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July 28, 2015

**VIA HAND DELIVERY**

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: Pennsylvania Public Utility Commission, et al. v. Duquesne Light Company**  
**Docket No. R-2013-2372129, et al.**

Dear Secretary Chiavetta:

Pursuant to the Joint Petition for Approval of Non-Unanimous Settlement ("Settlement") in the above-referenced proceeding, attached is Duquesne Light Company's ("Duquesne Light") LED Street Light Pilot Program Report ("LED Report"). Please note that Duquesne Light is filing Confidential and Public versions of the LED Report. Duquesne Light requests that the Pennsylvania Public Utility Commission and the parties receiving this report treat the Confidential version of the LED Report as Proprietary and Confidential pursuant to the terms of the Protective Order and/or Stipulated Protective Agreements in the above-referenced proceeding.

Please direct any questions regarding this matter to the undersigned.

Respectfully submitted,

Anthony D. Kanagy

ADK/skr  
Enclosure

cc: Certificate of Service

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*Duquesne Light Company*

*2014/2015 LED Street Light Pilot Program Report*

**PUBLIC VERSION**

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# Duquesne Light Company – LED Street Light Pilot Program Report

## Public Version

### Introduction

Duquesne Light Company (“Duquesne Light” or the “Company”) hereby submits this Light Emitting Diode (LED) Street Light report pursuant to the Company’s Distribution Rate Case Settlement approved by the Pennsylvania Public Utility Commission (“Commission”) at Docket No. P-2013-2372129 (“Rate Case Settlement”). In the Distribution Rate Case proceeding, the Company agreed to submit a report to PennFuture, the Commission, The Bureau of Investigation & Enforcement (I&E), the Office of Consumer Advocate (OCA) and the Office of Small Business Advocate (OSBA) within 90 days after the end of each annual period commencing May 1 in which the program is in effect. The annual reports will outline (a) the actions that Duquesne Light has taken to roll out the program, (b) the responses that have been received from the municipalities, (c) the number of LED fixtures installed in Duquesne’s territory during the preceding year, (d) average cost of the fixtures, (e) average costs of installation and (f) replacement costs for any failed fixtures. Duquesne Light’s first LED Street Light Program commenced on April 30, 2014, therefore, the first annual report is due by July 29, 2015. The following are the Company’s responses to each of the items that have been identified above:

### Summary of LED Street Light Pilot Program

#### (a) Actions Duquesne Light Took to Roll Out Program

Preparations to roll out the 2014/2015 pilot program began in January 2014. A LED Street Lighting Team was assembled to develop an implementation plan. Internal departments included on the team were Major Projects and Customer Accounts, Transmission and Distribution – Maintenance and Services – Street Lighting, Engineering and New Business – GIS and Mapping, Supply Chain, Accounting, Employee and Customer Communications, Governmental Relations, Regulatory Affairs, and Legal. This plan was finalized and approved and the pilot program was communicated to the 154 municipalities within Duquesne Light’s service territory prior to May 1<sup>st</sup> 2014. A letter announcing the program, an application, and the participation requirements and guidelines was sent to all municipal street lighting customers in the Company’s service territory (an example of the materials that were sent to municipalities is included in Appendix A). Announcements were sent via US Mail and email and were addressed to the municipal, borough, and township managers. The program allowed municipalities to convert a minimum of ten (10) contiguously installed 70 Watt and/or 150 Watt High Pressure Sodium (HPS) Cobrahead fixtures to the equivalent 43 Watt and 106 Watt LED Cobrahead fixtures. Participating municipalities were required to accept a minimum of ten (10) LED street lights in a contiguous location. The deadline to apply for the LED Pilot Program was July 15, 2014. A second e-mail was communicated to the municipalities prior to this date to remind them to return their applications before the deadline. A total of 46 participating municipalities receive ten (10) LED street lights leaving a surplus of undersubscribed LED street lights. The undersubscribed LED street lights were allocated on a first come first served basis to the participating municipalities by their respective application dates. In an effort to promote the pilot program, a LED Street Lighting Team representative was assigned to each municipality to answer any questions and to assist with any issues. The LED Street Lighting Team worked closely with the municipalities to answer questions and to provide cost savings analysis, street light locations and wattages. The program was well received and the responses showed a high level of interest to participate. The LED Street Lighting Team worked with the municipalities to determine the locations of 10 contiguous street lights for the LED street light conversion. The first LED street

lights were installed in June 2014 and levelized over the course of one year. All 1,500 LED street lights were subscribed with 100% customer satisfaction. Throughout the year, there was significant interest expressed from the participating and non-participating municipalities in applying for the 2015/2016 pilot program. Duquesne Light received positive publicity about the 2014/2015 LED Pilot Program from a variety of media sources.

