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August 22, 2016

VIA ELECTRONIC FILING

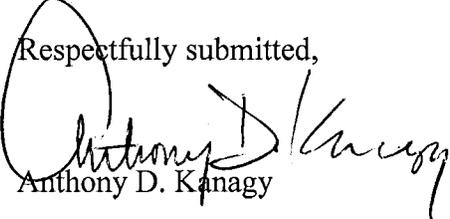
Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
P.O. Box 3265
Harrisburg, PA 17105-3265

**Re: Petition of Duquesne Light Company for Approval of a Distribution System
Improvement Charge - Docket No. P-2016-2540046**

Dear Secretary Chiavetta:

Enclosed please find Duquesne Light Company's Responses to the Bureau of Technical Services Data Request Set II, No. 1. Copies will be provided as indicated below.

Respectfully submitted,


Anthony D. Kanagy

ADK/skr
Enclosure

cc: Daniel Searfoorce (*via e-mail*)
David Washko (*via e-mail*)
Certificate of Service

CERTIFICATE OF SERVICE

I hereby certify that true and correct copies of the foregoing have been served upon the following persons, in the manner indicated, in accordance with the requirements of § 1.54 (relating to service by a participant).

VIA E-MAIL AND FIRST CLASS MAIL

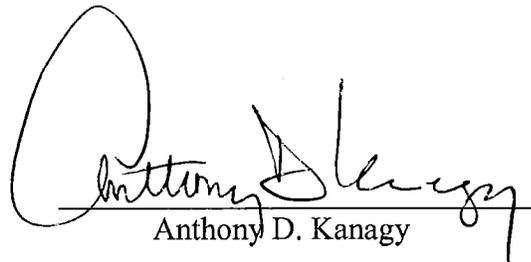
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Counsel for Citizen Power

Date: August 22, 2016



Anthony D. Kanagy

**Petition of Duquesne Light Company for Approval
of Its Long-Term Infrastructure Improvement Plan
Docket No. P-2016-2540046**

Bureau of Technical Utility Services (“TUS”) – Set II
To Duquesne Light Company

Witness: John Hilderbrand

TUS DR II-1

Reference Duquesne’s reply to Data Request TUS-1, filed July 25, 2016. Specifically reference the responses to TUS DR-3 and TUS DR-4 items.

- a. Duquesne Tables 3a, 3b1, and 3b2 have categories labeled “Overhead Program”. It appears this category is incorrectly described as “Overhead Program” versus “Substation Program.” Confirm which description is correct. Also define “subm. Trmr.” referenced in Unit column.
- b. Total overall baseline budget decreased from \$507.9 million (2011-2016) to \$439 million (2017-2022). There appear to be significant reductions in overall baseline expenditures (exclusive of any LTIP expenditures) for the Underground program and Substation program for the years 2017 to 2022 as compared to the historical expenditures from 2011 to 2016. Explain in detail the reasons for the reductions in expenditures for baseline expenditures for these categories and overall total expenditures.
- c. There appear to be significant reductions in the overall baseline for Underground Residential Distribution Rehabilitation programs and initiatives (Table 3b2 as compared to Table 3b1). Explain in detail the basis for this significant reduction.
- d. The number of baseline Breaker & Switch Replacements appear to significantly increase, refer to Table 3a, 3b2, and 3b1. Projected baseline breaker replacements increased from 38 breakers in 2011-2016 to 64 breakers in 2017-2022 and LTIP acceleration of 125; yet expenditures decreased significantly from \$73.8 million, \$42.5 million, and \$15 million respectively as indicated on TUS DR-4 response. Explain in detail this apparent anomaly cost savings.
- e. Refer to Table 3a, 3b2, and 3b. The 4 kV program in 2011 – 2016 eliminated 6 substations, upgraded 13 stepdown conversions, and added 4 modular integrated transformer systems for a total cost of \$23 million; while in 2017-2022 projections merely upgraded only 6 stepdown conversions for a total cost of \$25 million. Please explain this significant cost increase relative to 2011-2016.

- f. Please further breakdown the program costs shown in TUS DR-4 response by categories as was done in the Duquesne LTIP Petition Table 12, page 32.
- g. Refer to Table 3a, 3b2, and 3b; TUS DR-4 response; and Duquesne LTIP Petition Table 12, page 32. The Aerial Cable Replacement costs vary from \$25 million/mile during 2011-2016, to \$28 million/mile in 2017-2022, and then \$19 million/mile for LTIP acceleration. Please explain in detail the basis for these significant cost variations.

