, improved and replaced in the immediately preceding 12-month period pursuant to the utility’s long-term infrastructure improvement plan and prior year’s asset optimization plan; and
- 2) A detailed description of all the facilities to be improved in the upcoming 12-month period.

In the AAO Plan, the Company provides details regarding the actual and projected repair, improvement and replacement of aging infrastructure in 2017, 2018, and 2019. The Company’s LTIIP performance is an important part of its plan to ensure that its distribution system continues to operate in a safe and reliable manner.

BACKGROUND

Duquesne Light Company is a public utility as that term is defined under Section 102 of the Public Utility Code, 66 Pa. C.S. § 102, certificated by the Pennsylvania Public Utility Commission (“PUC” or the “Commission”) to provide electric service in the City of Pittsburgh and in Allegheny and Beaver Counties in Pennsylvania. DLC is also an EDC as that term is defined under Section 2803 of the Public Utility Code, 66 Pa. C.S. § 2803. DLC provides electric distribution service to approximately 590,000 customers within its service territory that covers approximately 817 square miles.

DLC filed an LTIIP on April 15, 2016. In preparing its LTIIP, DLC followed the guidelines established in the Commission’s August 2, 2012 Final Implementation Order. The LTIIP provides for accelerated replacement of DSIC eligible property to support and fulfill the goals of Act 11, which are aimed at constructing, installing, rehabilitating, improving and replacing portions of the Pennsylvania electric distribution system in an accelerated time frame to the betterment of Pennsylvania electricity customers. The LTIIP will support and enhance DLC’s continuing efforts to sustain its high level of reliability and safety that could otherwise suffer due to normal degradation of facilities that occurs with time and natural environmental stresses.

The Company's LTIIIP was approved as filed on September 15, 2016. On May 26, 2016, DLC filed a petition seeking approval of a DSIC. By Order entered April 20, 2017, the Commission approved DLC's DSIC at docket number P-2016-2540046.

Duquesne Light's Commission-approved LTIIIP includes five (5) asset programs and nine (9) initiatives.¹ Details regarding the asset programs included factors used to identify the need for the project, average age of the asset, scope of the project including the number of units to be replaced or improved over the next six years, the approximate location by geographic region for the projects, and the annual expenditures for 2017 through 2022 for each asset class. The asset programs address DLC's areas of aged infrastructure, which are approaching the end of their expected useful life.

EXECUTIVE SUMMARY

In developing its AAO Plan, DLC has included all of the five (5) asset programs and nine (9) initiatives originally included in its Commission-approved LTIIIP. The AAO Plan provides projected and actual replacement numbers for 2018, and projections for 2019. The project descriptions included in the AAO Plan are consistent with those provided in the LTIIIP. The Company has added information to describe the progress of the programs and to explain deviations from the original projections where appropriate. While some programs spending forecasts have been adjusted due to changing circumstances, DLC does not propose to eliminate any of its programs at this time.

The chart below details the Company's LTIIIP plan as filed, as well as the Company's actual 2018 performance and projected performance for 2019. Columns titled "2018 Plan" and "2019 Plan" reflect numbers as filed in the LTIIIP plan. The column titled "2018 AAOP" identifies numbers included as the 2018 Forecast in the Company's AAOP filed on March 1, 2018.

¹Duquesne Light's LTIIIP included an explanation that the Company planned to develop a Microgrid to improve the reliability of the portion of its distribution system that serves its Woods Run Operations facilities and its Preble Avenue Service Center. The LTIIIP did not provide a specific proposal for the Woods Run Microgrid, did not include any proposed budget or funding for the Woods Run Microgrid and specifically stated that the Company would file an Amended LTIIIP to provide such information. Upon further consideration, the Company did not petition to amend its LTIIIP. Accordingly, the Microgrid is not included in the Company's LTIIIP, or addressed in this AAOP.

Duquesne Light Company 2018-2019 Actual and Projected LTIIP Spend.