(b) Responses Received From Municipalities

Duquesne Light received responses from 46 municipalities to participate in the LED Street Light Pilot Program. Duquesne Light found that non-participating municipalities did not participate due to monetary constraints – the money was either not budgeted for in 2014 or that any additional money that could have been used to participate in the program was dedicated and spent on higher priority issues. Many of the municipalities that did not participate in the 2014/2015 pilot program are planning to participate in the 2015/2016 program.

Overall, the Company received positive feedback from the municipalities. Community leaders and residents expressed that they prefer the “white” light and claimed the lights have enhanced visibility. Duquesne Light was even praised for “Leading the Way” with energy efficient street lighting.

(c) Number of LED Fixtures Installed

Duquesne Light installed 1,500 LED street lights which was the maximum number of lights required by the Company’s Rate Case Settlement. All of the street lights were installed before the end of the pilot program year, April 30, 2015.

(d) Average Cost of Fixtures

The actual cost of a 43 Watt LED street light fixture is [REDACTED] and the actual cost of a 106 Watt street light fixture is [REDACTED]. The costs listed above were applicable during the entire first year of the pilot program.

(e) Average Costs of Installation

The average cost to install a 43 Watt LED street light fixture is \$[REDACTED]. The average cost to install a 106 Watt street light fixture is \$[REDACTED].

The breakdown of the average installation cost per fixtures is as follows:

- 43 Watt LED Fixture – materials cost \$[REDACTED] plus \$[REDACTED] in labor cost is a total average cost of \$[REDACTED].
- 106 Watt LED Fixture – materials cost \$[REDACTED] plus - \$[REDACTED] in labor is a total average cost of \$[REDACTED].

The average installation labor cost of \$[REDACTED] was calculated using the total labor cost incurred to install all of the 1,500 LED street lights.

As stated above, the material costs per fixture are actual costs.

(f) Replacement and Repair Costs

Duquesne Light had one LED street light replacement and three repairs during the first year of the pilot program which ended on April 30, 2015. The total cost of the street light replacement and repairs during the first year of the pilot program was \$[REDACTED].

The breakdown of the average replacement and repair cost is as follows:

The one LED street light replacement was due to a motor vehicle accident and cost \$ [REDACTED] which includes the cost for both labor and materials.

- LED street light replacement – materials cost \$ [REDACTED] plus \$ [REDACTED] in labor is a total cost of \$ [REDACTED]. Please note that this cost does not include replacing the pole.

The other three LED street light repairs were due to two failed photocells and one broken wire which cost the Company a total of \$ [REDACTED] to repair for both labor and materials.

- LED Street light repairs – photocells cost of \$ [REDACTED] (\$ [REDACTED] each) to fix the failed photocells, labor to replace the two photocells of \$ [REDACTED] (\$ [REDACTED] labor each photocell), and \$ [REDACTED] in labor to repair the broken wire for a total repair cost of \$ [REDACTED].

### Conclusion

This report provides details relating to the Duquesne Light 2014/2015 LED Street Light Pilot Program. It provides an overview of the actions that Duquesne Light took to initiate the pilot program and the responses that were received from participating municipalities. The report includes details relating to the number of fixtures installed, associated material and labor costs per fixture and costs associated with replacement and repairs. *The 2014/2015 LED Pilot Program was successfully implemented and well received by customers. The overall response to the LED pilot program was very positive and demonstrates that the municipalities in Duquesne Light's service territory are interested in converting the HPS street lights to LED street lights. The feedback that the Company received regarding the willingness of the municipalities to participate in the program was due to cost savings and environmental concerns. All 1,500 LED street lights were subscribed and there were several municipalities that would have applied for a greater number if they were available. Some municipalities that did not participate or participated minimally in the first year due to budgetary reasons, but are planning on participating in the 2015/2016 pilot program. Currently, the 2015/2016 Pilot Program is underway and Duquesne Light will distribute an additional 1,500 LED street lights. The 2015/2016 program will run from May 2015 through April 2016.*

APPENDIX A – Communications Material

April 30, 2014

Re: LED Municipal Cobrahead Street Lighting Conversion Pilot Program

Dear Municipal Street Lighting Customer,

For 125 years, Duquesne Light Company has been illuminating the Pittsburgh region with reliable and efficient street lighting. In keeping with our vision and our pledge to provide new energy and new technologies for a sustainable future; we are proud to announce that we are offering our Municipal Street Lighting customers an opportunity to participate in a LED Cobrahead Street Lighting Conversion Pilot Program. The program will allow municipalities to convert a minimum of ten (10) contiguously installed 70 Watt and/or 150 Watt High Pressure Sodium (HPS) Cobrahead fixtures to the equivalent 43 Watt and 106 Watt LED Cobrahead fixtures. There will be a charge associated with the removal of the existing High Pressure Sodium (HPS) street lights which is set forth in enclosed documents.

