

July 1, 2016

BY HAND DELIVERY AND ELECTRONIC MAIL

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

**RE: National Grid's Tariff Advice Filing to Amend Tariffs
RIPUC Nos. 2110, 2111, and 2112
Company-Owned LED Streetlighting Proposal
Docket No. _____**

Dear Ms. Massaro:

Pursuant to Rhode Island Public Utilities Commission (PUC) Rule 1.9(c), I have enclosed ten (10) copies of National Grid's¹ tariff advice filing to amend the Company's Decorative Street and Area Lighting Service Provision, RIPUC No. 2110 (S-06), Limited Service – Private Lighting Provision, RIPUC No. 2111 (S-10), and General Street and Area Lighting Service Provision, RIPUC No. 2112 (S-14) (collectively, Streetlighting Tariffs). These proposed amendments are necessary to implement National Grid's proposed Company-Owned LED Streetlighting Offering (LED Offering).

This filing includes Joint Testimony and Schedules of Raymond J. Sheridan III, Jeanne A. Lloyd, and Robin E. Pieri in support of the LED Offering. The Schedules include clean and marked versions of the Streetlighting Tariffs reflecting the proposed changes.

Background

The Company currently has four tariffs for street lighting service: (1) *Street and Area Lighting – Company-Owned Equipment Rate S-14* is available to municipal customers for municipal-owned or accepted roadways and for area lighting; (2) *Limited Service – Private Lighting Rate S-10* is limited to private lighting customers with locations having existing service under this rate on the effective date of the service offering, as well as new customers at locations previously served under this rate; (3) *Decorative Street and Area Lighting – Company-Owned*

¹The Narragansett Electric Company d/b/a National Grid (National Grid or the Company).

Equipment Rate S-06 is available to municipal and other government customers for municipally-owned or accepted roadways; and (4) *Street and Area Lighting – Customer-Owned Equipment Rate S-05* is available to any municipal customer that has purchased designated Company street lighting equipment pursuant to R.I. Gen. Laws § 39-30-1-5. In this filing, the Company is only proposing revisions to the tariffs for Rates S-06, S-10, and S-14 in order to implement its LED Offering.

The LED Offering will enable the Company to provide a selection of LED luminaires that would be owned and maintained by the Company. These luminaires would replace existing incandescent, mercury vapor, and high pressure sodium (HPS) lighting equipment installed at existing locations, as requested by the customer, or installed in new locations on new poles or standards. The Company believes that the LED Offering will be very beneficial to certain streetlighting customers because the Company has received numerous requests from municipal customers for street lighting facilities that are more energy efficient, while providing effective lighting for municipal outdoor settings. These customers have specifically requested an option that involves Company-owned and maintained equipment.

Summary of Tariff Revisions

The general changes to the Streetlighting Tariffs are as follows:

Decorative Street and Area Lighting Service Provision, RIPUC No. 2110 (S-06)

- Assigned RIPUC No. 2166 as the new tariff number
- Added October 1, 2016 as the effective date
- Revised Sheets 2 and 3 to incorporate the LED Offering

Limited Service – Private Lighting Rate, RIPUC No. 2111 (S-10)

- Assigned RIPUC No. 2167 as the new tariff number
- Added October 1, 2016 as the effective date
- Revised Sheet 2 to reflect changes to the annual kWh for incandescent luminaires. In revising the Streetlighting Tariffs to incorporate the necessary changes for the LED Offering, the Company realized that the previous versions of the S-10 Tariff only showed the annual kWh for the fixture and ballast but did not include the additional kWh for the photoelectric control. As such, the Company took this opportunity to correct this inadvertent omission and correctly state the total annual kWh in the tariff.
- Revised Sheets 3, 4, and 6 to incorporate the LED Offering

General Street and Area Lighting Service Provision, RIPUC No. 2112 (S-14)

- Assigned RIPUC No. 2168 as the new tariff number
- Added October 1, 2016 as the effective date
- Revised Sheet 2 to reflect changes to the annual kWh for incandescent luminaires for the reasons described above regarding the same changes to the S-10 Tariff.
- Revised Sheets 3, 4, and 11 to incorporate the LED Offering

Luly E. Massaro, Commission Clerk
Tariff Advice Filing to Amend RIPUC Nos. 2110, 2111, and 2112
Company-Owned LED Streetlighting Offering
July 1, 2016
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Thank you for your attention to this matter. If you have any questions regarding this filing, please contact me at 781-907-2121.

Very truly yours,



Raquel J. Webster

Enclosures

cc: Leo Wold, Esq. Division
Steve Scialabba, Division
Cynthia Wilson-Frias, Esq., PUC
Todd Bianco, PUC
Alan Nault, PUC

National Grid

The Narragansett Electric Company

Company-Owned LED
Streetlighting Offering

Testimony and Schedules of:

Raymond J. Sheridan III,
Jeanne A. Lloyd and Robin E. Pieri

July 1, 2016

Submitted to:
Rhode Island Public Utilities Commission
RIPUC Docket No. ____

Submitted by:

nationalgrid

The Narragansett Electric Company
d/b/a National Grid
RIPUC Docket No. _____
Company-Owned LED Streetlighting Proposal
Witnesses: Raymond J. Sheridan, Jeanne Lloyd, and
Robin E. Pieri

JOINT PRE-FILED DIRECT TESTIMONY

OF

RAYMOND J. SHERIDAN III

JEANNE A. LLOYD

AND

ROBIN E. PIERI

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1 **I. Introduction**

2 **Raymond J. Sheridan III**

3 **Q. Mr. Sheridan, please state your name and business address.**

4 A. My name is Raymond J. Sheridan III, and my business address is 40 Sylvan Road,
5 Waltham, Massachusetts 02451.

6
7 **Q. By whom are you employed and in what capacity?**

8 A. I am the Manager of Outdoor Lighting and Attachments for National Grid USA Service
9 Company, Inc., a subsidiary of National Grid USA (National Grid). This department
10 manages all regulatory, business, and information system functions associated with street
11 and area lighting in National Grid's New England and upstate New York service
12 territories, including The Narragansett Electric Company, d/b/a National Grid (the
13 Company).

14
15 **Q. Please describe your educational background and business experience.**

16 A. I graduated in 2001 with a Bachelors of Science in Electrical Engineering from
17 Rensselaer Polytechnic Institute. In 2011, I began my employment at National Grid as a
18 Senior Analyst in Procurement Strategy prior to accepting my current position as
19 Manager of Outdoor Lighting and Attachments in May 2016. I worked in the electrical
20 contracting industry prior to beginning my employment at National Grid.

1 **Q. Have you previously testified at the Rhode Island Public Utilities Commission**
2 **(PUC)?**

3 A. No, I have not testified at the PUC.
4

5 **Jeanne A. Lloyd**

6 **Q. Ms. Lloyd please state your name and business address.**

7 A. My name is Jeanne A. Lloyd, and my business address is 40 Sylvan Road, Waltham,
8 Massachusetts 02451.
9

10 **Q. By whom are you employed and in what capacity?**

11 A. I am a Principal Program Manager in Electric Pricing, New England in the Regulation
12 and Pricing group of National Grid USA Service Company, Inc. This department
13 provides rate-related support to the Company.
14

15 **Q. Please describe your educational background and training.**

16 A. In 1980, I graduated from Bradley University in Peoria, Illinois with a Bachelor's degree
17 in English. In December 1982, I received a Master of Arts degree in Economics from
18 Northern Illinois University in DeKalb, Illinois.
19

20 **Q. Please describe your professional experience.**

1 A. I was employed by Eastern Utilities Association (EUA) Service Corporation in December
2 1990 as an Analyst in the Rate Department. I was promoted to Senior Rate Analyst on
3 January 1, 1993. As a Senior Rate Analyst, my responsibilities included the study,
4 analysis and design of the retail electric service rates, rate riders, and special contracts for
5 the EUA retail companies. After the merger of New England Electric System and EUA
6 in April 2000, I joined the Distribution Regulatory Services Department as a Principal
7 Financial Analyst. I was promoted to Manager of New England Electric Pricing on
8 October 1, 2006. I assumed my current position in July 2014. Prior to my employment
9 at EUA, I was on the staff of the Missouri Public Service Commission in Jefferson City,
10 Missouri in the position of research economist. My responsibilities included presenting
11 both written and oral testimony before the Missouri Public Service Commission in the
12 areas of cost of service and rate design for electric and natural gas rate proceedings.

13
14 Q. Have you previously testified at the PUC or at any other regulatory commission?

15 A. Yes. I have testified before the PUC on numerous occasions in support of various rate-
16 related issues. I have also testified in proceedings at the Massachusetts Department of
17 Public Utilities.

18
19 **Robin E. Pieri**

20 Q. Please state your full name and business address.

21

1 A. My name is Robin E. Pieri and my business address is 40 Sylvan Road, Waltham,
2 Massachusetts 02451.

3 **Q. By whom are you employed and in what capacity?**

4 A. I am a Senior Analyst, also in New England Electric Pricing in the Regulation and
5 Pricing Department of National Grid USA Service Company, Inc.
6

7 **Q. Please describe your educational background.**

8 A. In 1998, I graduated from the University of Massachusetts in Lowell, MA with a
9 Bachelor of Psychology degree.
10

11 **Q. Please describe your professional experience?**

12 A. For approximately fifteen years before joining National Grid, I was employed by
13 Advantage Resourcing America (Advantage) as a Senior Financial Analyst. In that role,
14 I was responsible for budgeting, forecasting, and analysis for numerous Advantage
15 business units around the world, as well Advantage's Corporate Division. Prior to
16 working at Advantage, I held various positions in accounting and finance. I began my
17 employment with National Grid as a Senior Analyst in New England Electric Pricing in
18 March 2015.
19

20 **Q. Have you previously testified at the PUC?**

1 A. Yes, I recently submitted pre-filed testimony in the Company's annual Revenue
2 Decoupling Mechanism (RDM) Reconciliation Filing in Docket No. 4617.

3
4 **II. Purpose of Joint Testimony**

5 **Q. What is the purpose of your joint testimony?**

6 A. Our testimony presents the Company's proposed modifications to its existing Company-
7 owned street lighting tariffs to incorporate a proposal to offer outdoor lighting service
8 using Light Emitting Diode (LED) technology. Additionally, our testimony proposes the
9 annual luminaire charges for each LED fixture.

10
11 **Q. Are you sponsoring any schedules in addition to your testimony?**

12 A. Yes. The schedules that we are sponsoring are as follows:

Schedules	Description
Schedule NG - 1	Proposed Tariffs – Clean Version
Schedule NG - 2	Proposed Tariffs – Marked to Show Changes Version
Schedule NG - 3	Proposed LED Luminaire Charges
Schedule NG - 4	Installed Cost of LED Fixtures
Schedule NG - 5	Proposed Temporary Turn-Off Pricing for LED
Schedule NG – 6	Bill Comparison of Company-Owned LED and HPS Pricing
Schedule NG - 7	Proposed Streetlighting Summary of Retail Rates

1 **III. Overview of Proposal**

2 **Q. Please describe the Company's current street lighting service offerings.**

3 A. The Company currently has four tariffs for street lighting service. *Street and Area*
4 *Lighting – Company-Owned Equipment Rate S-14* (Rate S-14) provides for unmetered
5 electric service and for maintenance of Company-owned equipment. It is available to
6 municipal customers for municipal-owned or accepted roadways and for area lighting.
7 *Limited Service – Private Lighting Rate S-10* (Rate S-10) provides for unmetered electric
8 service and for maintenance of Company-owned equipment. This rate is limited to
9 private lighting customers with locations having existing service under this rate on the
10 effective date of the service offering, as well as new customers at locations previously
11 served under this rate.
12 *Decorative Street and Area Lighting – Company-Owned Equipment Rate S-06* (Rate S-
13 06) provides for unmetered electric service and for maintenance of Company-owned
14 underground served, decorative street lighting equipment. It is available to municipal and
15 other government customers for municipally-owned or accepted roadways.
16 *Street and Area Lighting – Customer-Owned Equipment Rate S-05* (Rate S-05) provides
17 delivery service to customer-owned equipment and is available to any municipal
18 customer that has purchased designated Company street lighting equipment pursuant to
19 R.I. Gen. Laws § 39-30-1-5. In addition, Rate S-05 provides delivery service to
20 customer-owned LED equipment as approved by the PUC in Docket No. 4442.

1 **Q. Which tariffs are the Company proposing to revise as part of this proposal?**

2 A. The Company is proposing revisions to the tariffs for Rates S-06, S-10, and S-14 for the
3 purpose of offering a Company-owned LED lighting service option. These proposed
4 tariffs, both clean and marked to show changes versions, are presented in Schedules NG-
5 1 and NG-2, respectively.

6
7 **IV. LED Street and Area Lighting Proposal**

8 **Q. Please describe the Company’s proposal to create an LED street and area lighting**
9 **service option as part of Rates S-06, S-10, and S-14.**

10 A. The purpose of the LED lighting service option is to allow the Company to provide a
11 selection of LED luminaires that would be owned and maintained by the Company.
12 These luminaires could replace existing incandescent, mercury vapor, and high pressure
13 sodium (HPS) lighting equipment installed at existing locations as requested by the
14 customer, or could be installed in new locations on new poles or standards.

15
16 **Q. Has the Company received any inquiries about offering an LED street and area**
17 **lighting service?**

18 A. Yes. The Company has received numerous requests from municipal customers for street
19 lighting facilities that are more energy efficient, while providing effective lighting for
20 municipal outdoor settings. The customers making these requests are specifically seeking
21 an option involving Company-owned and maintained equipment.

1 **Q. What are the LED street and area lighting facilities that the Company is proposing**
2 **to offer?**

3 A. The Company proposes to offer five roadway LED fixtures, one post top LED fixture,
4 and one decorative twin post top LED fixture. The five roadway and single post top
5 fixtures will be available under rates S-06, S-10 and S-14. The twin post top option will
6 only be available under the S-06 tariff because it is a decorative fixture. The wattages of
7 the proposed LED fixtures range from 20 watts to 275 watts and provide comparable
8 illumination to existing lighting fixtures installed throughout the Company's service area.

10 **Q. Please describe the equipment necessary to offer a LED lighting option.**

11 A. The equipment necessary to offer a LED lighting option is generally similar to current
12 outdoor lighting configurations, with differences involving the lighting technology, size
13 of the actual luminaire (or fixture), length of the bracket used to mount the light onto a
14 standard (or pole), and visual appearance of the light (such as a cobra-head or various
15 post top decorative fixtures). Certain wiring and serviceable photoelectric control
16 components are also required to provide service.

18 **Q. What is the operating schedule for the LED fixtures the Company is proposing to**
19 **offer?**

20 A. The Company is proposing the existing dusk-to-dawn operating schedule for its LED
21 proposal in this filing. Dusk-to-dawn is when a street or area light is in operation from

1 approximately one-half hour after sunset until approximately one-half hour before
2 sunrise, for a total of no greater than 4,175 hours each year.

3
4 **Q. Has the Company considered any other operating schedules?**

5 A. Yes, the Company considered a part-night option as an alternative to the dusk-to-dawn
6 operating schedule. However, of the available unmetered controls for part-night
7 operation, the Company was not able to identify an acceptable control that would
8 function on both LED and existing lamp source types.

9
10 **Q. How will the Company respond to customer requests to install LED fixtures?**

11 A. Typically, a customer's request to exchange a lighting fixture is incorporated into the
12 Company's work schedules. However, based on anticipated customer demand and the
13 Company's need to prioritize its workload, the Company may need to limit the quantity
14 of LED fixtures it installs in a year in order to best manage its conflicting operational
15 priorities and ensure safe and reliable electric service. Therefore, the Company is
16 proposing to respond to customer requests for LED fixtures on a first come, first served
17 basis in order to balance the requests for LED lighting service with its obligations to
18 deliver other requirements in its capital program in a cost effective manner. In addition,
19 the Company is proposing that it be allowed to impose a cap on the number of LED
20 fixtures that it replaces, should customer demand be high, to ten (10) percent per year of
21 the total quantity of active and inactive street and area lighting fixtures per customer

1 account if that customer is considered a municipal, governmental authority, or public
2 entity. No quantity cap would be imposed on the other customer types receiving service
3 on Rates S-06, S-10, or S-14 due to the small quantity of lights per customer account.
4 There also would not be a cap on new LED streetlight installations regardless of customer
5 type.