<i>All figures in \$ millions</i>	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
4kV Program					
4kV Substation Elimination	28.0	26.3	29.4	47.0	26.2
Stepdown Transformer Conversion	6.1	6.8	7.7	6.2	7.4
Modular Integrated Transformer System	8.0	5.8	4.9	8.0	3.0
Total 4kV Program	42.1	38.9	42.0	61.2	36.6
Overhead Program					
Aerial Cable Replacement	9.7	7.6	6.8	9.2	9.5
Total Overhead Program	9.7	7.6	6.8	9.2	9.5
Underground Program					
Underground Cable Replacement	3.5	1.7	0.6	3.0	-
Network Transformer and Protector Replacement	5.8	3.8	4.0	5.7	3.5
Underground Residential Distribution Rehabilitation	5.9	5.9	5.7	5.9	8.6
Total Underground Program	15.2	11.4	10.3	14.6	12.1
Substations Program					
Breaker & Switch Replacements	5.4	2.8	5.8	5.3	7.5
Substation Upgrades	3.0	1.9	1.8	3.0	3.1
Total Substations Program	8.4	4.7	7.6	8.3	10.6
Highway Relocation Program					
Unreimbursed Highway Relocations	2.8	1.3	2.6	2.9	1.2
Total Highway Relocations Program	2.8	1.3	2.6	2.9	1.2
TOTAL	78.1	63.9	69.3	96.2	69.9

Distribution Assets

The following pages set forth actual results for calendar year 2018 and current projections for calendar year 2019. These assets involved in the LTIP Initiatives include, but are not limited to, the following:

- Structures
 - Poles
 - Crossarms
- Overhead Conductors and Hardware
- Underground Cables and Hardware
- Breakers and Disconnect Switches
- Protective Devices
 - Fuses
 - Reclosers
 - Network Protectors
 - Lightning Arresters
- Transformers

4 KV Program

The Substation Elimination Initiative and the Stepdown Conversion Initiative are intended to replace the aged, 4kV infrastructure on DLC’s system. In certain instances, renewal of the 4kV substation infrastructure may be prudent, as opposed to substation elimination or conversion. In those instances, DLC will replace the substation equipment.

I. Substation Elimination Initiative **Program Description and Purpose**

The Substation Elimination Initiative will convert a substation’s 4kV load to 23kV operation. By removing the 4kV equipment and upgrading to 23kV, this initiative will permit the decommissioning of 4kV substations.

Scope

Replacement in Units (circuits)					
LTIIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
4kV Substation Elimination	7.0	6.0	5.0	12.0	2.0

Locations

Areas generally outside of downtown Pittsburgh.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
4kV Substation Elimination	28.0	26.3	29.4	47.0	26.2

Comments:

Units of work completed in 2018 were lower than forecasted because one circuit conversion was completed in early January 2019 as opposed to the original planned date of December 2018.

Units of work forecasted for 2019 are less than the LTIIP Filing anticipated due to the nature of the work involved in this initiative. Each 4kV Substation Elimination projects vary significantly in scope and costs. For example, the conversion of one circuit may be budgeted at \$6 million while another circuit conversion is budgeted at \$20 million. Spending in this initiative is lower in 2019 due to overall prioritization of work, and the

Company plans to be approximately on target overall in spending in this initiative over the six years of the LTIP.

II. *Stepdown Conversion Initiative*

Program Description and Purpose

The 4kV Stepdown Conversions Initiative will convert 4kV load fed from a stepdown to 23kV. By eliminating 4kV stepdown and upgrading the associated infrastructure to 23kV, this initiative will permit the decommissioning of the 4kV system.

Scope

Replacement in Units (three phase transformer set)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Stepdown Transformer Conversion	5.0	7.0	7.0	5.0	2.0

Locations

Areas generally outside of downtown Pittsburgh.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Stepdown Transformer Conversion	6.1	6.8	7.7	6.2	7.4

Comments

Forecasted units of work are lower primarily because the Company plans to begin certain stepdown conversions projects in mid-2019, however, the project will not be completed in 2019. Therefore, the units are not reflected in the chart above, although dollars associated with the project will be spent in 2019. The two LTIP units reflected in 2019 forecasts will be completed as part of one of the projects in our 4kV Substation Elimination initiative, so the spending associated for those two units is reflected in the 4kV Substation Elimination initiative.

