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File #: 153583

September 28, 2017

***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 UGI Utilities Inc. - Electric Division for Approval of its Long-Term Infrastructure Improvement Plan - Docket No. P-2017-2619834**

Dear Secretary Chiavetta:

Enclosed please find the Reply Comments of UGI Utilities, Inc. – Electric Division, for filing in the above-referenced proceeding. Copies will be provided as indicated on the Certificate of Service.

Respectfully submitted,

Jessica R. Rogers

JRR/jl  
Enclosures

cc: Certificate of Service

**CERTIFICATE OF SERVICE**

**(P-2017-2619834)**

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).

**VIA HAND DELIVERY**

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Commissioner  
PA Public Utility Commission  
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Honorable Andrew G. Place, Vice Chairman  
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Honorable David W. Sweet, Commissioner  
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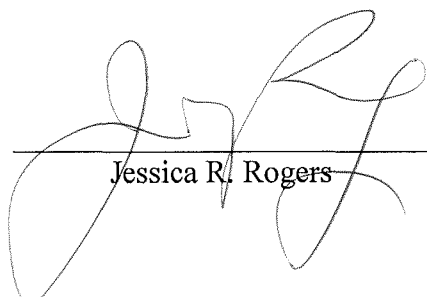
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Date: September 28, 2017



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Jessica R. Rogers

**BEFORE THE  
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Petition of UGI Utilities Inc. – Electric :  
Division for Approval of its Long Term : Docket No. P-2017-2619834  
Infrastructure Improvement Plan :

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**REPLY COMMENTS OF UGI UTILITIES INC. - ELECTRIC DIVISION**

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**TO THE PENNSYLVANIA PUBLIC UTILITY COMMISSION:**

UGI Utilities Inc. - Electric Division (“UGI-ED” or the “Company”) hereby files these Reply Comments in response to Comments of the Office of Small Business Advocate (“OSBA”) to UGI-ED’s Petition for Approval of its Long Term Infrastructure Improvement Plan (“LTIP”). UGI-ED recognizes that 66 Pa.C.S. § 1352,<sup>1</sup> the Final Implementation Order of the Pennsylvania Public Utility Commission (the “Commission”) entered at Docket No. M-2012-2293611 on August 2, 2012 (“Implementation Order”),<sup>2</sup> and the Commission’s regulations at 52 Pa. Code §§ 121.1 to 121.8 do not explicitly provide for Reply Comments. However, UGI-ED requests that the Commission take into consideration these Reply Comments, which address the questions and concerns OSBA has raised regarding the programs identified in the Company’s LTIP.

**I. INTRODUCTION**

On August 16, 2017, UGI-ED filed its proposed LTIP with the Commission. UGI-ED’s LTIP represents the Company’s proactive effort to address its aging infrastructure before it sees increased equipment failures and the resultant negative impacts on reliability. The Company has identified a variety of programs it is undertaking to address its aging infrastructure, and has

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<sup>1</sup> Also known as Act 11 of 2012 (“Act 11”).

<sup>2</sup> *Implementation of Act 11 of 2012*, Docket No. M-2012-2293611, entered on August 2, 2012.

committed to a significant increase in spending for the five year period reflected in the LTIP. The projected average annual spending of \$8.0 million on infrastructure replacement from 2018 through 2022 is double what the Company invested on an annual basis during the baseline period of 2012 to 2015. UGI-ED's infrastructure replacement program, as proposed in its LTIP, will aid the Company in maintaining safe and reliable service.

Pursuant to the Commission's Implementation Order, parties had thirty days to file Comments on UGI-ED's LTIP Petition. On September 15, 2017, the OSBA filed its Comments to UGI-ED's LTIP. OSBA's Comments raise a number of specific questions regarding the Company's LTIP, which UGI-ED will address in these Reply Comments.

## **II. REPLY COMMENTS**

To aid the Commission in its review, UGI-ED will organize its Reply Comments consistent with the OSBA's organization of its Comments, and will reflect the same section headings that OSBA utilized.

### **A. In General**

The OSBA comments that:

UGI Electric appears to have been under-investing in replacement capital over the past few years, and now proposes to accelerate spending in its LTIP. Nevertheless, and to the Company's credit, UGI Electric has already begun the acceleration of spending prior to the submission of its LTIP, although further acceleration is anticipated.