6
7 **Q. Why is a ten (10) percent cap a reasonable limit on the quantity of replacements the**
8 **Company can do in any one year?**

9 A. Although the Company will endeavor to meet all requests for replacing existing
10 luminaires with LED fixtures, the Company must have the ability to schedule its field
11 work in a way that ensures no detrimental impact to providing, maintaining, and restoring
12 electric service to non-streetlighting customers. Currently, the Company has a total street
13 and area lighting inventory, both active and inactive, of approximately 103,000
14 Company-owned fixtures. An annual cap of ten (10) percent totals approximately 10,300
15 of the 103,000 fixtures available for LED exchanges and represents an amount of fixtures
16 that the Company anticipates could reasonably be replaced during a 12-month period,
17 given existing resources and expected work load. This rationale is especially compelling
18 when requests are concentrated in a local area that would require the exclusive use of the
19 same Company resources that perform electric service work, in addition to the
20 administrative resources that would be required to process changes in billing and system
21 record changes..

1 **Q. Does the Company typically limit work performed at a customer request in other**
2 **circumstances?**

3 A. Yes. The Company's Temporary Turn Off Service contained in its Rate S-14 tariff
4 provides for the Company to use its best efforts to turn off retail delivery service to its
5 street and area lighting facilities within a reasonable length of time after receipt of written
6 notice from a customer requesting such service. This provision allows the Company to
7 schedule the work to occur over a period of time depending on the number of street and
8 area lighting facilities to be temporarily turned off and the availability of the Company's
9 crews to allow for efficient operations. The provision also allows the Company
10 flexibility in responding to a request. However, in order to assure that the customer's
11 request is addressed, the Company must complete all requests according to a mutually
12 accepted schedule between the customer and the Company.

13
14 **Q. Will the customer be required to pay the Company for the lighting equipment**
15 **removed that would be replaced by LED lighting equipment?**

16 A. Yes. Pursuant to the Permanent Discontinuance of Lighting Facilities provision in the
17 Rates S-06, S-10, and S-14 tariffs, at the customer's request, removal of the existing
18 lighting equipment for the purpose of installing LED lighting equipment would require
19 the customer to pay the unamortized balance of the original installation costs plus cost of
20 removal less salvage value for lights in excess of one percent of the total lights on the
21 customer's account.

1 **Q. Will customers have the ability to discontinue LED lighting service upon their**
2 **request?**

3 A. Yes, customers will be able to discontinue service upon making a request to the
4 Company. However, if a customer's request for discontinuance of LED lighting service
5 involves the removal or replacement of fixtures, the customer will be required to pay the
6 Company for the unamortized balance of the street light plus cost of removal less salvage
7 value, as provided in the Permanent Discontinuance of Lighting Facilities provision in
8 the tariffs for Rates S-06, S-10, and S-14. Without such reimbursement, the unrecovered
9 portion of the Company's costs would need to be recovered from other customers.

10
11 **V. Pricing of LED Fixtures**

12 **Q. Could you describe how the proposed pricing of Company-owned LED lighting was**
13 **developed?**

14 A. Yes. The proposed annual price for each LED fixture is calculated in Schedule NG-3.
15 Page 1 of Schedule NG-3 shows the calculation of the proposed luminaire charges which
16 consist of the sum of the Annual Carrying Charge on Line (5) plus the Annual Delivery
17 Charge on Line (7). The Annual Carrying Charge is designed to recover the costs of
18 those facilities specifically necessary to provide lighting service. The Annual Delivery
19 Charge is intended to recover other distribution system costs. The Annual Carrying
20 Charge is calculated by multiplying the installed cost from Schedule NG-4, page 1, Line
21 (3) by the Carrying Charge Rate of 17.46% on Line (4) of Schedule NG-3. On page 2 of

1 Schedule NG-3, the Carrying Charge Rate of 17.46% is calculated using the Weighted
2 Average Cost of Capital (9.68%) and Property Tax Percent (2.22%) approved in the
3 Company most recent general rate case in RIPUC Docket No. 4323 as well as a straight-
4 line depreciation rate applicable to an 18 year depreciable life (5.56%). On page 1, the
5 Annual Delivery Charge on Line (7) is calculated using the Rate S-05 approved
6 distribution rate of \$0.02654 per kilowatt-hour (kWh) on Line (6) times the annual kWh
7 of the fixture on Line (2).

8
9 **Q. What is the installed cost of the LED fixtures that underlie the luminaire charges**
10 **which the Company is proposing in this filing?**

11 A. The installed costs of the proposed LED options are summarized on page 1 of Schedule
12 NG-4. . The details behind each option's installed cost are provided on pages 2 through
13 8 of Schedule NG-4. The variable equipment costs on these pages are the luminaire and
14 bracket used for mounting the luminaire.

15
16 **Q. What else determines the installed cost?**

17 A. In addition to the cost of the equipment identified on Lines (1) through (4) of pages 2
18 through 8, the Company also incurs various other costs, such as sales tax on the
19 equipment purchased, labor and the cost of a Company vehicle to install the equipment,
20 and various overheads, such as materials handling and capital-related labor overheads.

21

1 **Q. How did the Company determine the annual kWh consumption for each of the**
2 **wattages?**

3 A. As with the Company's existing street lighting offerings, the energy consumption is
4 unmetered and utilizes an established, industry standard methodology based on the
5 wattage of the specific lamp type or light source in accordance with a predetermined
6 (dusk-to-dawn) operational model. The nominal wattage is converted to a billable
7 wattage by including all other energy consuming elements of the luminaire. The billable
8 wattage is multiplied by the number of burning hours in a year, and then divided by 1,000
9 to arrive at an annual kWh value. A kWh value of five (5) is added to this result to
10 represent the annual kWh needed by the photoelectric control. This total annual kWh
11 value is then used to assess any energy-based charges for retail delivery service and
12 commodity charges.

13
14 **Q. How was the pricing of the Temporary Turn Off Service available on Rate S-14 and**
15 **shown on exhibit NG-5 calculated?**

16 A. To calculate the prices of the Temporary Turn Off Service offered through Rate S-14, the
17 proposed full service price was multiplied by sixty (60) percent, as is consistent with the
18 existing luminaire Temporary Turn Off pricing. This reduced price reflects the fact that
19 there are reduced maintenance costs because the luminaires would not need to be
20 maintained while the light is not operating.

21

1 **Q. If customers choose to replace their current HPS, Mercury Vapor, or Incandescent**
2 **fixtures with LED fixtures, will this affect the Company's revenue?**

3 A. Yes, if customers decide to replace their existing fixtures with LED fixtures, the
4 Company's distribution revenue will be affected. However, pursuant to the Company's
5 RDM Provision, RIPUC No. 2073, as with other changes in the Company's distribution
6 revenue, the change in revenue, either positive or negative, will be reflected in the
7 Company's RDM reconciliation as an increase or decrease to billed revenue in the
8 applicable RDM reconciliation period, resulting in a corresponding increase or decrease
9 in the RDM reconciliation balance. Therefore, this change in revenue will be accounted
10 for and recovered from or credited to customers through the RDM Adjustment Factor.

11
12 **VI. Typical Bills**

13 **Q.** Has the Company included illustrative bill impacts associated with the proposed LED
14 offerings?

15 A. Yes. Schedule NG-6 presents the illustrative annual bill impact comparing bills for
16 existing lighting technology to bills based on the proposed LED luminaire charges for the
17 street and area lighting rate classes. These impacts are based on a simple assumption that
18 a customer could be served by only one street light fixture and therefore, presents the
19 impact of the Company's proposal on that basis.

20 In Schedule NG-6, the Company calculates the total annual bill for one luminaire in
21 column (f) for each type of fixture. The annual charges for each equivalent HPS fixture

1 include the annual approved luminaire charge (column (b)) plus the annual energy
2 charges under currently-effective per-kWh rates (column (d)) and the annual charges for
3 the LIHEAP Enhancement Program and Renewable Energy Growth Program (column
4 (e)). The annual charges for each proposed LED fixture include the annual proposed
5 luminaire charge for the proposed LED fixture (column (c)) plus the annual energy
6 charges under currently-effective per-kWh rates (column (d)) and the annual charges for
7 the LIHEAP Enhancement Program and Renewable Energy Growth Program (column
8 (e)). The result of comparing the annual bill of the proposed LED lighting technology
9 pricing with the equivalent HPS lighting technology is shown in column (g).

10 As indicated in Schedule NG-6, based on the Company's proposed LED luminaire
11 charges and currently-effective per-kWh charges, the LED option for the equivalent HPS
12 fixtures would result in an annual bill savings as compared to its HPS counterpart. As an
13 example, looking at line (10) of Schedule NG-6, a customer who is served by a 150 watt
14 HPS roadway fixture, for which they would be billed \$194.29 based on currently-
15 effective rates as shown in column (f), could request to have this light replaced with a 60
16 watt LED roadway fixture, which, on line (8), would be billed \$146.22 as shown in
17 column (f). By replacing the fixture, the customer would save \$48.07 annually, as shown
18 on line 10, column (g), based on currently effective per-kWh rates. Based on the
19 proposed LED luminaire charges, the currently-effective HPS luminaire charges, the
20 currently-effective per-kWh rates for the other components of delivery service, and the

1 currently-effective Standard Offer Service rate, the conversion of HPS fixtures to LED
2 fixtures would provide annual bill savings to customers.

3
4 **VII. Tariff Changes**

5 **Q. In addition to adding the LED luminaires to the tariffs, the annual kWh for**
6 **incandescent luminaires in tariffs S-10 and S-14 has changed. Please explain the**
7 **reason for this change.**

8 A. The previous versions of the S-10 and S-14 tariffs only showed the annual kWh for the
9 fixture and ballast but inadvertently omitted the additional kWh for the photoelectric
10 control. The Company took this opportunity to correct this omission and correctly state
11 the total annual kWh in the tariff.

12
13 **Q. The effective date of the tariffs is listed as October 1, 2016. How did you choose this**
14 **date?**

15 A. This offering requires changes to the Company's billing system and geographical
16 interface system as well as training of the Company's Operations and Design personnel.
17 The October 1, 2016 effective date will enable the Company to make these changes,
18 complete the training and procure the necessary materials for this new offering.

19
20 **Q. Has the Company included the Summary of Retail Delivery Rates associated with the**
21 **proposed LED offerings?**

1 A. Yes. Schedule NG-7 presents the proposed third page of RIPUC Tariff No. 2095, the
2 Summary of Retail Delivery Rates for Streetlighting.

3

4 **VIII. Conclusion**

5 **Q. Does this conclude your direct testimony?**

6 A. Yes.

Schedule NG - 1

Proposed Tarrifs - Clean Version

**THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE**

AVAILABILITY

Service is available under this rate for full service, underground served, decorative street and area lighting applications owned by the Company to any Customer, inclusive of municipalities, governmental entity, or other public authority, hereinafter referred to as Customer in accordance with the qualifications and the specifications hereinafter set forth:

1. For municipal-owned or accepted roadways, including those classified as “private areas”, for which the municipal Customer has agreed to supply street and area lighting service.
2. Service under this rate is available to any Customer where the decorative street and area lighting facilities can be provided underground delivery service from existing secondary voltage circuits within a radial distance not to exceed 20 feet. For circumstances requiring underground delivery service in excess of 20 feet, the Customer is responsible to compensate the Company for such excess as a contribution in aid of construction in accordance with all applicable Company policies.
3. Service under this rate is contingent upon Company ownership and maintenance of the underground delivery service supplied decorative street and area lighting facilities.
4. Service under this rate is not available for locations inaccessible by standard Company motorized equipment, limited access highways, bridges, tunnels and the access and egress ramps thereto.
5. Service under this rate is available to a private contractor, developer, or association of customers, wherein the municipality has agreed in writing to accept responsibility for future payment of such lights upon acceptance of applicable streets and areas.
6. In applications where revenue from the planned decorative street and area lighting facilities will be insufficient to compensate for the excessive incremental installation costs associated with, but not limited to, rock excavation or hardscape restoration, the Company, at its sole discretion, may elect not to provide decorative street lighting service or the Customer agrees to compensate the Company for the incremental installation costs as a contribution in aid of construction in accordance with all applicable Company policies.
7. The permanent discontinuance of Decorative Street and Area Lighting Service is available under this tariff to any Customer that has complied with all provisions and terms of this tariff, any related service agreements and has requested permanent discontinuance, whereas, such discontinuance is the cessation of this tariff service and constitutes the complete removal or in-place retirement of the Company’s facilities at the location at which this service is discontinued. Permanent discontinuance of service is further described below.
8. The management of vegetation and/or other adjacent physical conditions which obstruct the normal distribution of light from the specified decorative street and area lighting facilities is the responsibility of the Customer.
9. At the request of the Customer, the Company shall take reasonable actions to procure and install the necessary ancillary equipment, including but not limited to shields, visors, louvers and protective devices, for the purpose of providing special control of light distribution or vandal prevention of the facilities, provided all ancillary equipment costs and associated service charges are the responsibility of the Customer.

**THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE**

I. DECORATIVE STREET AND AREA LIGHTING - FULL SERVICE

RATE

The annual charges are applicable to all active or closed decorative street and area lighting facilities that have not been discontinued, permanently or temporarily, at the request of the Customer.

1. Luminaire Charges:

An annual charge as enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, includes luminaire, lamp, photoelectric control and all other components to facilitate its operation. The annual charge per luminaire type twin reflects two (2) luminaire assemblies and a post top decorative twin cross arm.

<u>Lamp Type</u>				
<u>Luminaire Type</u>	<u>Lumen</u>	<u>Nominal</u>		<u>Annual</u>
<u>Luminaire Style</u>	<u>Rating</u>	<u>Wattage</u>	<u>Description</u>	<u>kWh</u>

High Pressure Sodium Vapor

Decorative Post Top

Traditional	4,000	50	DEC HPS TR 50W	255
Traditional	9,600	100	DEC HPS TR 100W	493
Aspen Grove	4,000	50	DEC HPS AG 50W	255
Aspen Grove	9,600	100	DEC HPS AG 100W	493
Williamsville	4,000	50	DEC HPS WL 50W	255
Williamsville	9,600	100	DEC HPS WL 100W	493

Decorative Post Top - Twin

Traditional	4,000	50	DEC HPS TR-TW 50W	510
Traditional	9,600	100	DEC HPS TR-TW 100W	986
Aspen Grove	4,000	50	DEC HPS AG-TW 50W	510
Aspen Grove	9,600	100	DEC HPS AG-TW 100W	986
Williamsville	4,000	50	DEC HPS WL-TW 50W	510
Williamsville	9,600	100	DEC HPS WL-TW 100W	986

Light Emitting Diode ("LED")

Decorative Post Top

Traditional	5,000	60	DEC LED TR 60W	255
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Decorative Post Top – Twin

Traditional	5,000	60	DEC LED TR-TW 60W	510
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The Company shall use its best efforts to replace existing luminaire with LED luminaire within a reasonable

THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE

length of time after receipt of the written notice requesting such replacement. Depending upon the number of street and area lighting facilities to be replaced with LED luminaires and the availability of the Company's crews, the Company may limit the quantity of LED replacements to ten (10) percent per account per calendar year to allow for efficient operations. The Company reserves the right to be flexible in responding to the Customer's request. However, the Company shall complete all requests according to a mutually accepted schedule between the Customer and the Company upon receipt of written notice.

2. Support and Accessory Charges:

An additional annual charge as enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, will be applied to each luminaire type as stated in Section 1 – Luminaire Charges where the Company is requested to furnish a suitable decorative standard, foundation or other accessory and applicable underground delivery service as identified below, for the sole purpose of supporting a luminaire assembly.