III. *Modular Integrated Transformer System Initiative ("MITS")*

Program Description and Purpose

The purpose of this program is to replace aged substation transformers. The original approach to the replacement was to utilize a Modular Integrated Transformer System.

However, in the Company's AAOP filed on March 1, 2018, the Company stated that it planned on continuing this initiative by utilizing a conventional solution consisting of individual components as opposed to the modular integrated solution.

Scope

Replacement in Units (units)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Modular Integrated Transformer System	8.0	6.0	4.0	8.0	4.0

Locations

All areas of DLC System.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Modular Integrated Transformer System	8.0	5.8	4.9	8.0	3.0

Comments

2018 Actual units completed was lower by two units due to one unit being deferred to 2019 as part of managing total LTTIP spending in 2018 and one unit being completed in early January that was originally planned for completion in November 2018. Forecasted units of work in 2019 are lower due to the overall update of the LTIP spending plan for 2019.

The actual units completed in 2018 were lower than forecasted because one unit completed in January 2019, instead of November 2018 as originally forecasted. Additional deviations are forecasted based on prioritization of spending and the priority of substation equipment replacements within the overall 4kV Program.

Overhead Program

DLC's Overhead Program addresses aerial cable and other eligible property on the overhead distribution system approaching the end of its expected useful life.

- I. Aerial Cable Replacement Initiative
Program Description and Purpose

Aerial cable is used when multiple circuits are on the same pole. It is also used through rights-of-way with trees that may cause interference. Aerial cable is used principally on the 23kV sub-transmission and distribution circuits. This initiative focuses on the replacement of aged, failure-prone aerial cable to maintain DLC's current high level of reliability and reduce the likelihood of failures.

Scope

Replacement in Units (miles)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Aerial Cable Replacement	12.5	5.6	6.0	12.0	5.1

Locations

Areas generally outside of downtown Pittsburgh.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Aerial Cable Replacement	9.7	7.6	6.8	9.2	9.5

Comments:

Forecasted units of work in 2019 are lower because the Company plans to start a 3-mile aerial cable replacement project during 2019 that is currently forecasted to be completed after 2019

Underground Program

DLC's Underground Program replaces, rehabilitates, and improves obsolete, eligible property approaching the end of its expected useful life.

I. Underground Cable Replacement Initiative
Program Description and Purpose

DLC's underground cable has served the system for several years, but it is approaching the end of its expected useful life. This initiative focuses on the replacement of

underground cable to maintain the current high level of reliability and reduce the likelihood of future failures.

Scope

Replacement in Units (miles)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Underground Cable Replacement	1.7	1.7	1.2	1.0	0.3

Locations

Areas generally inside of downtown Pittsburgh.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Underground Cable Replacement	3.5	1.7	0.6	3.0	0.0

Comments

2018 units and spending were lower than forecasted due to the deferral of two aerial cable projects that included underground cable replacement.

II. Network Transformers & Protector Replacement Initiative
Program Description and Purpose

The majority of network transformers and protectors are located in downtown Pittsburgh in sidewalk vaults. Many of these vaults are exposed to natural and human elements that may lead to corrosion. These factors contribute to the deterioration of the transformers. This initiative focuses on the rehabilitation of network transformer and protector installations in downtown Pittsburgh to maintain the current high level of reliability and reduce the likelihood of failures.

Scope

Replacement in Units (transformers)					
LTIIIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Network Transformer and Protector Replacement	50.0	30.0	31.0	50.0	30.0

Location

Areas generally inside of downtown Pittsburgh.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIIIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Network Transformer and Protector Replacement	5.8	3.8	4.0	5.7	3.5

Comments

The plan for 2019 network transformer replacements has been adjusted to 30 units of work compared to the original LTIIP of 50 units of work based on the current condition of assets within this assets category.