The Duquesne Light LED Pilot Program has been approved by the PA Public Utility Commission. The energy efficient LED Cobrahead Street Light will be added to the Municipal Street Light rate (Tariff SM) and all facilities will continue to be installed, maintained, and owned by Duquesne Light Company. The pilot program will begin May 1, 2014 and all municipalities in our service territory are eligible to participate upon the filing of an application and meeting the requirements of the pilot program.

We are looking forward to working with our municipal partners to make this new and exciting opportunity a success. Attached you will find the guidelines and requirements to participate in the pilot program, a list of frequently asked questions, and an application for enrollment. Please do not hesitate to contact us with any questions that you may have about the program. Send your questions to [LEDPILOT@duqlight.com](mailto:LEDPILOT@duqlight.com) or call (412) 393-2373 and a member of our Duquesne Light LED Street Lighting Team will return your call within approximately three (3) business days.

*Helping to keep the future bright for generations to come with new energy and new technology,*

Judith Kroll

LED Street Lighting Team Lead

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## **PURPOSE OF DUQUESNE LIGHT'S LED STREET LIGHTING PILOT PROGRAM**

The Duquesne Light LED Cobrahead Street Lighting Pilot Program is a result of a settlement agreement between Duquesne Light and other parties, including PennFuture, to advance LED Street Light Technology. The technology for LED Street Lights is relatively new and there are currently no long-term studies regarding their performance and longevity or any data that can predict future maintenance costs and acceptance by customers and the public once installed along roadways. The pilot program will provide Duquesne Light, PennFuture and our municipalities with valuable data related to life cycle performance, maintenance costs, and public response to the new LED fixtures. The Pilot Program provides a maximum of 1,500 LED Street Lights to be installed yearly. This will allow all interested municipalities to participate during the pilot periods which begins May 1, 2014 and will remain in effect until the Commission enters an Order in Duquesne Light's next base rate case.

## **DUQUESNE LIGHT'S LED COBRAHEAD STREET LIGHT PILOT PROGRAM**

### **PARTICIPATION REQUIREMENTS**

- Duquesne Light will install up to a maximum of 1,500 LED Cobrahead Street Lights yearly in nominal LED Lamp wattages of 43 or 106 watts, which are equivalent to 70 watt and/or 150 watt Cobrahead High Pressure Sodium Street lights, respectively, under Rate SM. Duquesne Light will incur the cost of the LED Street Light Fixture and the installation costs and include them in its utility rate base.
- Duquesne Light will offer participation in the LED Street Light Pilot Program beginning in May 2014.
- The LED street lights will be offered to all of our Municipal Street Lighting Customers with existing 70 and 150 watt Cobrahead High Pressure Sodium Lights installed under Duquesne Light's Rate SM.
- Municipalities interested in participating in the 2014 pilot program must submit their application to our LED Street Lighting Team via e-mail at [LEDPILOT@duqlight.com](mailto:LEDPILOT@duqlight.com) by **July 15, 2014**. If you do not have access to an email account; please mail your application to 'Duquesne Light LED Pilot Program' c/o New Business 2645 New Beaver Ave., Pittsburgh, PA 15233. For 2015 and beyond, applications must be received by May 1<sup>st</sup> of each year.
- Participating municipalities are required to accept a minimum of (10) LED street lights in a contiguous location.
- Duquesne Light reserves the right to limit participation in any year of the pilot program.
- Only existing 70 Watt and 150 Watt High Pressure Sodium (HPS) Cobrahead street light fixtures will be converted to their equivalent 43 Watt and 106 Watt Cobrahead LED fixture.
- The current monthly distribution cost for a 43 Watt LED street light (equivalent to 70 watt HPS) will be \$11.16 per light (cost does not include supply charges).