Service Type

Support Type

Standard Style

Description

Underground Service

Decorative Standard

Villager with Foundation

Washington with Foundation

DEC VILL PT/FDN

DEC WASH PT/FDN

Accessory Type

None

3. Other Fees and Charges:

Additional fees or charges as enumerated below in the schedule of fee and charge prices will be applied per unit application pursuant to applicable Customer requests and/or in association with terms and conditions of separate agreements specific to attachments to the foregoing support types as stated in Section 2 – Support and Accessory Charges. Applicable Lighting Service Charges are assessed where the Company is requested by the Customer to provide an individual site visit for the purpose of; investigation and determination of operational malfunction, preventative or proactive maintenance to address vandalism or lighting control, the performance of other specified services, or other such actions which, unless requested by the Customer would otherwise have not been warranted. A charge will not be assessed if, in the sole discretion of the Company, the conditions which created the need for the Customer request were determined to be the result of Company facilities or systems. Applicable fees are assessed on a regular billing schedule based on the terms and conditions of the agreement or license from which they are specified.

Fee or Charge Type

Charge Amount

Lighting Service Charge

See Terms and Conditions for Distribution Service

THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE

RATE ADJUSTMENT PROVISIONS

Transmission Service Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Transmission Service Cost Adjustment Provision.

Transition Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Non-Bypassable Transition Charge Adjustment Provision.

Standard Offer Adjustment

All Customers served on this rate must pay any charges required pursuant to the terms of the Company’s Standard Offer Adjustment Provision, whether or not the Customer is taking or has taken Standard Offer Service.

Energy Efficiency Programs

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Energy Efficiency Program Provision as from time to time effective in accordance with law.

Infrastructure, Safety and Reliability Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Infrastructure, Safety and Reliability Provision as from time to time effective in accordance with law.

Customer Credit Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Customer Credit Provision as from time to time effective in accordance with law.

LIHEAP Enhancement Plan Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s LIHEAP Enhancement Plan Provision as from time to time effective in accordance with law.

Revenue Decoupling Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Revenue Decoupling Mechanism Provision as from time to time effective in accordance with law.

Net Metering Provision and Qualifying Facilities Power Purchase Rate

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Net Metering Provision and Qualifying Facilities Power Purchase Rate as from time to time effective in accordance with law.

THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE

Pension Adjustment Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Pension Adjustment Mechanism Provision as from time to time effective in accordance with law.

STANDARD OFFER SERVICE

Any Customer served under this rate who is eligible for Standard Offer Service shall receive such service pursuant to the Standard Offer Service tariff.

GROSS EARNINGS TAX

A Rhode Island Gross Earnings Tax adjustment will be applied to the charges determined above in accordance with Rhode Island General Laws.

HOURS OF OPERATION

All decorative street and area lights will be operated through the use of a photoelectric device nightly from approximately one-half hour after sunset until approximately one-half hour before sunrise, referred to as dusk-to-dawn, a total of approximately 4,175 hours each year.

DETERMINATION OF MONTHLY BILL FOR DECORATIVE STREET AND AREA LIGHTING

The monthly bill will be based on the following:

1. Facility Charges

The Luminaire Charges and the Support and Accessory Charges will be based on the annual rates above divided by the number of days in the calendar year to arrive at a daily rate and multiplied by the actual number of days in the billing period as measured from the date immediately following the prior bill to the current bill date.

2. Energy Charges

Charges per kWh will be based on the annual kWh per luminaire. The monthly kWh amount shall be determined by allocating the number of annual operating hours for lights among the months as shown below. The sum of the monthly kWh for each light equals the annual kWh in this tariff. A daily kWh amount is determined from the monthly amount by dividing monthly kWh by the number of days in a month. The daily kWh amount is multiplied by the actual number of days for each calendar month during the billing period as measured from the date immediately following the prior bill to the current bill date and then multiplied by the charge per kWh.

Monthly Operating Hours

January	442	July	267
February	367	August	301
March	363	September	338
April	309	October	392
May	280	November	418
June	251	December	447

THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE

3. Other Fees and Charges

Individual charges for specific Customer requested services will be identified as adjustments on the bill. The representation of applicable fees associated with specific agreement or license terms and conditions between the Customer and the Company will be imposed according to the agreements, licenses, or as specified in the Terms and Conditions for Distribution Service and presented as adjustments on the Customer's bill.

EXCESSIVE DAMAGE

Excessive damage due to wanton or malicious acts will be charged to the Customer at the actual cost of labor and material required to repair or replace the unit. Excessive damage is defined as any lighting facility component such as pole, standard, luminaire or conductors, being broken or damaged more than once in a twelve month period. Notification of excessive damage will be made to the Customer by the Company prior to billing for repairs.

ATTACHMENTS

The Company has exclusive rights of ownership of the facilities defined within this tariff and reserves the privilege and sole discretion to permit the use of such facilities for the support and physical attachment of other, non-company owned equipment under the terms and conditions of a separate agreement or license. The Company may, at its sole discretion, provide electric delivery service as applicable under another tariff. The Company will have no responsibility for the attachments except as defined in the separate agreement or license. The attachment will not adversely impact the street and area lighting as defined within this tariff.

RELAMPING

All inoperable lamps and/or photoelectric controls which are owned and maintained by the Company will be spot replaced. The Customer is responsible for notifying the Company of malfunctioning lights.

FAILURE OF LIGHTS TO OPERATE

Should any decorative light or lights, which are owned and maintained by the Company, fail to operate the full period provided therefore, except as hereinafter specified, a deduction will be made from the charges under this rate, other than the Support and Accessory Charge, for such light or lights, upon presentation of a claim therefore from the Customer, equivalent to such part of the annual price thereof, as is equal to the ratio that the time of any outage bears to the annual operating time of such light or lights. The provisions of this paragraph will apply only if such failure is due to some cause or condition which might reasonably have been prevented by the Company and without limiting the generality of the foregoing will not apply in case such failure is due to an act of nature or an act or order of any public authority or accidental or malicious breakage; provided, however, that in the latter case the necessary repairs are made with reasonable dispatch upon notification by the Customer.

LOCATION OF DECORATIVE STREET AND AREA LIGHTS

The Customer bears sole responsibility for determining where decorative street and area lights will be placed and the type of lamp/luminaire used at each location. The Company bears no responsibility for, and makes no representations or warranties concerning, the locations and lamps/linaires selected by the Customer or the adequacy of the resulting lighting. The Customer, by requesting and accepting service under this rate, hereby shall provide, grant and confer to the Company, all necessary easement, rights-of-way and/or consent rights and

**THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE**

privileges as is necessary to provide such service in a manner satisfactory to the Company. All applicable permits, fees and/or other charges by others associated with the facilitation of service under this rate are the responsibility of the Customer.

RELOCATION OF DECORATIVE LIGHTING FACILITIES

A Customer may request the relocation of existing decorative street and area lighting facilities, owned by the Company, to another Customer specified location which meets all aforementioned terms and conditions of this tariff. The Customer will be responsible for all costs associated with the relocation as determined by the Company including but not limited to the removal/retirement costs of non-transferable facilities, the installation of new facilities as required, the relocation of existing facilities, any electric system reconfiguration and all site restoration. The relocated facilities will continue to be billed under the Customer account as originally represented prior to relocation.

DISCLAIMER OF LIABILITY

The Company's duties and obligations under this tariff extend only to the Customer, and not to any third parties. The Company does not assume and specifically disclaims any liability to third parties arising out of the Company's obligations to the Customer under this section.

PERMANENT DISCONTINUANCE OF LIGHTING FACILITIES

A Customer may permanently discontinue decorative street and area lighting facilities, owned by the Company, at no cost to the Customer, limited to a quantity not to exceed one (1) percent of the total number of decorative lighting assemblies assigned to the Customer's billing account under this tariff within the given calendar year. The request by a Customer for the permanent discontinuance of decorative street and area lighting in excess of one (1) percent as stated above may be performed by mutual agreement upon payment by the Customer to the Company in an amount equal to the sum of the unamortized balance of the original installation costs, removal or restoration costs and any street light system reconfiguration costs to maintain all other active lights.

TERM OF AGREEMENT

The initial term of agreement for Decorative Street and Area Lighting service under this tariff is two (2) years. Upon expiration of the initial term, the agreement will be continuously renewed until such time as either party has given to the other written notice, not less than six (6) months prior to the date on which the party desires to have the agreement terminated.

TERMS AND CONDITIONS

The Company's Terms and Conditions in effect from time to time, where applicable hereto and not inconsistent with any specific provisions hereof, are a part of this rate.

Effective: October 1, 2016

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

AVAILABILITY

Private lighting and floodlighting service under this rate is restricted to those locations having existing service on the effective date of this service offering. No new or additional private lighting customers are permitted on this rate, except for a new private lighting customer at a location that was previously served under this rate may request continuation of service under this rate provided that the request is made within a reasonable time of the new customer occupying the service location and the lighting facilities have not otherwise been removed by the Company.

1. Service under this rate is available where the necessary lighting facilities can be supported on the Company's existing utility infrastructure and provided delivery service at the appropriate secondary voltage, or as necessary, additional wood poles may be furnished in place in accordance with the schedule of Support and Accessory Charges listed below under RATE, Section 2, provided no such pole is more than one span from an existing overhead secondary facility.
2. Service under this rate is available where the selected Company lighting facilities require underground delivery service at the appropriate secondary voltage and are within a radial distance not to exceed 20 feet. In circumstances requiring underground delivery service in excess of 20 feet, the Customer is responsible to compensate the Company for such excess as a contribution in aid of construction in accordance with all applicable Company policies.
3. Service under this rate is contingent upon Company ownership and maintenance of street and area lighting facilities.
4. Service under this rate is not available for locations inaccessible by standard Company motorized equipment, limited access highways, bridges, tunnels and the access and egress ramps thereto.
5. In applications where revenue from the planned street and area lighting facilities will be insufficient to compensate for the excessive incremental installation costs associated with, but not limited to, rock excavation or hardscape restoration, the Company, at its sole discretion, may elect not to provide private lighting service or the Customer agrees to compensate the Company for the incremental costs as a contribution in aid of construction in accordance with all applicable Company policies.
6. The management of vegetation and/or other adjacent physical conditions which obstruct the normal distribution of light from the specified street and area lighting facilities is the responsibility of the Customer.
7. At the request of the Customer, the Company shall take reasonable actions to procure and install the necessary ancillary equipment, including but not limited to shields, visors, louvers and protective devices, for the purpose of providing special control of light distribution or vandal prevention of the facilities, provided all ancillary equipment costs and associated service charges are the responsibility of the Customer.
8. Customers receiving private area lighting service under this rate may request the addition, change or replacement of lighting facilities at the existing service location with facilities available as of the effective date of this tariff. The Company shall take reasonable actions to facilitate the Customer's request following all applicable provisions of this tariff.

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

RATE

The annual charges enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, are applicable to all street and area lighting facilities:

1. Luminaire Charges:

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>Incandescent*</u>					
	Roadway	1,000*	105	LUM INC RWY 105W	443
<u>Mercury Vapor*</u>					
	Roadway	4,400*	100	LUM MV RWY 100W	543
		8,500*	175	LUM MV RWY 175W	881
		23,000*	400	LUM MV RWY 400W	1,991
		63,000*	1,000	LUM MV RWY 1000W	4,572
	Floodlight	23,000*	400	LUM MV FLD 400W	1,991
		63,000*	1,000	LUM MV FLD 1000W	4,572
<u>High Pressure Sodium Vapor</u>					
	Roadway	4,000	50	LUM HPS RWY 50W	255
		6,300	70	LUM HPS RWY 70W	359
		9,600	100	LUM HPS RWY 100W	493
		16,000	150	LUM HPS RWY 150W	722
		27,500	250	LUM HPS RWY 250W	1,269
		50,000	400	LUM HPS RWY 400W	1,962
	Wallighter	27,500 (24 hr)	250	WALL HPS 250W 24 HR	2,663
	Floodlight	27,500	250	LUM HPS FLD 250W	1,269
		50,000	400	LUM HPS FLD 400W	1,962
	Post Top	4,000*	50	LUM HPS POST 50W	255
		9,600*	100	LUM HPS POST 100W	493
	Shoebox	9,600*	100	LUM HPS REC 100W-C1	493
<u>Metal Halide</u>					
	Floodlight	32,000	400	LUM MH FLD 400W	1,883
		107,800*	1,000	LUM MH FLD 1000W	4,502

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
 RETAIL DELIVERY SERVICE

RATE (Continued)

<u>Lamp Type</u>				
<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>Light Emitting Diode ("LED")</u>				
Roadway				
	2,000	20	LUM LED RWY 20W	88
	2,700	30	LUM LED RWY 30W	130
	5,000	60	LUM LED RWY 60W	255
	13,000	140	LUM LED RWY 140W	589
	25,000	275	LUM LED RWY 275W	1,153
Post Top				
	5,000	60	LUM LED POST 60W	255

The Company shall use its best efforts to replace existing luminaires with LED luminaires within a reasonable length of time after receipt of the written notice requesting such replacement. Depending upon the number of street and area lighting facilities to be replaced with LED luminaires and the availability of the Company's crews, the Company may limit the quantity of LED replacements to ten (10) percent per account per calendar year to allow for efficient operations. The Company reserves the right to be flexible in responding to the Customer's request. However, the Company shall complete all requests according to a mutually accepted schedule between the Customer and the Company upon receipt of written notice. Requests for LED luminaires are also limited to the replacement of existing luminaires at existing locations per the availability of this tariff.

* No further installation or replacement of the designated luminaires will take place after the effective date of this rate.

2. Support and Accessory Charge

An additional annual charge as enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, will be applied to each luminaire type as stated in Section 1 – Luminaire Charges where the Company is requested to furnish a suitable wood pole, standard, foundation or other accessory and applicable delivery service as identified below, for the sole purpose of supporting a luminaire assembly.

Service Type

Support Type

Description

Overhead Service

Non-Distribution Pole

Wood Pole

POLE-WOOD

Underground Service

Non-Metallic Standard

Fiberglass without Foundation*

POLE FIBR PT EMB<25

Fiberglass with Foundation <25 ft.

POLE FIBER RWY <25'

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

RATE (Continued)

Service Type

Support Type

Description

Underground Service

Non-Metallic Standard (continued)

Fiberglass with Foundation =>25 ft. POLE FIBER RWY =>25

Metallic Standard

Metallic with Foundation POLE METAL =>25FT

Accessory Type

None

3. Other Fees and Charges

Additional fees or charges will be applied per unit application pursuant to applicable Customer requests and/or in association with terms and conditions of separate agreements specific to attachments to the foregoing support types as stated in Section 2 – Support and Accessory Charges. Applicable Lighting Service Charges are assessed where the Company is requested by the Customer to provide an individual site visit for the purpose of; investigation and determination of operational malfunction, preventative or proactive maintenance to address vandalism or lighting control, the performance of other specified services, or other such actions which, unless requested by the Customer would otherwise have not been warranted. A charge will not be assessed if, in the sole discretion of the Company, the conditions which created the need for the Customer request were determined to be the result of the Company facilities or systems. Applicable fees are assessed on a regular billing schedule based on the terms and conditions of the agreement or license from which they are specified.

Fee or Charge Type

Charge Amount

Lighting Service Charge

See Terms and Conditions for Distribution Service

RATE ADJUSTMENT PROVISIONS

Transmission Service Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Transmission Service Cost Adjustment Provision.

Transition Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Non-Bypassable Transition Charge Adjustment Provision.

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

Standard Offer Adjustment

All Customers served on this rate must pay any charges required pursuant to the terms of the Company's Standard Offer Adjustment Provision, whether or not the Customer is taking or has taken Standard Offer Service.

Energy Efficiency Programs

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Energy Efficiency Program Provision as from time to time effective in accordance with law.

Infrastructure, Safety and Reliability Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Infrastructure, Safety and Reliability Provision as from time to time effective in accordance with law.

Customer Credit Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Customer Credit Provision as from time to time effective in accordance with law.

LIHEAP Enhancement Plan Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's LIHEAP Enhancement Plan Provision as from time to time effective in accordance with law.

Revenue Decoupling Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Revenue Decoupling Mechanism Provision as from time to time effective in accordance with law.

Net Metering Provision and Qualifying Facilities Power Purchase Rate

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Net Metering Provision and Qualifying Facilities Power Purchase Rate as from time to time effective in accordance with law.