Response:

- a. The second occurrence of the label “Overhead Program” in each of the tables (Tables 3a, 3b1, and 3b2) should be “Substations Program”. The abbreviation “subm. Tfmr.” refers to “submersible transformer.”
- b. LTIP Filing Figure 3 illustrates total DSIC eligible spending over the years 2011-2022 and showed the spending as either “Baseline” or “Accelerated”. For the years 2011-2015, Duquesne Light used the term “Baseline” as a reference to the total amount of investment in DSIC eligible projects, programs, and initiatives during that time period. For the years 2016-2022, DLC used the term “Baseline” in reference to the pre-LTIP target budget amounts for DSIC eligible projects, programs, and initiatives. This target budget was then increased as a result of further analysis and because of the availability of the DSIC mechanism. Because of these two differing definitions of “Baseline”, a better comparison of Duquesne Light’s investment in initiatives and programs is to compare the planned future total spending (baseline plus accelerated) to the total historical spending (baseline). These two definitions of “Baseline” apply to the total DSIC eligible spending as well as the spending within each of the programs displayed in Figure 4 and the table in TUS DR-4.
- c. For the years 2011-2015, Duquesne Light used the term “Baseline” as a reference to the total amount of investment in DSIC eligible projects, programs, and initiatives during that time period. For the years 2016-2022, DLC used the term “Baseline” in reference to the pre-LTIP target budget amounts for DSIC eligible projects, programs, and initiatives.

Because of these two differing definitions of “Baseline”, a better comparison of Duquesne Light’s investment in initiatives and programs is to compare the planned future total spending (baseline plus accelerated) to the total historical spending (baseline).

- d. The units referenced in this question (38, 64, and 125 breakers) are associated with the Breakers and Switches initiative, while the dollar amounts of \$73.8 million and \$42.5 million referenced in this question are associated with the overall Substations Program.

The \$15 million referenced in the question is the amount associated with the accelerated investment in the Breakers and Switches Initiative.

The Substations Program includes the baseline Breakers and Switches investment, the accelerated Breakers and Switches investment, other LTIP initiatives within the Substations Program, and other projects within the Substations Program. Therefore, the observed anomaly cost savings is due to using dollars from the overall Substations program and units from one initiative within the Substations program to assess baseline cost per unit. (Please note that it appears that the values of \$73.8 million and \$42.5 million are different than the sum of the annual values for those two time periods in the table presented in DR-4.)

- e. The 2017-2022 numbers referenced in the question only include baseline unit projections for one initiative within the 4kV Program. The \$25 million appears to be a calculation that represents the baseline spending in the total 4 kV Program. The 2017-2022 baseline spending in the 4kV Program includes the Stepdown Transformer Conversion initiative as well as investment in other work.

The observed significant cost increase is due to using dollars associated with baseline spending in the 4kV program and comparing those dollars to units associated with one initiative within the program. (Please note that the unit of measure for the 4kV Substation Elimination initiative is “circuit” and not “substation”. Some of the substations to be eliminated include more than one circuit, therefore we chose the unit of “circuits” as the reference for this initiative.)

- f. Please see the table below. The initiative investment amounts in the table below includes both the accelerated spending shown in the filing Table 12 and the baseline investment in those initiatives. There is a slight change in the 4kV Program and Substations Program numbers in the table below when compared with the table in TUS DR-4. This change is due to the correction of the classification of one project. It was originally classified as a Substations Program project and is now correctly included as a 4kV Program Project within the Substations Elimination Initiative. A set of tables below shows the original, revised, and “delta” for the TUS DR-4 table.

Table TUS 2-f-1

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
4kV Program												
Substation Eliminations Initiative	8.9	1.7	1.3	0.1	0.9	-	13.0	28.0	47.0	-	-	7.5
Stepdown Conversions Initiative	1.0	2.8	1.9	1.4	-	1.1	1.1	6.1	6.1	6.1	1.1	1.1
Modular Integrated Transformer System	2.9	0.3	0.1	0.1	0.1	3.1	5.2	10.9	11.0	3.0	3.1	3.1
Total - 4kV Program	12.8	4.8	3.2	1.7	1.0	4.2	19.3	45.0	64.1	9.0	4.2	11.8
Overhead Program												
Aerial Cable Replacement Initiative	1.3	1.2	1.3	0.6	0.3	1.2	1.2	9.7	9.2	1.8	2.3	2.4
Other Overhead Work	51.1	41.2	53.3	37.3	46.3	41.6	38.8	50.7	39.9	39.8	41.2	42.5
Total - Overhead Program	52.4	42.4	54.6	37.9	46.6	42.8	40.0	60.4	49.1	41.6	43.5	44.9
Underground Program												
Underground Cable Replacement Initiative	-	-	-	-	-	-	5.0	3.5	3.0	0.5	1.0	2.0
Network Transformer and Protector Replacement Initiative	3.6	2.7	4.2	2.6	2.5	2.9	2.8	5.8	5.7	2.7	2.7	2.8
Underground Residential Distribution Rehabilitation Initiative	6.2	0.6	5.4	0.6	0.3	0.9	0.9	5.9	5.9	5.9	5.9	3.5
Other Underground Work	17.0	10.1	19.3	16.2	13.7	23.3	13.1	13.0	13.7	13.0	13.4	13.9
Total - Underground Program	26.7	13.3	28.9	19.4	16.5	27.1	21.8	28.2	28.3	22.1	23.1	22.2
Substation Program												
Breaker & Switch Replacement Initiative	1.3	0.5	1.2	1.2	0.9	1.4	1.4	5.4	5.3	5.2	3.3	2.3
Substation Upgrades Initiative	-	-	-	-	-	-	-	3.0	3.0	-	-	-
Other Substation Work	13.0	9.4	11.2	9.2	3.2	8.2	6.9	4.4	3.6	3.7	3.8	3.9
Total - Substations Program	14.4	9.9	12.4	10.4	4.0	9.6	8.3	12.8	11.9	8.9	7.1	6.2
Highway Relocation Program	1.3	1.8	1.8	2.2	0.9	2.8	2.8	2.8	2.9	2.8	2.9	3.0
Microgrid Program	-	-	-	-	-	-	-	-	-	-	-	-
Total	107.6	72.3	100.9	71.5	68.9	86.4	92.2	149.2	156.3	84.5	80.8	88.1

