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March 16, 2023

Via Electronic Mail board.secretary@bpu.nj.gov

Sherri Golden

Secretary of the Board

44 South Clinton Avenue, 1ST Floor

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Trenton, NJ 08625-0350

**Re: In the Matter of the Implementation of the Light Emitting Diode ("LED")
Streetlight Program
BPU Docket NO. QO22110710**

Dear Board Secretary Golden:

Please accept for filing these comments being submitted on behalf of the New Jersey Division of Rate Counsel ("Rate Counsel") pursuant to the Notice issued by the Board of Public Utilities ("Board") in this matter on March 1, 2023. In accordance with the Notice, these comments are being filed electronically at board.secretary@bpu.nj.gov.

Please acknowledge receipt of these comments.

Thank you for your consideration and attention to this matter.

Respectfully submitted,

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By:

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ML
Enclosure

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In the Matter of the Implementation of the Light Emitting Diode (“LED”) Streetlight Program

BPU Docket No. QO22110710

Comments of the New Jersey Division of Rate Counsel

March 16, 2023

Introduction

In general, Rate Counsel supports conversion of street lights to LED technology as an attractive opportunity to significantly reduce energy usage, reduce operating costs, reduce maintenance costs, improve public safety and comfort, and support future infrastructure all at the same time and with the same investment. According to the American Council for an Energy Efficient Economy (“ACEEE”), “Street lighting is often the first or second largest local government energy use, typically accounting for 25–50% of a municipal energy bill.”¹ ACEEE also notes that “[c]onverting all street and highway lights in the United States to LEDs could save 20,200 GWh annually, equivalent to 0.5% of all electricity consumed in the country ... DOE estimates that expanded adoption of high-efficiency street lighting could save communities across the country \$1 billion a year.”²

In an effort to achieve LED conversion in a prudent manner, Rate Counsel provides these comments in response to the following questions posed by the Board of Public Utilities (“Board”) Staff in the March 1, 2023 Notice and Request for Comments:

Questions for EDCs and GDCs as applicable:

1. Do you have a complete inventory of streetlights in your service territory, including type (bulb, light fixture and pole), ownership, vintage, original cost, accumulated depreciation, and remaining service life? Please provide the most granularity possible in

¹ ACEEE Toolkit, “Reducing Energy Use in Public Outdoor Lighting” (January 1, 2015). Available at <http://www.aceee.org/toolkit/2020/02/reducing-energy-use-public-outdoor-lighting>.

² Ibid.

narrative form with a level of detail that would explain what information you have with respect to each of the listed items.

Not applicable.

2. What is your process and schedule for validating the streetlights inventory mentioned in Question #1 above, and when was it most recently validated?

Not applicable.

3. How many gas streetlights, if applicable, do you have in your service area? Please provide the breakdown according to the location in each applicable municipality.

Not applicable.

4. Of the streetlights in your service area, how many are municipally-owned, and how many are utility-owned?

Not applicable.

5. How regularly do you replace the bulbs in the current streetlight fixtures? Please describe your streetlight replacement program(s).

Not applicable.

6. Physical Lights

A. LED Inventory

- i. What is your current LEDs inventory in terms of: (a) how many you have, (b) vintage year, (c) fixture types, (d) color temperature (Kelvin), (e) brightness levels (lumen output) and (f) costs for each bulb type?
- ii. What type of LED fixtures and bulb types (brightness level and color) could a municipality in your service territory order? Can municipalities order LED fixture and bulb types of their choice from you?
- iii. Do you provide bulk discounts on LED purchases and, if so, what are they?
- iv. Do you have a standard contract under which a municipality must procure its streetlights?

B. Non-LED Inventory

- i. What is your current non-LED inventory? Please describe the models and numbers of each.

- ii. What are the costs of bulbs for each streetlight fixture type?

Not applicable.

7. Poles

- A. How does your ownership model for the poles work? Please explain.
- B. Do you ever give municipalities an opportunity to purchase the poles from you?
- C. If municipalities do own the poles, what maintenance, replacement, or other pole-related services do you as an EDC provide to those municipalities?
- D. What challenges exist now to installing new technologies on poles such as motion activation, smart streetlight technologies, gunshot detection, traffic cameras, Wi-Fi hotspots, electric vehicle charging equipment, etc.? Please describe.

Not applicable.

8. Lighting Standards

- A. What standards (list all, including Bright Sky standards) do you use to inform which types of lights can be installed along various roadways, as well as in parking areas and around parks, schools, hospitals, universities, other campuses?
- B. How does compliance with each of these standards influence the range of fixtures you can offer to municipalities for their usage?

Not applicable.

- 9. Under an accelerated LED replacement program, please describe how the stranded cost issues with respect to the following could be resolved: (a) current inventory regarding spare streetlight bulbs and (b) currently operational bulbs that have been placed in light fixtures but have not yet reached the end of their useful life.

Rate Counsel Response: Municipalities should bear the full cost of streetlight replacement, including the undepreciated cost of equipment being replaced, and should assume the full benefit of energy and maintenance cost savings. Rate Counsel provided several examples of streetlight replacement programs in other states as part of its comments under BPU Docket No.

EO20010086.³ In none of these programs had the undepreciated or stranded cost of existing equipment been socialized to other ratepayers, and it should not be socialized in New Jersey.

Additionally, in general, responsibility for the cost of “current inventory regarding spare streetlight bulbs” should not be borne by ratepayers or municipalities, because they are not “used and useful” as required for inclusion in rates. An exception may be made if the bulbs can be shown to have been purchased specifically as part of a maintenance program for a specific utility, and they represent the minimum inventory necessary for an adequate replacement program.