Pension Adjustment Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Pension Adjustment Mechanism Provision as from time to time effective in accordance with law.

STANDARD OFFER SERVICE

Any Customer served under this rate who is eligible for Standard Offer Service shall receive such service pursuant to the Standard Offer Service tariff.

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

GROSS EARNINGS TAX

A Rhode Island Gross Earnings Tax adjustment will be applied to the charges determined above in accordance with Rhode Island General Laws.

HOURS OF OPERATION

All lights shall be operated through the use of a photoelectric device nightly from approximately one-half hour after sunset until approximately one-half hour before sunrise, a total of approximately 4,175 hours each year.

DETERMINATION OF MONTHLY BILL FOR LIMITED SERVICE – PRIVATE LIGHTING

The monthly bill will be based on the following:

1. Facility Charges

The Luminaire Charges and the Support and Accessory Charges will be based on the annual rates above divided by the number of days in the calendar year to arrive at a daily rate and multiplied by the actual number of days in the billing period as measured from the date immediately following the prior bill to the current bill date.

2. Energy Charges

Charges per kWh will be based on the annual kWh per luminaire above. The monthly kWh amount shall be determined by allocating the number of annual operating hours for lights among the months as shown below. The sum of the monthly kWh for each light equals the annual kWh in this tariff. A daily kWh amount is determined from the monthly amount by dividing the monthly kWh by the number of days in a month. The daily kWh amount is multiplied by the actual number of days for each calendar month during the billing period as measured from the date immediately following the prior bill to the current bill date and then multiplied by the charge per kWh.

Monthly Operating Hours

January	442	July	267
February	367	August	301
March	363	September	338
April	309	October	392
May	280	November	418
June	251	December	447

3. Other Fees and Charges

Individual charges for specific Customer requested services will be identified as adjustments on the bill. The representation of applicable fees associated with specific agreement or license terms and conditions between the Customer and the Company will be imposed according to the agreements, licenses, or as specified in the Terms and Conditions for Distribution Service and presented as adjustments on the Customer's bill.

**THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE**

EXCESSIVE DAMAGE

Excessive damage due to wanton or malicious acts shall be charged to the Customer at the actual cost of labor and material required to repair or replace the unit. Excessive damage is defined as any lighting facility component such as wood pole, standard, lamp, luminaire, accessory or conductors, being broken or damaged more than once in a twelve month period. Notification of excessive damage will be made to the Customer by the Company prior to billing for repairs.

ATTACHMENTS

The Company has exclusive rights of ownership of the facilities defined within this tariff and reserves the privilege and sole discretion to permit the use of such facilities for the support and physical attachment of other, non-company owned equipment under the terms and conditions of a separate agreement or license. The Company may, at its sole discretion, provide electric delivery service as applicable under another tariff. The Company will have no responsibility for the attachments except as defined in the separate agreement or license. The attachment will not adversely impact the street and area lighting as defined within this tariff.

RELAMPING

All inoperable lamps and/or photoelectric controls which are owned and maintained by the Company will be spot replaced. The Customer is responsible for notifying the Company of malfunctioning lights.

FAILURE OF LIGHTS TO OPERATE

Should any light or lights, which are owned and maintained by the Company, fail to operate the full period provided therefore, except as hereinafter specified, a deduction will be made from the charges under this rate, other than the Support and Accessory Charge, for such light or lights, upon presentation of a claim therefore from the Customer, equivalent to such part of the annual price thereof, as is equal to the ratio that the time of any outage bears to the annual operating time of such light or lights. The provisions of this paragraph will apply only if such failure is due to some cause or condition which might reasonably have been prevented by the Company and without limiting the generality of the foregoing will not apply in case such failure is due to an act of nature or an act or order of any public authority or accidental or malicious breakage; provided, however, that in the latter case the necessary repairs are made with reasonable dispatch upon notification by the Customer.

LOCATION OF STREET AND AREA LIGHTS

The Customer bears sole responsibility for determining where street and area lights will be placed and the type of lamp/luminaire used at each location. The Company bears no responsibility for, and makes no representations or warranties concerning, the locations and lamps/linaires selected by the Customer or the adequacy of the resulting lighting. The Customer, by requesting and accepting service under this rate, hereby shall provide, grant and confer to the Company, all necessary easement, rights-of-way and/or consent rights and privileges as is necessary to provide such service in a manner satisfactory to the Company. All applicable permits, fees and/or other charges by others associated with the facilitation of service under this rate are the responsibility of the Customer.

RELOCATION OF LIGHTING FACILITIES

A Customer may request the relocation of existing street and area lighting facilities, owned by the Company, to another Customer specified location which meets all aforementioned terms and conditions of this

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

tariff. The Customer will be responsible for all costs associated with the relocation as determined by the Company including but not limited to the removal/retirement costs of non-transferable facilities, the installation of new facilities as required, the relocation of existing facilities, any electric system reconfiguration and all site restoration. The relocated facilities will continue to be billed under the Customer account as originally represented prior to relocation.

DISCLAIMER OF LIABILITY

The Company's duties and obligations under this tariff extend only to the Customer, and not to any third parties. The Company does not assume and specifically disclaims any liability to third parties arising out of Company's obligations to Customer under this section.

TERM OF AGREEMENT

The initial term of agreement for Private Lighting service under this tariff is two (2) years. Upon expiration of the initial term, the agreement will be continuously renewed until such time as either party has given to the other written notice, not less than six (6) months prior to the date on which the party desires to have the agreement terminated.

TERMS AND CONDITIONS

The Company's Terms and Conditions in effect from time to time, where applicable hereto and not inconsistent with any specific provisions hereof, are a part of this rate.

Effective: October 1, 2016

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

AVAILABILITY

General Street and Area Lighting Service is available under this rate to any city, town, governmental entity, or other public authority hereinafter referred to as the Customer, in accordance with the provisions and the specifications hereinafter set forth:

1. For municipal-owned or accepted roadways, including those classified as "private areas" for which a municipal Customer has agreed to supply street and area lighting service.
2. Service under this rate is contingent upon Company ownership and maintenance of street and area lighting facilities.
3. Service under this rate is not available for locations inaccessible by standard Company motorized equipment, limited access highways, bridges, tunnels and the access and egress ramps thereto.
4. Service under this rate is available to a private contractor, developer, or association of customers, wherein the municipality has agreed in writing to accept responsibility for future payment of such lights upon acceptance of applicable streets and areas.
5. Street and area lighting is available under this rate to any Customer where the necessary luminaires can be supported on the Company's existing poles and where such service can be supplied directly from existing secondary voltage circuits. Where the necessary luminaires cannot be supported on existing utility infrastructure, wood poles may be furnished in place in accordance with the schedule of Support and Accessory Charges listed below under RATE, Section 2, provided no such pole is more than one span from an existing secondary distribution facility.
6. In applications where revenue from the planned street or area lighting facilities will be insufficient to compensate for the excessive incremental installation costs associated with, but not limited to, rock excavation or hardscape restoration, the Company, at its sole discretion, may elect not to provide street or area lighting service or the Customer agrees to compensate the Company for the incremental installation costs as a contribution in aid of construction in accordance with all applicable Company policies.
7. Temporary Turn Off Service under this tariff is available to any municipal Customer that has requested to temporarily discontinue street and area lighting service received under this rate. Temporary Turn Off Service under this tariff provides for the Company's lighting facilities to remain in place in anticipation of reinstatement of General Street and Area Lighting – Full Service. The Customer shall be allowed to temporarily turn off General Street and Area Lighting – Full Service and will be billed under this tariff in accordance with the Temporary Turn Off Service provision included in this tariff, provided that the Customer has complied with all provisions and terms of the Company's General Street and Area Lighting – Full Service provision of this tariff and any related service agreements.
8. The permanent discontinuance of General Street and Area Lighting Service is available under this tariff to any Customer that has complied with all provisions and terms of this tariff, any related service agreements and has requested permanent discontinuance, whereas, such discontinuance is the cessation of this tariff service and constitutes the complete removal or in-place retirement of the Company's facilities at the location at which this service is discontinued. Permanent discontinuance of service is further described below.

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

9. The management of vegetation and/or other adjacent physical conditions which obstruct the normal distribution of light from the specified street and area lighting facilities is the responsibility of the Customer.
10. At the request of the Customer, the Company shall take reasonable actions to procure and install the necessary ancillary equipment, including but not limited to shields, visors, louvers and protective devices, for the purpose of providing special control of light distribution or vandal prevention of the facilities, provided all ancillary equipment costs and associated service charges are the responsibility of the Customer.

I. GENERAL STREET AND AREA LIGHTING – FULL SERVICE

RATE

The annual charges enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, are applicable to all street and area lighting facilities that have not been discontinued, permanently or temporarily, at the request of the Customer.

1. Luminaire Charges:

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>Incandescent*</u>					
	Roadway				
		1,000*	105	LUM INC RWY 105W	443
		2,500*	205	LUM INC RWY 205W	860
<u>Mercury Vapor*</u>					
	Roadway				
		4,400*	100	LUM MV RWY 100W	543
		8,500*	175	LUM MV RWY 175W	881
		13,000*	250	LUM MV RWY 250W	1,282
		23,000*	400	LUM MV RWY 400W	1,991
		63,000*	1,000	LUM MV RWY 1000W	4,572
	Floodlight				
		23,000*	400	LUM MV FLD 400W	1,991
		63,000*	1,000	LUM MV FLD 1000W	4,572
	Post Top				
		8,500*	175	LUM MV POST 175W	881
<u>Metal Halide</u>					
	Floodlight				
		32,000	400	LUM MH FLD 400W	1,883
		107,800*	1,000	LUM MH FLD 1000W	4,502

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

RATE (Continued)

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>High Pressure Sodium Vapor</u>					
Roadway					
		4,000	50	LUM HPS RWY 50W	255
		6,300	70	LUM HPS RWY 70W	359
		9,600	100	LUM HPS RWY 100W	493
		16,000	150	LUM HPS RWY 150W	722
		27,500	250	LUM HPS RWY 250W	1,269
		50,000	400	LUM HPS RWY 400W	1,962
Wallighter					
	27,500 (24 Hr)		250	WALL HPS 250W 24 HR	2,663
Post Top					
		4,000**	50	LUM HPS POST 50W	255
		9,600**	100	LUM HPS POST 100W	493
Floodlight					
		27,500	250	LUM HPS FLD 250W	1,269
		50,000	400	LUM HPS FLD 400W	1,962
<u>Light Emitting Diode ("LED")</u>					
Roadway					
		2,000	20	LUM LED RWY 20W	88
		2,700	30	LUM LED RWY 30W	130
		5,000	60	LUM LED RWY 60W	255
		13,000	140	LUM LED RWY 140W	589
		25,000	275	LUM LED RWY 275W	1,153
Post Top					
		5,000**	60	LUM LED POST 60W	255

* No further installation or replacement of designated luminaires will take place after the effective date of this rate. Conversion of existing Incandescent or Mercury Vapor luminaires to an equivalent High Pressure Sodium Vapor luminaire may also be done at the request of the Customer.

** Post top luminaire installations will only be permitted for the "Traditional" luminaire style and only in underground development areas after the effective date of this rate.

The Company shall use its best efforts to replace existing luminaires with LED luminaires within a reasonable length of time after receipt of the written notice requesting such replacement. Depending upon the number of street and area lighting facilities to be replaced with LED luminaires and the availability of the Company's crews, the Company may limit the quantity of LED replacements to ten (10) percent per account per calendar year to allow for efficient operations. The Company reserves the right to be flexible in responding to the Customer's request. However, the Company shall complete all requests according to a mutually accepted schedule between the Customer and the Company upon receipt of written notice.

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
 RETAIL DELIVERY SERVICE

RATE (Continued)

2. **Support and Accessory Charges:**

An additional annual charge as enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, will be applied to each luminaire type as stated in Section 1 – Luminaire Charges, where the Company is requested to furnish a suitable wood pole, standard, foundation or other accessory, and applicable delivery service as identified below, for the sole purpose of supporting a luminaire assembly.

Service Type

<u>Support Type</u>	<u>Description</u>
<u>Overhead Service</u>	
<u>Non-Distribution Pole</u>	
Wood Pole	POLE-WOOD
<u>Underground Service</u>	
<u>Non-Metallic Standard</u>	
Fiberglass without Foundation*	POLE FIBR PT EMB<25
Fiberglass with Foundation <25 feet	POLE FIBER PT <25' (Or) POLE FIBER RWY<25'
Fiberglass with Foundation =>25 feet	POLE FIBER RWY =>25
<u>Metallic Standard</u>	
Metallic Direct Embedded (No Fdn.)*	POLE METAL EMBEDDED
Metallic with Foundation	POLE METAL =>25FT

* No further installation or relocation of the designated support will take place after the effective date of this rate.

Accessory Type

None

3. **Other Fees and Charges:**

Additional fees or charges as enumerated below in the schedule of fee and charge prices will be applied per unit application pursuant to applicable Customer requests and/or in association with terms and conditions of separate agreements specific to attachments to the foregoing support types as stated in Section 2 – Support and Accessory Charges. Applicable Lighting Service Charges are assessed where the Company is requested by the Customer to provide an individual site visit for the purpose of; investigation and determination of operational malfunction, preventative or proactive maintenance to address vandalism or lighting control, the performance of other specified services, or other such actions which, unless requested by the Customer would otherwise have not been warranted. A charge will not be assessed if, in the sole discretion of the Company, the conditions which created the need for the Customer request were determined to be the result of Company facilities or systems. Applicable fees are assessed on a regular billing schedule based on the terms and conditions of the agreement or license from which they are specified.

THE NARRAGANSETT ELECTRIC COMPANY
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RETAIL DELIVERY SERVICE

Fee or Charge Type

Charge Amount

Lighting Service Charge

See Terms and Conditions for Distribution Service

RATE ADJUSTMENT PROVISIONS

Transmission Service Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Transmission Service Cost Adjustment Provision.

Transition Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Non-Bypassable Transition Charge Adjustment Provision.

Standard Offer Adjustment

All Customers served on this rate must pay any charges required pursuant to the terms of the Company’s Standard Offer Adjustment Provision, whether or not the Customer is taking or has taken Standard Offer Service.

Energy Efficiency Programs

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Energy Efficiency Program Provision as from time to time effective in accordance with law.

Infrastructure, Safety and Reliability Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Infrastructure, Safety and Reliability Provision as from time to time effective in accordance with law.

Customer Credit Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Customer Credit Provision as from time to time effective in accordance with law.

LIHEAP Enhancement Plan Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s LIHEAP Enhancement Plan Provision as from time to time effective in accordance with law.

Revenue Decoupling Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Revenue Decoupling Mechanism Provision as from time to time effective in accordance with law.

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

Net Metering Provision and Qualifying Facilities Power Purchase Rate

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Net Metering Provision and Qualifying Facilities Power Purchase Rate as from time to time effective in accordance with law.

Pension Adjustment Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Pension Adjustment Mechanism Provision as from time to time effective in accordance with law.

STANDARD OFFER SERVICE

Any Customer served under this rate who is eligible for Standard Offer Service shall receive such service pursuant to the Standard Offer Service tariff.

GROSS EARNINGS TAX

A Rhode Island Gross Earnings Tax adjustment will be applied to the charges determined above in accordance with Rhode Island General Laws.

HOURS OF OPERATION

All street and area lights shall be operated through the use of a photoelectric device nightly from approximately one-half hour after sunset until approximately one-half hour before sunrise, a total of approximately 4,175 hours each year.

DETERMINATION OF MONTHLY BILL FOR GENERAL STREET AND AREA LIGHTING – FULL SERVICE

The monthly bill will be based on the following:

1. Facility Charges

The Luminaire Charges and the Support and Accessory Charges will be based on the annual rates above divided by the number of days in the calendar year to arrive at a daily rate and multiplied by the actual number of days in the billing period as measured from the date immediately following the prior bill to the current bill date.

2. Energy Charges

Charges per kWh will be based on the annual kWh per luminaire above. The monthly kWh amount shall be determined by allocating the number of annual operating hours for lights among the months, as shown below. The sum of the monthly kWh for each light equals the annual kWh in this tariff. A daily kWh amount is determined from the monthly amount by dividing the monthly kWh by the number of days in a month. The daily

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE

kWh amount is multiplied by the actual number of days for each calendar month during the billing period as measured from the date immediately following the prior bill to the current bill date and then multiplied by the charge per kWh.