OSBA Comments, p. 2. While the Company appreciates that OSBA supports its voluntary acceleration, the criticism that the Company has under-invested in its system in the past is simply unfounded. UGI-ED, like utilities throughout Pennsylvania and all across America, is managing a system where portions of infrastructure are reaching an age where it may no longer operate reliably. This is not unique to UGI-ED and it poses a challenge for utilities, Commissions, and

state legislators, because a step change in maintenance practices is required to address the aged volume of at risk infrastructure. The General Assembly recognized the tremendous cost, manpower, and proactive planning required to address this situation when it passed Act 11.

The passage of Act 11 has assisted many Pennsylvania utilities, including UGI-ED, in accelerating infrastructure repair and replacement programs to address aging infrastructure. Even without a distribution system improvement charge (“DSIC”) in place, Act 11 has helped UGI-ED come up with a plan for proactively addressing its aging infrastructure, has created an industry-wide discussion about how best to approach infrastructure repair and replacement, and gives the Company some assurance that it may implement a DSIC to help recover infrastructure costs if it meets the appropriate criteria. Act 11 does not, however, address how utilities should strike a proper balance between using existing infrastructure to the fullest extent possible, which is cost-effective, and proactively replacing infrastructure to avoid having a maintenance backlog. UGI-ED believes that its LTIP shows that, under its past and current operating circumstances, its historic maintenance practices efficiently addressed threats to reliability. However, UGI-ED recognizes that the acceleration of programs identified in the LTIP is necessary to address the increasing threat that will be posed by the age of certain parts of its system in the coming years, and to ensure that future reliability is not impacted by the need to replace significant elements of its system.

#### B. Major Distribution System Improvement Projects

OSBA has requested a more detailed explanation of the types of projects in this category. OSBA Comments, p. 3. The projects included in this category are aimed at upgrading and modernizing the primary 3-phase distribution system for reliability, safety and to meet current construction standards. These projects predominantly involve the reconductoring of older, in

some cases highly spliced, and undersized conductors to provide for tie-line capability between substations; building out new tie-lines by adding to existing single and two phase circuits; and creating new feeder circuits to allow for load shifting between substations and to create additional tie-lines. Projects are prioritized based on criteria such as worst performing circuits, large radial loads, loading and poor conductor/line condition.

OSBA comments that “it is questionable whether DSIC-eligible capital should include capital associated with ‘load growth’.” OSBA Comments, p. 3. The primary purpose of Major Distribution System Improvements is to make necessary upgrades to provide safe and reliable service to existing customers. The fact that improving and modernizing facilities, and interconnecting facilities, may allow additional capacity which could be used by future customers is an ancillary benefit and not the primary goal of these projects, and the Commission has already found that such projects are DSIC-eligible. Specifically, at page 23 of its Implementation Order, the Commission addressed the issue of replacement plant that could also be used to serve new customers. The Commission concluded that, “necessary upgrades to existing infrastructure serving existing customers, which may also result in the capability of serving new customers...will be considered a DSIC-eligible project.”

Finally, OSBA questions whether the Company may be double-counting costs that are included in the Major Distribution System Improvement Program. OSBA Comments, p. 3. The Company is not double-counting such work. Specifically, while referenced, sectionalizing and lower voltage conversions are specifically addressed in other programs. The reference to sectionalizing included in the Major Distribution System Improvement Program points to a key benefit of building out new tie-lines to provide a distribution network capability that can be used to restore customers from either side of a fault following sectionalizing. Without tie-lines the

benefit of just sectionalizing (which is the purpose of the Distribution Sectionalizing Program) is limited by the location of the fault relative to the distribution of customers along the line. With respect to 8kV and 4kV Distribution System Conversions, these projects are not included in the Major Distribution System Improvement projects section in the UGI-ED LTIP. They have a separate plan category, and are targeted and accounted for entirely within that category.

C. Wooden Pole Replacements

OSBA asserts that UGI-ED's pole replacement program is flawed. Specifically, OSBA states that:

The LTIP's historical poles replacement pace appears to have been grossly inadequate if not imprudent. The OSBA respectfully submits that the Company should explain why pole replacement has been so slow.