- The current monthly distribution cost for a 106 Watt LED street light (equivalent to 150 watt HPS) will be \$12.82 per light (cost does not include supply charges).
- The 2014 removal charge for each HPS street light fixture is \$109.00. Payment is required before the conversion can be scheduled. Acceptable payment method is by check made out to Duquesne Light Company and mailed to 'Duquesne Light LED Pilot Program c/o New Business' 2645 New Beaver Ave., Pittsburgh, PA 15233.
- If the pilot program is undersubscribed in any period it may be possible for the participating municipalities to receive more than ten (10) LED street lights at the discretion of Duquesne Light, provided there are a minimum of ten (10) contiguous lights at any location.
- Upon receipt of the application a LED Street Lighting Team Member will contact you to review your application and discuss the details of converting the street lights.
- All questions pertaining to the LED Pilot Program should be sent to [LEDPILOT@duqlight.com](mailto:LEDPILOT@duqlight.com) or contact us at 412-393-2373.

#### FREQUENTLY ASKED QUESTIONS

**What LED street light fixture did Duquesne Light select for the pilot program?** *After an extensive study and an internal pilot program; Duquesne Light selected the GE Evolve LED Roadway Scalable Cobrahead fixture. The GE Evolve fixture was awarded a "Best in Class" designation in 2012 Next Generation Luminaires Solid State Lighting Design Competition in the Roadway Lighting category. The award was created to recognize excellence in energy-efficient LED commercial lighting unit design.*

**Why isn't the LED Street Light Rate significantly lower than the HPS Street Light Rate?** *The rate does not include the energy or supply charges. The monthly rate is for Distribution only which includes the cost of the new LED street light fixture and an estimate of associated maintenance costs. LED Street Lights are a relatively new technology and there is currently considerable uncertainty regarding the life span of the LED street lights. In addition, a LED fixture is much more expensive than the equivalent HPS fixture.*

**Why are we being charged maintenance costs?** *While industry expert predict that LED street lights can have up to a 12 year life span there is currently no data that substantiates this prediction. The LEDs or Light Emitting Diodes do have an extended life compared to HPS lamps, but they are not maintenance-free. Other components, i.e. drivers, photocells of LED fixture have the same potential to fail as an HPS fixture. Additionally, street lights are susceptible to damage by motor vehicle accidents, lightning strikes, and vandalism.*

**Who selects the location of the LED street lights and who will determine if the street lights are in a contiguous location?** *The municipalities will be required to identify and submit the proposed location of the HPS/LED conversion. Duquesne Light field personnel will verify that the street lights submitted by municipalities are in a contiguous location and meet the criteria of the program. HPS street lights will not be allowed to be interspersed with the new LED street lights on any street or roadway.*

**What is the definition of contiguous?** *Contiguous means “connected throughout in an unbroken sequence or touching along a common border immediately next to each other.” The purpose of the pilot program is to demonstrate and observe the difference between the existing HPS “lighting” and new LED “lighting” in a location that is currently lit.*

**How do we apply for the pilot program?** *All applications must be sent to the following e-mail address: [LEDPILOT@duqlight.com](mailto:LEDPILOT@duqlight.com) or if you do not have e-mail send to ‘Duquesne Light Pilot Program’ c/o New Business 2645 New Beaver Ave., Pittsburgh, PA 15233 by July 15, 2014.*

**When is the deadline and what if we miss the deadline?** *The deadline for applications for 2014 is July 15, 2014 and by May 1<sup>st</sup> for 2015 and beyond. Late responses may be considered for the pilot program if it is undersubscribed.*

**What if we have a question or need help filling out my application?** *Send all questions to our e-mail address [LEDPILOT@duqlight.com](mailto:LEDPILOT@duqlight.com) or by calling 412-393-2373 and a member of our LED Street Lighting Team will contact you within approximately 3 business days to answer your questions or offer any assistance.*

**How many municipalities did you include to participate in the pilot program?** *The pilot program is being offered to all municipalities in Duquesne Light service territory. Private Area Lighting customers are not eligible to participate in the program.*

**Can we install new LED street lights where we currently do not have any?** *No, the current program is a replacement program, but the Company will also consider circumstances where a municipality has taken down lights which have not been replaced; provided the HPS Streetlight was taken down sometime after January 1, 2013.*

**Can we apply for more than ten (10) LED street lights?** *Yes, but you must take a minimum of 10 contiguous street lights and the award will depend on the overall interest in the program.*

**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).

**FIRST CLASS MAIL**

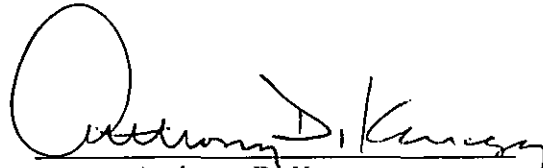
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Date: July 28, 2015

  
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