Monthly Operating Hours

January	442	July	267
February	367	August	301
March	363	September	338
April	309	October	392
May	280	November	418
June	251	December	447

3. Other Fees and Charges

Individual charges for specific Customer requested services will be identified as adjustments on the bill. The representation of applicable fees associated with specific agreement or license terms and conditions between the Customer and the Company will be imposed according to the agreements, licenses, or as specified in the Terms and Conditions for Distribution Service and presented as adjustments on the Customer's bill.

DISCLAIMER OF LIABILITY

The Company's duties and obligations under this tariff extend only to the Customer, and not to any third parties. The Company does not assume and specifically disclaims any liability to third parties arising out of Company's obligations to Customer under this section.

EXCESSIVE DAMAGE

Excessive damage due to wanton or malicious acts shall be charged to the Customer at the actual cost of labor and material required to repair or replace the unit. Excessive damage is defined as any lighting facility component such as pole, standard, lamp, luminaire, accessory or conductors being broken or damaged more than once in a twelve month period. Notification of excessive damage will be made to the Customer by the Company prior to billing for repairs.

ATTACHMENTS

The Company has exclusive rights of ownership of the facilities defined within this tariff and reserves the privilege and sole discretion to permit the use of such facilities for the support and physical attachment of other, non-company owned equipment under the terms and conditions of a separate agreement or license. The Company may, at its sole discretion, provide electric delivery service as applicable under another tariff. The Company will have no responsibility for the attachments except as defined in the separate agreement or license. The attachment will not adversely impact the street and area lighting as defined in this tariff.

RELAMPING

All inoperable lamps and/or photoelectric controls which are owned and maintained by the Company will be spot replaced. The Customer is responsible for notifying the Company of malfunctioning lights.

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

FAILURE OF LIGHTS TO OPERATE

Should any light or lights, which are owned and maintained by the Company, fail to operate the full period provided therefore, except as hereinafter specified, a deduction will be made from the charges under this rate, other than the Support and Accessory Charge, for such light or lights, upon presentation of a claim therefore from the Customer, equivalent to such part of the annual price thereof, as is equal to the ratio that the time of any outage bears to the annual operating time of such light or lights. The provisions of this paragraph will apply only if such failure is due to some cause or condition which might reasonably have been prevented by the Company and without limiting the generality of the foregoing will not apply in case such failure is due to an act of nature or an act or order of any public authority or accidental or malicious breakage; provided, however, that in the latter case the necessary repairs are made with reasonable dispatch upon notification by the Customer.

LOCATION OF STREET AND AREA LIGHTS

The Customer bears sole responsibility for determining where street and area lights will be placed and the type of lamp/luminaire used at each location. The Company bears no responsibility for, and makes no representations or warranties concerning, the locations and lamps/linaires selected by the Customer or the adequacy of the resulting lighting. The Customer, by requesting and accepting service under this rate, hereby shall provide, grant and confer to the Company, all necessary easement, rights-of-way and/or consent rights and privileges as is necessary to provide such service in a manner satisfactory to the Company. All applicable permits, fees and/or other charges by others associated with the facilitation of service under this rate are the responsibility of the Customer.

PERMANENT DISCONTINUANCE OF LIGHTING FACILITIES

A Customer may permanently discontinue lighting facilities, owned by the Company, at no cost to the Customer, limited to a quantity not to exceed one (1) percent of the total number of lighting assemblies assigned to the Customer's billing account under this tariff within the given calendar year. The request by a Customer for the permanent discontinuance of the lighting in excess of one (1) percent as stated above may be performed by mutual agreement upon payment by the Customer to the Company in an amount equal to the sum of the unamortized balance of the original installation cost, removal and restoration costs, and any street light reconfiguration costs to maintain all other active lights.

RELOCATION OF LIGHTING FACILITIES

A Customer may request the relocation of existing street and area lighting facilities, owned by the Company, to another Customer specified location which meets all aforementioned terms and conditions of this tariff. The Customer will be responsible for all costs associated with the relocation as determined by the Company including but not limited to the removal/retirement costs of non-transferable facilities, the installation of new facilities as required, the relocation of existing facilities, any electric system reconfiguration and all site restoration. The relocated facilities will continue to be billed under the Customer account as originally represented prior to relocation.

TERM OF AGREEMENT

The initial term of agreement for General Street and Area Lighting Service under this tariff is two (2)

**THE NARRAGANSETT ELECTRIC COMPANY
 GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
 RETAIL DELIVERY SERVICE**

years. Upon expiration of the initial term, the agreement will be continuously renewed until such time as either party has given to the other written notice, not less than six (6) months prior to the date on which the party desires to have the agreement terminated.

TERMS AND CONDITIONS

The Company's Terms and Conditions in effect from time to time, where applicable hereto and not inconsistent with any specific provisions hereof, are a part of this rate.

II. GENERAL STREET AND AREA LIGHTING – TEMPORARY TURN OFF SERVICE

RATE

Upon the Company's temporary turn-off of retail delivery service to municipal Customers requesting temporary turn off of the Company's street and area lighting facilities, the Company shall bill the municipal Customer the charges enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, for the temporary turn off.

1. Luminaire Charges:

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>Incandescent</u>					
Roadway		1,000	105	LUM INC RWY 105WTT	n/a
		2,500	205	LUM INC RWY 205WTT	n/a
<u>Mercury Vapor</u>					
Roadway		4,400	100	LUM MV RWY 100W TT	n/a
		8,500	175	LUM MV RWY 175W TT	n/a
		13,000	250	LUM MV RWY 250W TT	n/a
		23,000	400	LUM MV RWY 400W TT	n/a
		63,000	1,000	LUM MV RWY 1000WTT	n/a
Floodlight		23,000	400	LUM MV FLD 400W TT	n/a
		63,000	1,000	LUM MV FLD 1000WTT	n/a
Post Top		8,500	175	LUM MV POST 175W TT	n/a
<u>Metal Halide</u>					
Floodlight		32,000	400	LUM MH FLD 400W TT	n/a
		107,800	1,000	LUM MH FLD 1000W TT	n/a

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
 RETAIL DELIVERY SERVICE

RATE (Continued)

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>High Pressure Sodium Vapor</u>					
Roadway					
		4,000	50	LUM HPS RWY 50W TT	n/a
		6,300	70	LUM HPS RWY 70W TT	n/a
		9,600	100	LUM HPS RWY 100W TT	n/a
		16,000	150	LUM HPS RWY 150W TT	n/a
		27,500	250	LUM HPS RWY 250W TT	n/a
		50,000	400	LUM HPS RWY 400W TT	n/a
Walllighter					
	27,500 (24 Hr)		250	WALL HPS 250W 24 TT	n/a
Post Top					
		4,000	50	LUM HPS POST 50W TT	n/a
		9,600	100	LUM HPS POST 100W TT	n/a
Floodlight					
		27,500	250	LUM HPS FLD 250W TT	n/a
		50,000	400	LUM HPS FLD 400W TT	n/a
<u>Light Emitting Diode ("LED")</u>					
Roadway					
		2,000	20	LUM LED RWY 20W TT	n/a
		2,700	30	LUM LED RWY 30W TT	n/a
		5,000	60	LUM LED RWY 60W TT	n/a
		13,000	140	LUM LED RWY 140W TT	n/a
		25,000	275	LUM LED RWY 275W TT	n/a
Post Top					
	5,000**		60	LUM LED POST 60W TT	n/a

2. Support and Accessory Charges:

Overhead Service

Non-Distribution Pole

Wood Pole

POLE – WOOD TEMPOFF

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

RATE (Continued)

Service Type

Support Type

Description

Underground Service

Non-Metallic Standard

Fiberglass without Foundation

POLE FIBR EMB<25TT

Fiberglass with Foundation < 25 ft.

POLE FIBER PT <25TT

(Or) POLE FIBER RWY <25TT

Fiberglass with Foundation =>25 ft.

POLE FIBER RWY =>25TT

Metallic Standard

Metallic Direct Embedded (No Fdn.)

POLE METAL EMB TT

Metallic with Foundation

POLE METAL=>25' TT

3. Other Fees and Charges:

Fee or Charge Type

Charge Amount

Reactivation Charge

\$25.00

Crew Protection

Customer Responsibility

DETERMINATION OF MONTHLY BILL FOR TEMPORARY TURN OFF SERVICE

The monthly bill will be based on the annual Temporary Turn Off Charges above. The monthly charge will be based on the annual charge divided by the number of days in the calendar year to arrive at a daily rate and multiplied by the actual number of days in the billing period as measured from the date immediately following the prior bill to the current bill date.

MAINTENANCE

Temporary Turn Off Service under this tariff does not include routine maintenance of lighting facilities temporarily discontinued by the Customer.

NOTICE FOR TEMPORARY TURN OFF SERVICE

In order for a municipal Customer to be served under the Temporary Turn Off Service provision of this tariff, the municipal Customer must provide written notice to the Company requesting such temporary turn off service. Such notice shall take the form of that provided by the Company and shall include the specific identification of Company street and area lighting facilities to be temporarily turned off and the estimated length of the temporary discontinuance, however, will be not less than one year and not more than three years. Such identification shall include sufficient information for the Company to easily locate its street and area lighting facilities to be temporarily turned off for the purpose of turning off (red capping) the facilities.

The Company shall use its best effort to turn off retail delivery service to its street and area lighting facilities within a reasonable length of time after receipt of the written notice required above. Depending upon the

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

number of street and area lighting facilities to be temporarily turned off and the availability of the Company's crews, the Company may schedule such turn off over a period of time to allow for efficient operations. The Company reserves the right to be flexible in responding to the Customer's request. However, the Company shall complete all requests according to a mutually accepted schedule between the Customer and the Company upon receipt of written notice.

CREW PROTECTION

The Customer shall be responsible for the cost of any required police details or road flaggers for services provided under this option.

REINSTATEMENT OF GENERAL STREET AND AREA LIGHTING – FULL SERVICE

The provision of this service by the Company is predicated on the municipal Customer reinstating General Street and Area Lighting – Full Service. The Customer's request to reinstate all or a portion of the Company's street and area lighting facilities served under this rate, after complying with the term of service provision of this tariff, must be in written form and identify the specific street and area lighting facilities for the Company to reinstate. Upon receipt of the Customer's request, the Company shall use its best efforts to return the street and area lighting facilities to full lighting service as soon as possible after receiving the request. However, the Company reserves the right to flexibility in scheduling the reinstatement in an appropriate manner based on crew availability and the quantity of street and area lighting facilities requested to be reinstated. If the Customer requests reinstatement of the General Street and Area Lighting – Full Service prior to minimum term of one year, the Company will charge the Customer a Reactivation Charge per street or area lighting facility.

TERM OF SERVICE

The municipal Customer may remain on this provision of the General Street and Area Lighting tariff for a maximum period of three years. At the end of the three year period, the Customer must provide written notice for (i) the municipal Customer's return to General Street and Area Lighting – Full Service as provided for above, (ii) the permanent discontinuance of the street and area lighting facilities, as provided for above in Section I, or (iii) the Customer's ability to take advantage of another lighting tariff for retail delivery service to the street and area lighting facilities. The Company will continue to bill the Temporary Turn Off Charge until such time as the street and area lighting facilities are transferred to another delivery service selected by the Customer, or as assigned by the Company following the maximum three year term of service.

TERMS AND CONDITIONS

The Company's Terms and Conditions in effect from time to time, where applicable hereto and not inconsistent with any specific provisions hereof, are a part of this rate.

Effective: October 1, 2016

Schedule NG - 2

Proposed Tariffs - Marked to Show Changes Version

**THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE**

AVAILABILITY

Service is available under this rate for full service, underground served, decorative street and area lighting applications owned by the Company to any Customer, inclusive of municipalities, governmental entity, or other public authority, hereinafter referred to as Customer in accordance with the qualifications and the specifications hereinafter set forth:

1. For municipal-owned or accepted roadways, including those classified as “private areas”, for which the municipal Customer has agreed to supply street and area lighting service.
2. Service under this rate is available to any Customer where the decorative street and area lighting facilities can be provided underground delivery service from existing secondary voltage circuits within a radial distance not to exceed 20 feet. For circumstances requiring underground delivery service in excess of 20 feet, the Customer is responsible to compensate the Company for such excess as a contribution in aid of construction in accordance with all applicable Company policies.
3. Service under this rate is contingent upon Company ownership and maintenance of the underground delivery service supplied decorative street and area lighting facilities.
4. Service under this rate is not available for locations inaccessible by standard Company motorized equipment, limited access highways, bridges, tunnels and the access and egress ramps thereto.
5. Service under this rate is available to a private contractor, developer, or association of customers, wherein the municipality has agreed in writing to accept responsibility for future payment of such lights upon acceptance of applicable streets and areas.
6. In applications where revenue from the planned decorative street and area lighting facilities will be insufficient to compensate for the excessive incremental installation costs associated with, but not limited to, rock excavation or hardscape restoration, the Company, at its sole discretion, may elect not to provide decorative street lighting service or the Customer agrees to compensate the Company for the incremental installation costs as a contribution in aid of construction in accordance with all applicable Company policies.
7. The permanent discontinuance of Decorative Street and Area Lighting Service is available under this tariff to any Customer that has complied with all provisions and terms of this tariff, any related service agreements and has requested permanent discontinuance, whereas, such discontinuance is the cessation of this tariff service and constitutes the complete removal or in-place retirement of the Company’s facilities at the location at which this service is discontinued. Permanent discontinuance of service is further described below.
8. The management of vegetation and/or other adjacent physical conditions which obstruct the normal distribution of light from the specified decorative street and area lighting facilities is the responsibility of the Customer.
9. At the request of the Customer, the Company shall take reasonable actions to procure and install the necessary ancillary equipment, including but not limited to shields, visors, louvers and protective devices, for the purpose of providing special control of light distribution or vandal prevention of the facilities, provided all ancillary equipment costs and associated service charges are the responsibility of the Customer.

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DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
 RETAIL DELIVERY SERVICE

I. DECORATIVE STREET AND AREA LIGHTING - FULL SERVICE

RATE

The annual charges are applicable to all active or closed decorative street and area lighting facilities that have not been discontinued, permanently or temporarily, at the request of the Customer.

1. Luminaire Charges:

An annual charge as enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, includes luminaire, lamp, photoelectric control and all other components to facilitate its operation. The annual charge per luminaire type twin reflects two (2) luminaire assemblies and a post top decorative twin cross arm.

<u>Lamp Type</u>				
<u>Luminaire Type</u>	<u>Lumen</u>	<u>Nominal</u>		<u>Annual</u>
<u>Luminaire Style</u>	<u>Rating</u>	<u>Wattage</u>	<u>Description</u>	<u>kWh</u>

High Pressure Sodium Vapor

Decorative Post Top

Traditional	4,000	50	DEC HPS TR 50W	255
Traditional	9,600	100	DEC HPS TR 100W	493
Aspen Grove	4,000	50	DEC HPS AG 50W	255
Aspen Grove	9,600	100	DEC HPS AG 100W	493
Williamsville	4,000	50	DEC HPS WL 50W	255
Williamsville	9,600	100	DEC HPS WL 100W	493

Decorative Post Top - Twin

Traditional	4,000	50	DEC HPS TR-TW 50W	510
Traditional	9,600	100	DEC HPS TR-TW 100W	986
Aspen Grove	4,000	50	DEC HPS AG-TW 50W	510
Aspen Grove	9,600	100	DEC HPS AG-TW 100W	986
Williamsville	4,000	50	DEC HPS WL-TW 50W	510
Williamsville	9,600	100	DEC HPS WL-TW 100W	986

Light Emitting Diode ("LED")

Decorative Post Top

<u>Traditional</u>	<u>5,000</u>	<u>60</u>	<u>DEC LED TR 60W</u>	<u>255</u>
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Decorative Post Top – Twin

<u>Traditional</u>	<u>5,000</u>	<u>60</u>	<u>DEC LED TR-TW 60W</u>	<u>510</u>
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The Company shall use its best efforts to replace existing luminaire with LED luminaire within a reasonable

THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
 RETAIL DELIVERY SERVICE

length of time after receipt of the written notice requesting such replacement. Depending upon the number of street and area lighting facilities to be replaced with LED luminaires and the availability of the Company's crews, the Company may limit the quantity of LED replacements to ten (10) percent per account per calendar year to allow for efficient operations. The Company reserves the right to be flexible in responding to the Customer's request. However, the Company shall complete all requests according to a mutually accepted schedule between the Customer and the Company upon receipt of written notice.