OSBA Comments, p. 4. The data in the Company's LTIP does not support OSBA's conclusion.

The Company has historically been repairing or replacing poles as they failed or as they were evaluated as part of the Company's ongoing inspection and maintenance programs. This approach to infrastructure replacement is consistent with good utility practice, in that it maximizes the value of the original investment and reduces the repair cost that would otherwise be shouldered by customers; it also comports with Commission Inspection and Maintenance requirements. Historically the Company's failure rate for poles was extremely low, which is why the Company only replaced approximately 34 poles per year. Because poles have a long life, and so few poles failed, their failure had only a negligible impact on the Company's ability to provide reliable service.

As the Company showed on page 8 of its LTIP, recently the failure rate of its poles has begun to climb. The Company is responding to this trend by accelerating its approach to pole replacement. As described in Section A of these Reply Comments, the Company will likely

need to continue to accelerate its repair and replacement program, and will need to maintain that pace for many years in order to address the tremendous quantity of plant that is reaching the end of its useful life. As actual experience provides additional pole replacement data, the Company will continuously evaluate the appropriate pace of pole replacement activity.

The Company’s historical pace of replacement was appropriate given the operational circumstances it was faced with, but its LTIP reflects that those historical operating considerations will not continue to apply in the future. The Company has attempted to maximize the value of its existing plant, while taking immediate action to prepare for a future that will require both short term efforts to maintain reliable service, and long-term programs that identify the best ways to continue to strike the balance between cost to customers, reliable service, and resource capabilities in order to replace thousands of poles.

OSBA has asked for more information on how the Company developed its cost estimates on pole replacement. Historical cost data is shown in the following chart:

**Reject Pole Replacement Data, October 2015 thru September 2017**  
9/21/2017<sup>3</sup>

	Estimated Labor	Estimated Materials	Estimated Total
Average Cost Per Reject Pole October 2015 thru September 2017 (to date)	\$5,736.12	\$405.04	\$6,141.16
Average Cost Per Reject Pole, Fiscal Year 2016	\$5,571.03	\$434.90	\$6,005.93
Average Cost Per Reject Pole, Fiscal Year 2017 (to date)	\$5,962.25	\$365.40	\$6,327.66

<sup>3</sup>

Notes:

1. Average cost per reject pole labor calculated from actual contractor bills associated with work requests.
2. Average cost per reject pole material calculated from actual design estimate of work requests.
3. Amounts above do not include Permit fees, which, when applicable, add approximately \$70 to the replacement cost of a pole.



Individual pole replacement costs can vary significantly based on location, facilities on the pole, and soil conditions. The replacement model used in the plan, which assumed a 3% increase in replacement costs per year due to labor increases, was as follows:

Year	Estimated Replacements	Estimated Cost Each	Estimated Replacement Cost
2018	177	\$6,000	\$1,062,000
2019	187	\$6,180	\$1,155,660
2020	198	\$6,365	\$1,260,349
2021	207	\$6,556	\$1,357,167
2022	217	\$6,753	\$1,465,412

D. Underground Residential Cable Replacement/Restoration

In its Comments on underground residential cable replacement and restoration, OSBA first notes a discrepancy between a statement made by UGI in its LTIP that “[o]ver 60% of the cable installed on the UGI-ED system is at least 30 years old” and data shown in a bar chart of page four of the LTIP. The bar chart correctly displays the breakdown in the age of the Company’s underground cable, and shows that only approximately 19% of UGI-ED’s underground residential cable has been in place for more than 30 years.

As mentioned in the LTIP, the URD Cable Replacement Program is focused on the replacement of direct buried, bare concentric neutral underground cable which comprises approximately 50% of the remaining cable installed prior to 1987. Replacement costs can vary significantly based on excavation conditions, project scope (smaller developments), multi-phase systems and restoration costs. UGI-ED typically assumes replacement costs between \$50 and \$75 per trench foot. Considering this cost and the remaining bare concentric neutral cable, UGI-ED expects to complete the replacement of this cable in 5 to 6 years.