III. Underground Residential Distribution Rehabilitation Initiative Program Description and Purpose

DLC installed a significant number of Underground Residential Distribution (URD) facilities in housing developments in the 1970s. This equipment is approaching the end of expected useful life. Some of this equipment is below grade. The equipment has been exposed to wet conditions due to rain runoff. In addition, chemicals from lawn treatment in the water in below-grade vaults further deteriorate the equipment. The deteriorated equipment includes transformers, primary cable, splices, bushing junctions, elbows, brackets, and the vaults themselves.

This initiative focuses on the rehabilitation of the failure-prone underground residential (URD) system in order to maintain the current high level of reliability and reduce the likelihood of future failures.

Scope

Replacement in Units (transformers)					
LTIIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Underground Residential Distribution Rehabilitation	196.0	205.0	180.0	196.0	224.0

Locations

Areas generally outside of downtown Pittsburgh.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Underground Residential Distribution Rehabilitation	5.9	5.9	5.7	5.9	8.6

Comments:

Spending and units of work in 2018 were consistent with the values forecasted in the 2018 AAOP.

Substations Program

DLC's Substations Program addresses eligible property associated with its substations that are approaching the end of expected useful life. The eligible property under this LTIIP includes circuit breakers, associated switches, line protection devices, and substation infrastructure.

I. Breaker & Switch Replacement Initiative Program Description and Purpose

The 23kV distribution infrastructure is the backbone of DLC's delivery system. As part of that system, substation breakers are important for reliable operation. The line protection of the system must also work as appropriate and in coordination with other protective devices such as IntelliRupters and line fuses. Currently, there are approximately 500 oil circuit breakers that can be replaced with vacuum circuit breakers. The line and bus disconnect switches will be changed while the breakers are being replaced. The disconnect switches are used to establish a valid clearance for a visual break, allowing construction crews to perform line work safely.

Scope

Replacement in Units (breakers)					
LTIIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Breaker & Switch Replacements	44.0	24.0	25.0	43.0	32.0

Locations

All areas of DLC System.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Breaker & Switch Replacements	5.4	2.8	5.8	5.3	7.5

Comments

Spending on this initiative in 2018 was higher than forecasted in the 2018 AAOP due to several factors including the timing of materials arriving for 2018 construction in 2018 as opposed to the end of 2017 and higher construction costs associated with breaker replacements at one of our substations due to site-specific challenges of working at that substation.

II. Substation Upgrades Initiative Program Description and Purpose

The Substation Upgrades Initiative replaces substation infrastructure that is approaching the end of expected useful life. Within the substation, DLC has identified several pieces of equipment and/or systems that need to be replaced or rehabilitated. The infrastructure principally includes, but is not limited to: transformers, relays, substation structures, system control equipment, foundations, ground grid systems, and battery systems.

Scope

Replacement in Units (projects)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Substation Upgrades	5.0	11.0	8.0	5.0	12.0

Locations

All areas of DLC System.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Substation Upgrades	3.0	1.9	1.8	3.0	3.1

Comments

The Company completed more substation upgrades than included in the LTIP in 2018, and presently expects to complete a greater number of upgrades in 2019.

Highway Relocation Program

The Highway Relocation Program consists of work that arises during the course of normal operations required by the State of Pennsylvania, PennDOT, counties, cities, municipalities, or other government agencies. As part of unreimbursed road and bridge projects, DLC is required to relocate its distribution facilities. During these relocations, there is the potential for system improvements. Due to the nature of how these relocation projects are scheduled, DLC cannot definitively determine the annual expenditures or number of projects that will be required during the LTIP period. DLC will include eligible costs as part of its LTIP.

Actual/Planned Annual Expenditures

Replacement Spending (\$ in millions)					
LTIP Initiative	2018 Plan	2018 AAOP	2018 Actual	2019 Plan	2019 Forecast
Unreimbursed Highway Relocations	2.8	1.3	2.6	2.9	1.2