2. Support and Accessory Charges:

An additional annual charge as enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, will be applied to each luminaire type as stated in Section 1 – Luminaire Charges where the Company is requested to furnish a suitable decorative standard, foundation or other accessory and applicable underground delivery service as identified below, for the sole purpose of supporting a luminaire assembly.

Service Type

Support Type

Standard Style

Description

Underground Service

Decorative Standard

Villager with Foundation

DEC VILL PT/FDN

Washington with Foundation

DEC WASH PT/FDN

Accessory Type

None

3. Other Fees and Charges:

Additional fees or charges as enumerated below in the schedule of fee and charge prices will be applied per unit application pursuant to applicable Customer requests and/or in association with terms and conditions of separate agreements specific to attachments to the foregoing support types as stated in Section 2 – Support and Accessory Charges. Applicable **Lighting Service e**Charges are assessed where the Company is requested by the Customer to provide an individual site visit for the purpose of; investigation and determination of operational malfunction, preventative or proactive maintenance to address vandalism or lighting control, the performance of other specified services, or other such actions which, unless requested by the Customer would otherwise have not been warranted. A charge will not be assessed if, in the sole discretion of the Company, the conditions which created the need for the Customer request were determined to be the result of Company facilities or systems. Applicable fees are assessed on a regular billing schedule based on the terms and conditions of the agreement or license from which they are specified.

Fee or Charge Type

Charge Amount

Lighting Service Charge

See Terms and Conditions for Distribution Service

THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE

RATE ADJUSTMENT PROVISIONS

Transmission Service Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Transmission Service Cost Adjustment Provision.

Transition Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Non-Bypassable Transition Charge Adjustment Provision.

Standard Offer Adjustment

All Customers served on this rate must pay any charges required pursuant to the terms of the Company’s Standard Offer Adjustment Provision, whether or not the Customer is taking or has taken Standard Offer Service.

Energy Efficiency Programs

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Energy Efficiency Program Provision as from time to time effective in accordance with law.

Infrastructure, Safety and Reliability Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Infrastructure, Safety and Reliability Provision as from time to time effective in accordance with law.

Customer Credit Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Customer Credit Provision as from time to time effective in accordance with law.

LIHEAP Enhancement Plan Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s LIHEAP Enhancement Plan Provision as from time to time effective in accordance with law.

Revenue Decoupling Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Revenue Decoupling Mechanism Provision as from time to time effective in accordance with law.

Net Metering Provision and Qualifying Facilities Power Purchase Rate

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Net Metering Provision and Qualifying Facilities Power Purchase Rate as from time to time effective in accordance with law.

THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE

Pension Adjustment Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Pension Adjustment Mechanism Provision as from time to time effective in accordance with law.

STANDARD OFFER SERVICE

Any Customer served under this rate who is eligible for Standard Offer Service shall receive such service pursuant to the Standard Offer Service tariff.

GROSS EARNINGS TAX

A Rhode Island Gross Earnings Tax adjustment will be applied to the charges determined above in accordance with Rhode Island General Laws.

HOURS OF OPERATION

All decorative street and area lights will be operated through the use of a photoelectric device nightly from approximately one-half hour after sunset until approximately one-half hour before sunrise, referred to as dusk-to-dawn, a total of approximately 4,175 hours each year.

DETERMINATION OF MONTHLY BILL FOR DECORATIVE STREET AND AREA LIGHTING

The monthly bill will be based on the following:

1. Facility Charges

The Luminaire Charges and the Support and Accessory Charges will be based on the annual rates above divided by the number of days in the calendar year to arrive at a daily rate and multiplied by the actual number of days in the billing period as measured from the date immediately following the prior bill to the current bill date.

2. Energy Charges

Charges per kWh will be based on the annual kWh per luminaire. The monthly kWh amount shall be determined by allocating the number of annual operating hours for lights among the months as shown below. The sum of the monthly kWh for each light equals the annual kWh in this tariff. A daily kWh amount is determined from the monthly amount by dividing monthly kWh by the number of days in a month. The daily kWh amount is multiplied by the actual number of days for each calendar month during the billing period as measured from the date immediately following the prior bill to the current bill date and then multiplied by the charge per kWh.

Monthly Operating Hours

January	442	July	267
February	367	August	301
March	363	September	338
April	309	October	392
May	280	November	418
June	251	December	447

THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE

3. Other Fees and Charges

Individual charges for specific Customer requested services will be identified as adjustments on the bill. The representation of applicable fees associated with specific agreement or license terms and conditions between the Customer and the Company will be imposed according to the agreements, licenses, or as specified in the Terms and Conditions for Distribution Service and presented as adjustments on the Customer's bill.

EXCESSIVE DAMAGE

Excessive damage due to wanton or malicious acts will be charged to the Customer at the actual cost of labor and material required to repair or replace the unit. Excessive damage is defined as any lighting facility component such as pole, standard, luminaire or conductors, being broken or damaged more than once in a twelve month period. Notification of excessive damage will be made to the Customer by the Company prior to billing for repairs.

ATTACHMENTS

The Company has exclusive rights of ownership of the facilities defined within this tariff and reserves the privilege and sole discretion to permit the use of such facilities for the support and physical attachment of other, non-company owned equipment under the terms and conditions of a separate agreement or license. The Company may, at its sole discretion, provide electric delivery service as applicable under another tariff. The Company will have no responsibility for the attachments except as defined in the separate agreement or license. The attachment will not adversely impact the street and area lighting as defined within this tariff.

RELAMPING

All inoperable lamps and/or photoelectric controls which are owned and maintained by the Company will be spot replaced. The Customer is responsible for notifying the Company of malfunctioning lights.

FAILURE OF LIGHTS TO OPERATE

Should any decorative light or lights, which are owned and maintained by the Company, fail to operate the full period provided therefore, except as hereinafter specified, a deduction will be made from the charges under this rate, other than the Support and Accessory Charge, for such light or lights, upon presentation of a claim therefore from the Customer, equivalent to such part of the annual price thereof, as is equal to the ratio that the time of any outage bears to the annual operating time of such light or lights. The provisions of this paragraph will apply only if such failure is due to some cause or condition which might reasonably have been prevented by the Company and without limiting the generality of the foregoing will not apply in case such failure is due to an act of nature or an act or order of any public authority or accidental or malicious breakage; provided, however, that in the latter case the necessary repairs are made with reasonable dispatch upon notification by the Customer.

LOCATION OF DECORATIVE STREET AND AREA LIGHTS

The Customer bears sole responsibility for determining where decorative street and area lights will be placed and the type of lamp/luminaire used at each location. The Company bears no responsibility for, and makes no representations or warranties concerning, the locations and lamps/linaires selected by the Customer or the adequacy of the resulting lighting. The Customer, by requesting and accepting service under this rate, hereby shall provide, grant and confer to the Company, all necessary easement, rights-of-way and/or consent rights and

THE NARRAGANSETT ELECTRIC COMPANY
DECORATIVE STREET AND AREA LIGHTING SERVICE (S-06)
RETAIL DELIVERY SERVICE

privileges as is necessary to provide such service in a manner satisfactory to the Company. All applicable permits, fees and/or other charges by others associated with the facilitation of service under this rate are the responsibility of the Customer.

RELOCATION OF DECORATIVE LIGHTING FACILITIES

A Customer may request the relocation of existing decorative street and area lighting facilities, owned by the Company, to another Customer specified location which meets all aforementioned terms and conditions of this tariff. The Customer will be responsible for all costs associated with the relocation as determined by the Company including but not limited to the removal/retirement costs of non-transferable facilities, the installation of new facilities as required, the relocation of existing facilities, any electric system reconfiguration and all site restoration. The relocated facilities will continue to be billed under the Customer account as originally represented prior to relocation.

DISCLAIMER OF LIABILITY

The Company's duties and obligations under this tariff extend only to the Customer, and not to any third parties. The Company does not assume and specifically disclaims any liability to third parties arising out of the Company's obligations to the Customer under this section.

PERMANENT DISCONTINUANCE OF LIGHTING FACILITIES

A Customer may permanently discontinue decorative street and area lighting facilities, owned by the Company, at no cost to the Customer, limited to a quantity not to exceed one (1) percent of the total number of decorative lighting assemblies assigned to the Customer's billing account under this tariff within the given calendar year. The request by a Customer for the permanent discontinuance of decorative street and area lighting in excess of one (1) percent as stated above may be performed by mutual agreement upon payment by the Customer to the Company in an amount equal to the sum of the unamortized balance of the original installation costs, removal or restoration costs and any street light system reconfiguration costs to maintain all other active lights.

TERM OF AGREEMENT

The initial term of agreement for Decorative Street and Area Lighting service under this tariff is two (2) years. Upon expiration of the initial term, the agreement will be continuously renewed until such time as either party has given to the other written notice, not less than six (6) months prior to the date on which the party desires to have the agreement terminated.

TERMS AND CONDITIONS

The Company's Terms and Conditions in effect from time to time, where applicable hereto and not inconsistent with any specific provisions hereof, are a part of this rate.

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

AVAILABILITY

Private lighting and floodlighting service under this rate is restricted to those locations having existing service on the effective date of this service offering. No new or additional private lighting customers are permitted on this rate, except for a new private lighting customer at a location that was previously served under this rate may request continuation of service under this rate provided that the request is made within a reasonable time of the new customer occupying the service location and the lighting facilities have not otherwise been removed by the Company.

1. Service under this rate is available where the necessary lighting facilities can be supported on the Company's existing utility infrastructure and provided delivery service at the appropriate secondary voltage, or as necessary, additional wood poles may be furnished in place in accordance with the schedule of Support and Accessory Charges listed below under RATE, Section 2, provided no such pole is more than one span from an existing overhead secondary facility.
2. Service under this rate is available where the selected Company lighting facilities require underground delivery service at the appropriate secondary voltage and are within a radial distance not to exceed 20 feet. In circumstances requiring underground delivery service in excess of 20 feet, the Customer is responsible to compensate the Company for such excess as a contribution in aid of construction in accordance with all applicable Company policies.
3. Service under this rate is contingent upon Company ownership and maintenance of street and area lighting facilities.
4. Service under this rate is not available for locations inaccessible by standard Company motorized equipment, limited access highways, bridges, tunnels and the access and egress ramps thereto.
5. In applications where revenue from the planned street and area lighting facilities will be insufficient to compensate for the excessive incremental installation costs associated with, but not limited to, rock excavation or hardscape restoration, the Company, at its sole discretion, may elect not to provide private lighting service or the Customer agrees to compensate the Company for the incremental costs as a contribution in aid of construction in accordance with all applicable Company policies.
6. The management of vegetation and/or other adjacent physical conditions which obstruct the normal distribution of light from the specified street and area lighting facilities is the responsibility of the Customer.
7. At the request of the Customer, the Company shall take reasonable actions to procure and install the necessary ancillary equipment, including but not limited to shields, visors, louvers and protective devices, for the purpose of providing special control of light distribution or vandal prevention of the facilities, provided all ancillary equipment costs and associated service charges are the responsibility of the Customer.
8. Customers receiving private area lighting service under this rate may request the addition, change or replacement of lighting facilities at the existing service location with facilities available as of the effective date of this tariff. The Company shall take reasonable actions to facilitate the Customer's request following all applicable provisions of this tariff.

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
 RETAIL DELIVERY SERVICE

RATE

The annual charges enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, are applicable to all street and area lighting facilities:

1. Luminaire Charges:

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>Incandescent*</u>					
	Roadway	1,000*	105	LUM INC RWY 105W	438 443
<u>Mercury Vapor*</u>					
	Roadway	4,400*	100	LUM MV RWY 100W	543
		8,500*	175	LUM MV RWY 175W	881
		23,000*	400	LUM MV RWY 400W	1,991
		63,000*	1,000	LUM MV RWY 1000W	4,572
	Floodlight	23,000*	400	LUM MV FLD 400W	1,991
		63,000*	1,000	LUM MV FLD 1000W	4,572
<u>High Pressure Sodium Vapor</u>					
	Roadway	4,000	50	LUM HPS RWY 50W	255
		6,300	70	LUM HPS RWY 70W	359
		9,600	100	LUM HPS RWY 100W	493
		16,000	150	LUM HPS RWY 150W	722
		27,500	250	LUM HPS RWY 250W	1,269
		50,000	400	LUM HPS RWY 400W	1,962
	Wallighter	27,500 (24 hr)	250	WALL HPS 250W 24 HR	2,663
	Floodlight	27,500	250	LUM HPS FLD 250W	1,269
		50,000	400	LUM HPS FLD 400W	1,962
	Post Top	4,000*	50	LUM HPS POST 50W	255
		9,600*	100	LUM HPS POST 100W	493
	Shoebox	9,600*	100	LUM HPS REC 100W-C1	493
<u>Metal Halide</u>					
	Floodlight	32,000	400	LUM MH FLD 400W	1,883
		107,800*	1,000	LUM MH FLD 1000W	4,502

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
 RETAIL DELIVERY SERVICE

RATE (Continued)Lamp Type

<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>Light Emitting Diode ("LED")</u>				
<u>Roadway</u>				
	<u>2,000</u>	<u>20</u>	<u>LUM LED RWY 20W</u>	<u>88</u>
	<u>2,700</u>	<u>30</u>	<u>LUM LED RWY 30W</u>	<u>130</u>
	<u>5,000</u>	<u>60</u>	<u>LUM LED RWY 60W</u>	<u>255</u>
	<u>13,000</u>	<u>140</u>	<u>LUM LED RWY 140W</u>	<u>589</u>
	<u>25,000</u>	<u>275</u>	<u>LUM LED RWY 275W</u>	<u>1,153</u>
<u>Post Top</u>				
	<u>5,000</u>	<u>60</u>	<u>LUM LED POST 60W</u>	<u>255</u>

The Company shall use its best efforts to replace existing luminaires with LED luminaires within a reasonable length of time after receipt of the written notice requesting such replacement. Depending upon the number of street and area lighting facilities to be replaced with LED luminaires and the availability of the Company's crews, the Company may limit the quantity of LED replacements to ten (10) percent per account per calendar year to allow for efficient operations. The Company reserves the right to be flexible in responding to the Customer's request. However, the Company shall complete all requests according to a mutually accepted schedule between the Customer and the Company upon receipt of written notice. Requests for LED luminaires are also limited to the replacement of existing luminaires at existing locations per the availability of this tariff.

* No further installation or replacement of the designated luminaires will take place after the effective date of this rate.

2. Support and Accessory Charge

An additional annual charge as enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, will be applied to each luminaire type as stated in Section 1 – Luminaire Charges where the Company is requested to furnish a suitable wood pole, standard, foundation or other accessory and applicable delivery service as identified below, for the sole purpose of supporting a luminaire assembly.

Service TypeSupport TypeDescriptionOverhead ServiceNon-Distribution Pole

Wood Pole

POLE-WOOD

Underground ServiceNon-Metallic Standard

Fiberglass without Foundation*

POLE FIBR PT EMB<25

Fiberglass with Foundation <25 ft.

POLE FIBER RWY <25'

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
 RETAIL DELIVERY SERVICE

RATE (Continued)Service TypeSupport TypeDescriptionUnderground ServiceNon-Metallic Standard (continued)

Fiberglass with Foundation =>25 ft.