Table TUS-2-f-2: Revised "TUS DR-4"

	Millions											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
4kV Program	12.8	4.8	3.2	1.7	1.0	4.2	19.3	45.0	64.1	9.0	4.2	11.8
Overhead Program	52.4	42.4	54.6	37.9	46.6	42.8	40.0	60.4	49.1	41.6	43.5	44.9
Underground Program	26.7	13.3	28.9	19.4	16.5	27.1	21.8	28.2	28.3	22.1	23.1	22.2
Substation Program	14.4	9.9	12.4	10.4	4.0	9.6	8.3	12.8	11.9	8.9	7.1	6.2
Highway Relocation Program	1.3	1.8	1.8	2.2	0.9	2.8	2.8	2.8	2.9	2.8	2.9	3.0
Microgrid Program	-	-	-	-	-	-	-	-	-	-	-	-
Total	107.5	72.3	100.8	71.5	69.0	86.4	92.2	149.2	156.3	84.5	80.8	88.1

Table TUS-2-f-3: Original "TUS DR-4"

	Millions											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
4kV Program	8.1	4.8	3.2	1.7	1.0	4.2	19.3	45.0	64.1	9.0	4.2	11.8
Overhead Program	52.4	42.4	54.6	37.9	46.6	42.8	40.0	60.4	49.1	41.6	43.5	44.9
Underground Program	26.7	13.3	28.9	19.4	16.5	27.1	21.8	28.2	28.3	22.1	23.1	22.2
Substation Program	19.1	10.0	12.4	10.4	4.0	9.6	8.3	12.8	11.9	8.9	7.1	6.2
Highway Relocation Program	1.3	1.8	1.8	2.2	0.9	2.8	2.8	2.8	2.9	2.8	2.9	3.0
Microgrid Program	-	-	-	-	-	-	-	-	-	-	-	-
Total	107.5	72.3	100.8	71.5	69.0	86.4	92.2	149.2	156.3	84.5	80.8	88.1

Table TUS 2-f-4: Delta

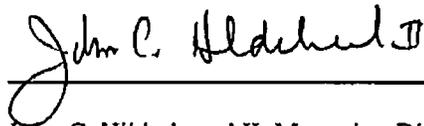
	Millions											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
4kV Program	(4.7)	(0.1)	(0.0)	-	-	-	-	-	-	-	-	-
Overhead Program	-	-	-	-	-	-	-	-	-	-	-	-
Underground Program	-	-	-	-	-	-	-	-	-	-	-	-
Substation Program	4.7	0.1	0.0	-	-	-	-	-	-	-	-	-
Highway Relocation Program	-	-	-	-	-	-	-	-	-	-	-	-
Microgrid Program	-	-	-	-	-	-	-	-	-	-	-	-
Total	0.0	-	0.0	-								

- g. The unit cost calculations used to derive the cost per mile figures in the question appear to use the total Overhead Program cost as the numerator and the miles of aerial cable construction as the denominator. Since the Overhead Program cost figures include investment in other projects, programs and initiatives other than Aerial Cable, the unit cost calculations cannot be performed with the information referenced. (Please note that the \$19 million per mile in the question appears to be in reference to the \$19 million of accelerated investment and not a cost per mile.)

VERIFICATION

I, John C. Hilderbrand II, hereby state that the facts above set forth are true and correct to the best of my knowledge, information and belief, and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa. C.S. § 4904 (relating to unsworn falsification to authorities).

Date: 8/22/16



John C. Hilderbrand II, Managing Director, Engineering & Programs