Questions for EDCs, GDCs, and other stakeholders as applicable:

10. Tariffs

- A. What is the current utility tariff and corresponding rate structure under such tariff for electric and gas streetlights, respectively?

Not applicable.

- B. What tariff and what rate structure are you using when municipalities seek to pursue an LED streetlight conversion?

Not applicable.

- C. What issues have you encountered with your current tariff structure with municipalities interested in conducting an LED streetlight conversion?

Not applicable.

- D. Some utilities have designed tariffs to allow municipalities that convert streetlights to LEDs to pay the associated purchase, conversion, and/or stranded costs over time at a rate no greater than the electric energy cost savings, thereby avoiding any cost increase for the municipalities or ratepayers in general.

- i. Do you have such a tariff to prevent cost impacts for municipalities?
- ii. If not, do you intend to develop one to support LED streetlight conversions?

³ See I/M/O the LED Streetlight Conversion and Tariffs, BPU Dkt. No. EO20010086, Rate Counsel comments submitted in response to Staff Stakeholder Notice (February 21, 2020).

- iii. What would be the impact of such a tariff on ratepayers in general?
- iv. What do you see as the overall benefits and drawbacks of such a proposal?

Rate Counsel Response: In all of the several examples of streetlight replacement programs in other states provided by Rate Counsel as part of its February 21, 2020 comments under BPU Docket No. EO20010086,⁴ the tariffs were designed to allow municipalities to pay off the cost of replacement over time from the savings achieved, thus incurring no additional cost or requiring any rate increase for retail customers or taxpayers. Once replacement costs were fully paid, the municipalities would reap the entire benefit of reduced energy and maintenance costs. This is the same concept already employed by the New Jersey Energy Savings Improvement Program (“ESIP”). ESIP is an established program that enables local government entities to finance the implementation of energy conservation measures and permits the retrofitting of public facilities with energy conservation measures without having to budget up front for new capital investment. By using ESIP financing, the future value of energy savings is leveraged to pay for the up front project costs.⁵

More recently, the City of Philadelphia has undertaken a similar program, the Philly Streetlight Improvement Project⁶, through a partnership with the Philadelphia Energy Authority. This program involves the replacement of 120,000 high pressure sodium streetlights with LED streetlights, the linking of all newly- and already-converted LED streetlights to a lighting management system and an audit to include cobra heads (roadway), alleyway, and decorative (residential and commercial corridor) lighting over the course of three years.⁷ It is estimated that these upgrades will save the City of Philadelphia \$5.4 million annually and reduce carbon

⁴ *Id.*, p. 5-7.

⁵ See ESIP Guidebook Volume 2, p. 2-3 (June 2019). Available at https://www.njcleanenergy.com/files/file/ESIP/ESIP_HowToGuide%20V2%202019.pdf

⁶ <https://www.phillystreetlightimprovement.com/> (last visited March 13, 2023).

⁷ Dora Chi and Energy Office, “City Prepares to Convert 120,000 Streetlights to LEDs” (May 20, 2022). Available at <https://www.phila.gov/2022-05-20-city-prepares-to-convert-120000-streetlights-to-leds/>.

emissions by 15,000 metric tons each year. The multi-million-dollar investment will be budget neutral as it will be paid for by the resulting savings generated from the energy efficiency improvements.⁸

- E. Would there be a benefit for municipalities to own the streetlights that are converted? In other words, if renting now, they would have the option to purchase and own the streetlights and be responsible for the replacement.

Rate Counsel Response: See response to F below.

- F. What are the benefits of the utilities retaining ownership and maintenance of the streetlights that are converted?

Rate Counsel Response: Rate Counsel recommends that all municipalities be offered the option of purchasing and owning their own streetlights, and that the utilities be required to sell them at a cost no greater than the net book value of the existing infrastructure, plus a reasonable administrative fee. If this was not an option and the costs of maintenance are not built into the municipality's tariff rate, captive EDC ratepayers could be paying for the maintenance of streetlights in one particular municipality where they do not live or work and that they may never visit. Municipalities may have greater flexibility than the utilities in finding lower-cost contractors by obtaining multiple competitive bids for the maintenance work associated with the streetlights. In order for municipalities to make this decision, utilities should be required to provide each municipality with an itemized list of the costs associated with each option, both with and without purchasing the fixtures. The itemized costs should include, among other factors, the book value, original cost and depreciation, and how each cost was developed. Further, municipalities should have the option of paying the maintenance costs to their utility as part of the tariff rate, soliciting competitive bids for the maintenance of those lights, or performing maintenance themselves with municipal resources.

⁸ Ibid.

11. Please describe any additional services that utilities may provide that are integrated into the conversion of LED fixtures.

Rate Counsel Response: Streetlight conversions can often be accompanied by additional technology deployments, such as traffic, parking, and safety monitors; weather monitoring; motion sensors and safety cameras; gunshot detection; and support for technology such as advanced wireless and the so-called Internet of Things.⁹ These technologies are available on the **competitive** market and need not be provided by the public utility. New Jersey municipalities that wish to take advantage of these additional opportunities will need to ensure that their streetlight poles are adequate in both design and condition to accommodate these additional uses. This is another reason why municipalities should be directly involved with the financial decisions concerning streetlight replacements at the outset. If additional costs are imposed by the need to upgrade or replace utility poles or other infrastructure to support these non-electricity-related services, these costs should not be funded through individual electric ratepayers' utility rates but rather by the municipalities who advocate for the additional amenities.

Conclusion

Once again, Rate Counsel appreciates the opportunity to provide our comments and looks forward to working closely with Staff to provide input on the proposal and its ratepayer impacts. Thank you for your consideration and attention to this matter.

⁹ See, for example, <https://spectrum.ieee.org/computing/it/san-diego-installs-smart-streetlights-to-monitor-the-metropolis>.