POLE FIBER RWY =>25

Metallic Standard

Metallic with Foundation

POLE METAL =>25FT

Accessory Type

None

3. Other Fees and Charges

Additional fees or charges will be applied per unit application pursuant to applicable Customer requests and/or in association with terms and conditions of separate agreements specific to attachments to the foregoing support types as stated in Section 2 – Support and Accessory Charges. Applicable Lighting Service eCharges are assessed where the Company is requested by the Customer to provide an individual site visit for the purpose of; investigation and determination of operational malfunction, preventative or proactive maintenance to address vandalism or lighting control, the performance of other specified services, or other such actions which, unless requested by the Customer would otherwise have not been warranted. A charge will not be assessed if, in the sole discretion of the Company, the conditions which created the need for the Customer request were determined to be the result of the Company facilities or systems. Applicable fees are assessed on a regular billing schedule based on the terms and conditions of the agreement or license from which they are specified.

Fee or Charge TypeCharge Amount

Lighting Service Charge

See Terms and Conditions for Distribution Service

RATE ADJUSTMENT PROVISIONSTransmission Service Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Transmission Service Cost Adjustment Provision.

Transition Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Non-Bypassable Transition Charge Adjustment Provision.

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

Standard Offer Adjustment

All Customers served on this rate must pay any charges required pursuant to the terms of the Company's Standard Offer Adjustment Provision, whether or not the Customer is taking or has taken Standard Offer Service.

Energy Efficiency Programs

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Energy Efficiency Program Provision as from time to time effective in accordance with law.

Infrastructure, Safety and Reliability Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Infrastructure, Safety and Reliability Provision as from time to time effective in accordance with law.

Customer Credit Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Customer Credit Provision as from time to time effective in accordance with law.

LIHEAP Enhancement Plan Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's LIHEAP Enhancement Plan Provision as from time to time effective in accordance with law.

Revenue Decoupling Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Revenue Decoupling Mechanism Provision as from time to time effective in accordance with law.

Net Metering Provision and Qualifying Facilities Power Purchase Rate

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Net Metering Provision and Qualifying Facilities Power Purchase Rate as from time to time effective in accordance with law.

Pension Adjustment Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Pension Adjustment Mechanism Provision as from time to time effective in accordance with law.

STANDARD OFFER SERVICE

Any Customer served under this rate who is eligible for Standard Offer Service shall receive such service pursuant to the Standard Offer Service tariff.

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
 RETAIL DELIVERY SERVICE

GROSS EARNINGS TAX

A Rhode Island Gross Earnings Tax adjustment will be applied to the charges determined above in accordance with Rhode Island General Laws.

HOURS OF OPERATION

All lights shall be operated through the use of a photoelectric device nightly from approximately one-half hour after sunset until approximately one-half hour before sunrise, a total of approximately 4,175 hours each year.

DETERMINATION OF MONTHLY BILL FOR LIMITED SERVICE – PRIVATE LIGHTING

The monthly bill will be based on the following:

1. Facility Charges

The Luminaire Charges and the Support and Accessory Charges will be based on the annual rates above divided by the number of days in the calendar year to arrive at a daily rate and multiplied by the actual number of days in the billing period as measured from the date immediately following the prior bill to the current bill date.

2. Energy Charges

Charges per kWh will be based on the annual kWh per luminaire above ~~and include the watts for the ballast and photoelectric control~~. The monthly kWh amount shall be determined by allocating the number of annual operating hours for lights among the months as shown below. The sum of the monthly kWh for each light equals the annual kWh in this tariff. A daily kWh amount is determined from the monthly amount by dividing the monthly kWh by the number of days in a month. The daily kWh amount is multiplied by the actual number of days for each calendar month during the billing period as measured from the date immediately following the prior bill to the current bill date and then multiplied by the charge per kWh.

Monthly Operating Hours

January	442	July	267
February	367	August	301
March	363	September	338
April	309	October	392
May	280	November	418
June	251	December	447

3. Other Fees and Charges

Individual charges for specific Customer requested services will be identified as adjustments on the bill. The representation of applicable fees associated with specific agreement or license terms and conditions between the Customer and the Company will be imposed according to the agreements, licenses, or as specified in the Terms and Conditions for Distribution Service and presented as adjustments on the Customer's bill.

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

EXCESSIVE DAMAGE

Excessive damage due to wanton or malicious acts shall be charged to the Customer at the actual cost of labor and material required to repair or replace the unit. Excessive damage is defined as any lighting facility component such as wood pole, standard, lamp, luminaire, accessory or conductors, being broken or damaged more than once in a twelve month period. Notification of excessive damage will be made to the Customer by the Company prior to billing for repairs.

ATTACHMENTS

The Company has exclusive rights of ownership of the facilities defined within this tariff and reserves the privilege and sole discretion to permit the use of such facilities for the support and physical attachment of other, non-company owned equipment under the terms and conditions of a separate agreement or license. The Company may, at its sole discretion, provide electric delivery service as applicable under another tariff. The Company will have no responsibility for the attachments except as defined in the separate agreement or license. The attachment will not adversely impact the street and area lighting as defined within this tariff.

RELAMPING

All inoperable lamps and/or photoelectric controls which are owned and maintained by the Company will be spot replaced. The Customer is responsible for notifying the Company of malfunctioning lights.

FAILURE OF LIGHTS TO OPERATE

Should any light or lights, which are owned and maintained by the Company, fail to operate the full period provided therefore, except as hereinafter specified, a deduction will be made from the charges under this rate, other than the Support and Accessory Charge, for such light or lights, upon presentation of a claim therefore from the Customer, equivalent to such part of the annual price thereof, as is equal to the ratio that the time of any outage bears to the annual operating time of such light or lights. The provisions of this paragraph will apply only if such failure is due to some cause or condition which might reasonably have been prevented by the Company and without limiting the generality of the foregoing will not apply in case such failure is due to an act of nature or an act or order of any public authority or accidental or malicious breakage; provided, however, that in the latter case the necessary repairs are made with reasonable dispatch upon notification by the Customer.

LOCATION OF STREET AND AREA LIGHTS

The Customer bears sole responsibility for determining where street and area lights will be placed and the type of lamp/luminaire used at each location. The Company bears no responsibility for, and makes no representations or warranties concerning, the locations and lamps/ luminaires selected by the Customer or the adequacy of the resulting lighting. The Customer, by requesting and accepting service under this rate, hereby shall provide, grant and confer to the Company, all necessary easement, rights-of-way and/or consent rights and privileges as is necessary to provide such service in a manner satisfactory to the Company. All applicable permits, fees and/or other charges by others associated with the facilitation of service under this rate are the responsibility of the Customer.

RELOCATION OF LIGHTING FACILITIES

A Customer may request the relocation of existing street and area lighting facilities, owned by the Company, to another Customer specified location which meets all aforementioned terms and conditions of this

THE NARRAGANSETT ELECTRIC COMPANY
LIMITED SERVICE - PRIVATE LIGHTING (S-10)
RETAIL DELIVERY SERVICE

tariff. The Customer will be responsible for all costs associated with the relocation as determined by the Company including but not limited to the removal/retirement costs of non-transferable facilities, the installation of new facilities as required, the relocation of existing facilities, any electric system reconfiguration and all site restoration. The relocated facilities will continue to be billed under the Customer account as originally represented prior to relocation.

DISCLAIMER OF LIABILITY

The Company's duties and obligations under this tariff extend only to the Customer, and not to any third parties. The Company does not assume and specifically disclaims any liability to third parties arising out of Company's obligations to Customer under this section.

TERM OF AGREEMENT

The initial term of agreement for Private Lighting service under this tariff is two (2) years. Upon expiration of the initial term, the agreement will be continuously renewed until such time as either party has given to the other written notice, not less than six (6) months prior to the date on which the party desires to have the agreement terminated.

TERMS AND CONDITIONS

The Company's Terms and Conditions in effect from time to time, where applicable hereto and not inconsistent with any specific provisions hereof, are a part of this rate.

Effective: ~~February~~October 1, 201~~3~~6

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

AVAILABILITY

General Street and Area Lighting Service is available under this rate to any city, town, governmental entity, or other public authority hereinafter referred to as the Customer, in accordance with the provisions and the specifications hereinafter set forth:

1. For municipal-owned or accepted roadways, including those classified as "private areas" for which a municipal Customer has agreed to supply street and area lighting service.
2. Service under this rate is contingent upon Company ownership and maintenance of street and area lighting facilities.
3. Service under this rate is not available for locations inaccessible by standard Company motorized equipment, limited access highways, bridges, tunnels and the access and egress ramps thereto.
4. Service under this rate is available to a private contractor, developer, or association of customers, wherein the municipality has agreed in writing to accept responsibility for future payment of such lights upon acceptance of applicable streets and areas.
5. Street and area lighting is available under this rate to any Customer where the necessary luminaires can be supported on the Company's existing poles and where such service can be supplied directly from existing secondary voltage circuits. Where the necessary luminaires cannot be supported on existing utility infrastructure, wood poles may be furnished in place in accordance with the schedule of Support and Accessory Charges listed below under RATE, Section 2, provided no such pole is more than one span from an existing secondary distribution facility.
6. In applications where revenue from the planned street or area lighting facilities will be insufficient to compensate for the excessive incremental installation costs associated with, but not limited to, rock excavation or hardscape restoration, the Company, at its sole discretion, may elect not to provide street or area lighting service or the Customer agrees to compensate the Company for the incremental installation costs as a contribution in aid of construction in accordance with all applicable Company policies.
7. Temporary Turn Off Service under this tariff is available to any municipal Customer that has requested to temporarily discontinue street and area lighting service received under this rate. Temporary Turn Off Service under this tariff provides for the Company's lighting facilities to remain in place in anticipation of reinstatement of General Street and Area Lighting – Full Service. The Customer shall be allowed to temporarily turn off General Street and Area Lighting – Full Service and will be billed under this tariff in accordance with the Temporary Turn Off Service provision included in this tariff, provided that the Customer has complied with all provisions and terms of the Company's General Street and Area Lighting – Full Service provision of this tariff and any related service agreements.
8. The permanent discontinuance of General Street and Area Lighting Service is available under this tariff to any Customer that has complied with all provisions and terms of this tariff, any related service agreements and has requested permanent discontinuance, whereas, such discontinuance is the cessation of this tariff service and constitutes the complete removal or in-place retirement of the Company's facilities at the location at which this service is discontinued. Permanent discontinuance of service is further described below.

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
 RETAIL DELIVERY SERVICE

9. The management of vegetation and/or other adjacent physical conditions which obstruct the normal distribution of light from the specified street and area lighting facilities is the responsibility of the Customer.
10. At the request of the Customer, the Company shall take reasonable actions to procure and install the necessary ancillary equipment, including but not limited to shields, visors, louvers and protective devices, for the purpose of providing special control of light distribution or vandal prevention of the facilities, provided all ancillary equipment costs and associated service charges are the responsibility of the Customer.

I. GENERAL STREET AND AREA LIGHTING – FULL SERVICE

RATE

The annual charges enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, are applicable to all street and area lighting facilities that have not been discontinued, permanently or temporarily, at the request of the Customer.

1. Luminaire Charges:

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>Incandescent*</u>					
	Roadway				
		1,000*	105	LUM INC RWY 105W	438 443
		2,500*	205	LUM INC RWY 205W	856 860
<u>Mercury Vapor*</u>					
	Roadway				
		4,400*	100	LUM MV RWY 100W	543
		8,500*	175	LUM MV RWY 175W	881
		13,000*	250	LUM MV RWY 250W	1,282
		23,000*	400	LUM MV RWY 400W	1,991
	63,000*	1,000	LUM MV RWY 1000W	4,572	
	Floodlight				
		23,000*	400	LUM MV FLD 400W	1,991
		63,000*	1,000	LUM MV FLD 1000W	4,572
	Post Top				
	8,500*	175	LUM MV POST 175W	881	
<u>Metal Halide</u>					
	Floodlight				
		32,000	400	LUM MH FLD 400W	1,883
		107,800*	1,000	LUM MH FLD 1000W	4,502

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
 RETAIL DELIVERY SERVICE

RATE (Continued)

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>High Pressure Sodium Vapor</u>					
Roadway					
		4,000	50	LUM HPS RWY 50W	255
		6,300	70	LUM HPS RWY 70W	359
		9,600	100	LUM HPS RWY 100W	493
		16,000	150	LUM HPS RWY 150W	722
		27,500	250	LUM HPS RWY 250W	1,269
		50,000	400	LUM HPS RWY 400W	1,962
Wallighter					
	27,500 (24 Hr)		250	WALL HPS 250W 24 HR	2,663
Post Top					
		4,000**	50	LUM HPS POST 50W	255
		9,600**	100	LUM HPS POST 100W	493
Floodlight					
		27,500	250	LUM HPS FLD 250W	1,269
		50,000	400	LUM HPS FLD 400W	1,962
<u>Light Emitting Diode ("LED")</u>					
Roadway					
		<u>2,000</u>	<u>20</u>	<u>LUM LED RWY 20W</u>	<u>88</u>
		<u>2,700</u>	<u>30</u>	<u>LUM LED RWY 30W</u>	<u>130</u>
		<u>5,000</u>	<u>60</u>	<u>LUM LED RWY 60W</u>	<u>255</u>
		<u>13,000</u>	<u>140</u>	<u>LUM LED RWY 140W</u>	<u>589</u>
		<u>25,000</u>	<u>275</u>	<u>LUM LED RWY 275W</u>	<u>1,153</u>
Post Top					
		<u>5,000**</u>	<u>60</u>	<u>LUM LED POST 60W</u>	<u>255</u>

* No further installation or replacement of designated luminaires will take place after the effective date of this rate. Conversion of existing Incandescent or Mercury Vapor luminaires to an equivalent High Pressure Sodium Vapor luminaire may also be done at the request of the Customer.

** Post top luminaire installations will only be permitted for the "Traditional" luminaire style and only in underground development areas after the effective date of this rate.

The Company shall use its best efforts to replace existing luminaires with LED luminaires within a reasonable length of time after receipt of the written notice requesting such replacement. Depending upon the number of street and area lighting facilities to be replaced with LED luminaires and the availability of the Company's crews, the Company may limit the quantity of LED replacements to ten (10) percent per account per calendar year to allow for efficient operations. The Company reserves the right to be flexible in responding to the Customer's request. However, the Company shall complete all requests according to a mutually accepted schedule between the Customer and the Company upon receipt of written notice.

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
 RETAIL DELIVERY SERVICE

RATE (Continued)

2. **Support and Accessory Charges:**

An additional annual charge as enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, will be applied to each luminaire type as stated in Section 1 – Luminaire Charges, where the Company is requested to furnish a suitable wood pole, standard, foundation or other accessory, and applicable delivery service as identified below, for the sole purpose of supporting a luminaire assembly.

Service Type

<u>Support Type</u>	<u>Description</u>
<u>Overhead Service</u>	
<u>Non-Distribution Pole</u>	
Wood Pole	POLE-WOOD
<u>Underground Service</u>	
<u>Non-Metallic Standard</u>	
Fiberglass without Foundation*	POLE FIBR PT EMB<25
Fiberglass with Foundation <25 feet	POLE FIBER PT <25' (Or) POLE FIBER RWY<25'
Fiberglass with Foundation =>25 feet	POLE FIBER RWY =>25
<u>Metallic Standard</u>	
Metallic Direct Embedded (No Fdn.)*	POLE METAL EMBEDDED
Metallic with Foundation	POLE METAL =>25FT

* No further installation or relocation of the designated support will take place after the effective date of this rate.

Accessory Type

None

3. **Other Fees and Charges:**

Additional fees or charges as enumerated below in the schedule of fee and charge prices will be applied per unit application pursuant to applicable Customer requests and/or in association with terms and conditions of separate agreements specific to attachments to the foregoing support types as stated in Section 2 – Support and Accessory Charges. Applicable **Lighting Service e**Charges are assessed where the Company is requested by the Customer to provide an individual site visit for the purpose of; investigation and determination of operational malfunction, preventative or proactive maintenance to address vandalism or lighting control, the performance of other specified services, or other such actions which, unless requested by the Customer would otherwise have not been warranted. A charge will not be assessed if, in the sole discretion of the Company, the conditions which created the need for the Customer request were determined to be the result of Company facilities or systems. Applicable fees are assessed on a regular billing schedule based on the terms and conditions of the agreement or license from which they are specified.