E. Substation Transformer Replacements

OSBA has requested that the Company justify its projected costs for substation transformer replacement. OSBA Comments, p. 6. From the data in the LTIP, a reviewer can see that the Company has had limited recent experience in replacing these units. The Company has replaced one transformer since 2011. That total project cost in 2011 was \$413,000. The Company is in the process of preparing to replace a transformer in 2018, and those anticipated project costs are as follows:

25 MVA Power Transformer	\$350,000.00
Transformer Consultant	\$22,000.00
Labor, Engineering, and Testing	\$8,000.00
Crane Service	\$10,000.00
Misc. Materials	\$5,000.00
Overheads (20%)	\$79,000.00
Total	\$474,000.00

As this cost breakdown indicates, transformer cost comprises the most significant component of transformer replacement cost. The Company undertakes a competitive bid process for the purchase of its transformers, and seeks multiple bids in order to obtain the best available price at the time it is purchasing replacement units. The increase in costs between 2018 and 2022 is to account for fluctuations in the cost of labor and materials.

F. Miscellaneous Issues

The OSBA has identified questions regarding six programs in Section F of its Comments: Right-of-Way Reliability Relocations, PennDOT Facility Relocation Projects, Distribution

Automation, Porcelain Cutout and Insulator Replacements, Distribution Circuit Breakers, and Distribution Relay Replacements. For many of these programs, OSBA has criticized the cost basis of the Company's projections.

UGI-ED notes that the LTIP reflects its best estimates on the number of units needed, which will fluctuate based on operating circumstances, and the cost of replacement units, which are done on a competitive bid basis. At this time, the Company is not seeking rate recovery for the plant identified in its LTIP. When it may do so, the Company would only include costs for eligible plant placed in service, and not the estimated amount.

*Right-of-Way Reliability Relocations:* OSBA asks for justification on the increase in cost and need for these projects. OSBA Comments, p. 6.

Restoration time, which equates to the duration of a customer outage, is a factor in the way utility reliability is measured. Off road right-of-way restoration takes longer and is more dangerous because crews, in many cases, cannot use insulated line trucks to access and assist with repairs. These areas may also pose additional vegetation maintenance issues which can impact reliability. UGI-ED looks for opportunities to improve the reliability of these lines by relocating them. The Company notes that it has not identified an increased need for these projects, but it does have a continued need to address relocations to improve repair crew accessibility and reduce the cost of maintenance obligations in the future. The baseline period identified an average of 2 projects per year, and the LTIP plan period identifies 2 to 4 projects per year. LTIP, p. 20.

With respect to cost, relocation costs can vary greatly by project, based on the number of spans and poles being relocated. For this program, rather than using the baseline period costs, the

Company used the most current data available. Therefore, the expenditures were based on the period 2014 through 2016 where the Company’s average spending was \$103,000 per year.

*PennDOT Facility Relocation Projects:* OSBA has challenged the basis for the Company’s forecast for increased costs associated with mandatory PennDOT relocations. OSBA Comments, pp. 6-7. According to PennDOT, Act 89 of 2013 will provide for an additional \$2.3 to \$2.4 billion of transportation investment annually by 2019, including \$1.3 billion for state roads and bridges and \$237 million for local roads and bridges.<sup>4</sup> Given the historically unprecedented increase in PennDOT highway improvement project expenditures, UGI-ED expects a corresponding increase in the number of mandated utility facility relocations, particularly related to bridge construction and replacements of non-contemporary infrastructure.

In developing its cost estimates for this work, the Company compared the following historical average costs to the \$684,177 in costs it experienced in 2016:

2012	2013	2014	2015	12-15 AVG
\$147,572.00	\$89,172.00	\$355,704.00	\$741,802.00	\$333,562.50

The Company believes it is reasonable to predict that future costs will continue at an elevated rate more similar to the 2015/2016 costs, rather than the baseline period’s average.

*Distribution Automation:* OSBA has asked for an explanation of the per unit difference in cost between the baseline period and the LTIP. OSBA Comments, p. 7. The baseline costs shown for Distribution Automation utilized incomplete cost amounts, which inadvertently did not include the cost of the devices. The program period cost estimates, on the other hand,

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<sup>4</sup> For a summary of Act 89 of 2013, *see*:  
<http://www.dot.state.pa.us/public/Bureaus/PublicTransportation/GeneralInformation/Act%2089%20of%202013.pdf>

correctly included the cost of the equipment. Adding the typical cost of the equipment, which is around \$21,000 per location, to the three jobs included in the baseline period, the average amount for the three installations is \$31,000. This is in-line with the estimated program amount.

The Company also notes that during the baseline period, only a few distribution automation projects were completed, as UGI-ED was exploring how best to deploy this technology.

*Porcelain Cutout and Insulator Replacements:* The OSBA has questioned the “significant increase” in cost per replacement for this program. OSBA Comments, p. 7.

UGI-ED had a formal porcelain cut-out replacement program which ended in 2009. The baseline replacement cost per location in 2009 was \$420. For the LTIP baseline period, the Company sporadically replaced cut-outs, which were documented as part of other work. The baseline period cost estimate was a function of the number replaced each year and a cost derived from the 2009 amount increased by 5% annually. For the program period, the Company used the same cost escalation method to get to a 2018 value of \$652 dollars. The Company also validated the reasonableness of the cost estimate for this program through an engineering estimation. UGI-ED then allocated an annual amount of \$50,000 for this program, divided by the \$652 to get an upper bound of approximately 80 replacements per year. Thus, the Company does not believe it has reflected a significant increase in per unit cost.

UGI-ED has budgeted and will spend the entire \$50,000 per year on porcelain cutout replacements, and will continue this program until there are no more porcelain cutouts on its system.

*Distribution Circuit Breakers:* OSBA questions the per unit cost of distribution circuit breakers. OSBA Comments, p. 7.

Only one circuit breaker was replaced during the baseline period. This occurred in 2015 at a cost of \$42,000. The chart on page 31 should have shown an average of .25 replacements per year, rather than one replacement per year, with an average per year cost of \$10,000. This historic experience is in-line with the estimated program amount.

*Distribution Relay Replacements:* OSBA notes that the Company stated in its LTIP that it replaced 4 distribution relays in the past four years, but it indicates in its baseline period that it has not replaced any units, and has spent \$0. OSBA Comments, p. 7.

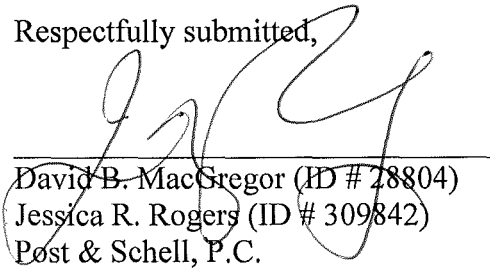
As mentioned in the LTIP, the Company replaced four (4) distribution relay units (“DPU”): Lance Circuit Breaker 80 in May 2013; Kingston Circuit Breaker 315 in March 2015; Kingston Circuit Breaker 1215 in April 2015; and Lance Circuit Breaker 45 in May 2016. These replacements were completed using spare relays, and the work related to the replacements was expensed. The approximate cost of these replacements was \$3,500 each, including labor, which is less expensive than future replacements because new equipment will need to be purchased and the cost of labor has increased.

Forecast spending is based on estimates to replace DPU relays and associated control panels on older switchgear installations, as opposed to the basic relay swap-outs done in 2013 through 2016. This will increase the overall cost of these projects due to panel engineering, fabrication and testing. The expected cost of an individual project is \$12,000, with a maximum estimate of \$20,000 each.

**III. CONCLUSION**

WHEREFORE, UGI Utilities Inc. – Electric Division respectfully requests that the Pennsylvania Public Utility Commission consider the Company’s Reply Comments in making its determination on UGI-ED’s Long-Term Infrastructure Improvement Plan.

Respectfully submitted,



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Of Counsel:

Post & Schell, P.C.


Attorneys for UGI Utilities Inc. - Electric Division

Date: September 28, 2017

**VERIFICATION**

I, Eric W. Sorber, UGI Utilities Inc. – Electric Division, Director Engineering & Operations, hereby state that the information set forth herein is 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: September 28, 2017

  
Eric W. Sorber