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE

Fee or Charge TypeCharge Amount

Lighting Service Charge

See Terms and Conditions for Distribution Service

RATE ADJUSTMENT PROVISIONSTransmission Service Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Transmission Service Cost Adjustment Provision.

Transition Charge Adjustment

The prices under this rate as set forth under “Monthly Charge” may be adjusted from time to time in the manner described in the Company’s Non-Bypassable Transition Charge Adjustment Provision.

Standard Offer Adjustment

All Customers served on this rate must pay any charges required pursuant to the terms of the Company’s Standard Offer Adjustment Provision, whether or not the Customer is taking or has taken Standard Offer Service.

Energy Efficiency Programs

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Energy Efficiency Program Provision as from time to time effective in accordance with law.

Infrastructure, Safety and Reliability Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Infrastructure, Safety and Reliability Provision as from time to time effective in accordance with law.

Customer Credit Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Customer Credit Provision as from time to time effective in accordance with law.

LIHEAP Enhancement Plan Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s LIHEAP Enhancement Plan Provision as from time to time effective in accordance with law.

Revenue Decoupling Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company’s Revenue Decoupling Mechanism Provision as from time to time effective in accordance with law.

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

Net Metering Provision and Qualifying Facilities Power Purchase Rate

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Net Metering Provision and Qualifying Facilities Power Purchase Rate as from time to time effective in accordance with law.

Pension Adjustment Mechanism Provision

The amount determined under the preceding provisions shall be adjusted in accordance with the Company's Pension Adjustment Mechanism Provision as from time to time effective in accordance with law.

STANDARD OFFER SERVICE

Any Customer served under this rate who is eligible for Standard Offer Service shall receive such service pursuant to the Standard Offer Service tariff.

GROSS EARNINGS TAX

A Rhode Island Gross Earnings Tax adjustment will be applied to the charges determined above in accordance with Rhode Island General Laws.

HOURS OF OPERATION

All street and area lights shall be operated through the use of a photoelectric device nightly from approximately one-half hour after sunset until approximately one-half hour before sunrise, a total of approximately 4,175 hours each year.

DETERMINATION OF MONTHLY BILL FOR GENERAL STREET AND AREA LIGHTING – FULL SERVICE

The monthly bill will be based on the following:

1. Facility Charges

The Luminaire Charges and the Support and Accessory Charges will be based on the annual rates above divided by the number of days in the calendar year to arrive at a daily rate and multiplied by the actual number of days in the billing period as measured from the date immediately following the prior bill to the current bill date.

2. Energy Charges

Charges per kWh will be based on the annual kWh per luminaire above. The monthly kWh amount shall be determined by allocating the number of annual operating hours for lights among the months, as shown below. The sum of the monthly kWh for each light equals the annual kWh in this tariff. A daily kWh amount is determined from the monthly amount by dividing the monthly kWh by the number of days in a month. The daily

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE

kWh amount is multiplied by the actual number of days for each calendar month during the billing period as measured from the date immediately following the prior bill to the current bill date and then multiplied by the charge per kWh.

Monthly Operating Hours

January	442	July	267
February	367	August	301
March	363	September	338
April	309	October	392
May	280	November	418
June	251	December	447

3. Other Fees and Charges

Individual charges for specific Customer requested services will be identified as adjustments on the bill. The representation of applicable fees associated with specific agreement or license terms and conditions between the Customer and the Company will be imposed according to the agreements, licenses, or as specified in the Terms and Conditions for Distribution Service and presented as adjustments on the Customer's bill.

DISCLAIMER OF LIABILITY

The Company's duties and obligations under this tariff extend only to the Customer, and not to any third parties. The Company does not assume and specifically disclaims any liability to third parties arising out of Company's obligations to Customer under this section.

EXCESSIVE DAMAGE

Excessive damage due to wanton or malicious acts shall be charged to the Customer at the actual cost of labor and material required to repair or replace the unit. Excessive damage is defined as any lighting facility component such as pole, standard, lamp, luminaire, accessory or conductors being broken or damaged more than once in a twelve month period. Notification of excessive damage will be made to the Customer by the Company prior to billing for repairs.

ATTACHMENTS

The Company has exclusive rights of ownership of the facilities defined within this tariff and reserves the privilege and sole discretion to permit the use of such facilities for the support and physical attachment of other, non-company owned equipment under the terms and conditions of a separate agreement or license. The Company may, at its sole discretion, provide electric delivery service as applicable under another tariff. The Company will have no responsibility for the attachments except as defined in the separate agreement or license. The attachment will not adversely impact the street and area lighting as defined in this tariff.

RELAMPING

All inoperable lamps and/or photoelectric controls which are owned and maintained by the Company will be spot replaced. The Customer is responsible for notifying the Company of malfunctioning lights.

**THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE**

FAILURE OF LIGHTS TO OPERATE

Should any light or lights, which are owned and maintained by the Company, fail to operate the full period provided therefore, except as hereinafter specified, a deduction will be made from the charges under this rate, other than the Support and Accessory Charge, for such light or lights, upon presentation of a claim therefore from the Customer, equivalent to such part of the annual price thereof, as is equal to the ratio that the time of any outage bears to the annual operating time of such light or lights. The provisions of this paragraph will apply only if such failure is due to some cause or condition which might reasonably have been prevented by the Company and without limiting the generality of the foregoing will not apply in case such failure is due to an act of nature or an act or order of any public authority or accidental or malicious breakage; provided, however, that in the latter case the necessary repairs are made with reasonable dispatch upon notification by the Customer.

LOCATION OF STREET AND AREA LIGHTS

The Customer bears sole responsibility for determining where street and area lights will be placed and the type of lamp/luminaire used at each location. The Company bears no responsibility for, and makes no representations or warranties concerning, the locations and lamps/ luminaires selected by the Customer or the adequacy of the resulting lighting. The Customer, by requesting and accepting service under this rate, hereby shall provide, grant and confer to the Company, all necessary easement, rights-of-way and/or consent rights and privileges as is necessary to provide such service in a manner satisfactory to the Company. All applicable permits, fees and/or other charges by others associated with the facilitation of service under this rate are the responsibility of the Customer.

PERMANENT DISCONTINUANCE OF LIGHTING FACILITIES

A Customer may permanently discontinue lighting facilities, owned by the Company, at no cost to the Customer, limited to a quantity not to exceed one (1) percent of the total number of lighting assemblies assigned to the Customer's billing account under this tariff within the given calendar year. The request by a Customer for the permanent discontinuance of the lighting in excess of one (1) percent as stated above may be performed by mutual agreement upon payment by the Customer to the Company in an amount equal to the sum of the unamortized balance of the original installation cost, removal and restoration costs, and any street light reconfiguration costs to maintain all other active lights.

RELOCATION OF LIGHTING FACILITIES

A Customer may request the relocation of existing street and area lighting facilities, owned by the Company, to another Customer specified location which meets all aforementioned terms and conditions of this tariff. The Customer will be responsible for all costs associated with the relocation as determined by the Company including but not limited to the removal/retirement costs of non-transferable facilities, the installation of new facilities as required, the relocation of existing facilities, any electric system reconfiguration and all site restoration. The relocated facilities will continue to be billed under the Customer account as originally represented prior to relocation.

TERM OF AGREEMENT

The initial term of agreement for General Street and Area Lighting Service under this tariff is two (2)

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE

years. Upon expiration of the initial term, the agreement will be continuously renewed until such time as either party has given to the other written notice, not less than six (6) months prior to the date on which the party desires to have the agreement terminated.

TERMS AND CONDITIONS

The Company's Terms and Conditions in effect from time to time, where applicable hereto and not inconsistent with any specific provisions hereof, are a part of this rate.

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
 RETAIL DELIVERY SERVICE

II. GENERAL STREET AND AREA LIGHTING – TEMPORARY TURN OFF SERVICE

RATE

Upon the Company's temporary turn-off of retail delivery service to municipal Customers requesting temporary turn off of the Company's street and area lighting facilities, the Company shall bill the municipal Customer the charges enumerated in R.I.P.U.C. No. 2095, Summary of Retail Delivery Rates, Sheet 3, for the temporary turn off.

1. Luminaire Charges:

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>Incandescent</u>					
	Roadway				
		1,000	105	LUM INC RWY 105WTT	n/a
		2,500	205	LUM INC RWY 205WTT	n/a
<u>Mercury Vapor</u>					
	Roadway				
		4,400	100	LUM MV RWY 100W TT	n/a
		8,500	175	LUM MV RWY 175W TT	n/a
		13,000	250	LUM MV RWY 250W TT	n/a
		23,000	400	LUM MV RWY 400W TT	n/a
		63,000	1,000	LUM MV RWY 1000WTT	n/a
	Floodlight				
		23,000	400	LUM MV FLD 400W TT	n/a
		63,000	1,000	LUM MV FLD 1000WTT	n/a
	Post Top				
		8,500	175	LUM MV POST 175W TT	n/a
<u>Metal Halide</u>					
	Floodlight				
		32,000	400	LUM MH FLD 400W TT	n/a
		107,800	1,000	LUM MH FLD 1000W TT	n/a

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
 RETAIL DELIVERY SERVICE

RATE (Continued)

<u>Lamp Type</u>	<u>Luminaire Type</u>	<u>Lumen Rating</u>	<u>Nominal Wattage</u>	<u>Description</u>	<u>Annual kWh</u>
<u>High Pressure Sodium Vapor</u>					
Roadway					
		4,000	50	LUM HPS RWY 50W TT	n/a
		6,300	70	LUM HPS RWY 70W TT	n/a
		9,600	100	LUM HPS RWY 100W TT	n/a
		16,000	150	LUM HPS RWY 150W TT	n/a
		27,500	250	LUM HPS RWY 250W TT	n/a
		50,000	400	LUM HPS RWY 400W TT	n/a
Walllighter					
	27,500 (24 Hr)		250	WALL HPS 250W 24 TT	n/a
Post Top					
		4,000	50	LUM HPS POST 50W TT	n/a
		9,600	100	LUM HPS POST 100W TT	n/a
Floodlight					
		27,500	250	LUM HPS FLD 250W TT	n/a
		50,000	400	LUM HPS FLD 400W TT	n/a
<u>Light Emitting Diode ("LED")</u>					
<u>Roadway</u>					
		<u>2,000</u>	<u>20</u>	<u>LUM LED RWY 20W TT</u>	<u>n/a</u>
		<u>2,700</u>	<u>30</u>	<u>LUM LED RWY 30W TT</u>	<u>n/a</u>
		<u>5,000</u>	<u>60</u>	<u>LUM LED RWY 60W TT</u>	<u>n/a</u>
		<u>13,000</u>	<u>140</u>	<u>LUM LED RWY 140W TT</u>	<u>n/a</u>
		<u>25,000</u>	<u>275</u>	<u>LUM LED RWY 275W TT</u>	<u>n/a</u>
<u>Post Top</u>					
		<u>5,000**</u>	<u>60</u>	<u>LUM LED POST 60W TT</u>	<u>n/a</u>

2. Support and Accessory Charges:Overhead ServiceNon-Distribution Pole

Wood Pole

POLE – WOOD TEMPOFF

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
 RETAIL DELIVERY SERVICE

RATE (Continued)Service TypeSupport TypeDescriptionUnderground ServiceNon-Metallic Standard

Fiberglass without Foundation

POLE FIBR EMB<25TT

Fiberglass with Foundation < 25 ft.

POLE FIBER PT <25TT

(Or) POLE FIBER RWY <25TT

Fiberglass with Foundation =>25 ft.

POLE FIBER RWY =>25TT

Metallic Standard

Metallic Direct Embedded (No Fdn.)

POLE METAL EMB TT

Metallic with Foundation

POLE METAL=>25' TT

3. Other Fees and Charges:Fee or Charge TypeCharge Amount

Reactivation Charge

\$25.00

Crew Protection

Customer Responsibility

DETERMINATION OF MONTHLY BILL FOR TEMPORARY TURN OFF SERVICE

The monthly bill will be based on the annual Temporary Turn Off Charges above. The monthly charge will be based on the annual charge divided by the number of days in the calendar year to arrive at a daily rate and multiplied by the actual number of days in the billing period as measured from the date immediately following the prior bill to the current bill date.

MAINTENANCE

Temporary Turn Off Service under this tariff does not include routine maintenance of lighting facilities temporarily discontinued by the Customer.

NOTICE FOR TEMPORARY TURN OFF SERVICE

In order for a municipal Customer to be served under the Temporary Turn Off Service provision of this tariff, the municipal Customer must provide written notice to the Company requesting such temporary turn off service. Such notice shall take the form of that provided by the Company and shall include the specific identification of Company street and area lighting facilities to be temporarily turned off and the estimated length of the temporary discontinuance, however, will be not less than one year and not more than three years. Such identification shall include sufficient information for the Company to easily locate its street and area lighting facilities to be temporarily turned off for the purpose of turning off (red capping) the facilities.

The Company shall use its best effort to turn off retail delivery service to its street and area lighting facilities within a reasonable length of time after receipt of the written notice required above. Depending upon the

THE NARRAGANSETT ELECTRIC COMPANY
GENERAL STREET AND AREA LIGHTING SERVICE (S-14)
RETAIL DELIVERY SERVICE

number of street and area lighting facilities to be temporarily turned off and the availability of the Company's crews, the Company may schedule such turn off over a period of time to allow for efficient operations. The Company reserves the right to be flexible in responding to the Customer's request. However, the Company shall complete all requests according to a mutually accepted schedule between the Customer and the Company upon receipt of written notice.

CREW PROTECTION

The Customer shall be responsible for the cost of any required police details or road flaggers for services provided under this option.

REINSTATEMENT OF GENERAL STREET AND AREA LIGHTING – FULL SERVICE

The provision of this service by the Company is predicated on the municipal Customer reinstating General Street and Area Lighting – Full Service. The Customer's request to reinstate all or a portion of the Company's street and area lighting facilities served under this rate, after complying with the term of service provision of this tariff, must be in written form and identify the specific street and area lighting facilities for the Company to reinstate. Upon receipt of the Customer's request, the Company shall use its best efforts to return the street and area lighting facilities to full lighting service as soon as possible after receiving the request. However, the Company reserves the right to flexibility in scheduling the reinstatement in an appropriate manner based on crew availability and the quantity of street and area lighting facilities requested to be reinstated. If the Customer requests reinstatement of the General Street and Area Lighting – Full Service prior to minimum term of one year, the Company will charge the Customer a Reactivation Charge per street or area lighting facility.

TERM OF SERVICE

The municipal Customer may remain on this provision of the General Street and Area Lighting tariff for a maximum period of three years. At the end of the three year period, the Customer must provide written notice for (i) the municipal Customer's return to General Street and Area Lighting – Full Service as provided for above, (ii) the permanent discontinuance of the street and area lighting facilities, as provided for above in Section I, or (iii) the Customer's ability to take advantage of another lighting tariff for retail delivery service to the street and area lighting facilities. The Company will continue to bill the Temporary Turn Off Charge until such time as the street and area lighting facilities are transferred to another delivery service selected by the Customer, or as assigned by the Company following the maximum three year term of service.

TERMS AND CONDITIONS

The Company's Terms and Conditions in effect from time to time, where applicable hereto and not inconsistent with any specific provisions hereof, are a part of this rate.

The Narragansett Electric Company

d/b/a National Grid

RIPUC Docket No. _____

Company-Owned LED Streetlighting Offering

Joint Testimony: Raymond J. Sheridan III,

Jeanne A. Lloyd and Robin E. Pieri

Schedule NG - 3

Company-Owned LED Proposed Pricing

The Narragansett Electric Company
Summary of Company-Owned LED Pricing

	Roadway Offerings					Post Top	Twin Post Top
	<u>1</u> (a)	<u>2</u> (b)	<u>3</u> (c)	<u>4</u> (d)	<u>5</u> (e)	<u>6</u> (f)	<u>7</u> (g)
(1) Wattage	20	30	60	140	275	60	60
(2) Annual kWh	88	130	255	589	1,153	255	510
(3) Installed Cost	\$505.56	\$494.41	\$529.09	\$798.42	\$960.33	\$807.09	\$2,201.39
<u>Capital-Related Carrying Charge</u>							
(4) Carrying Charge Rate	17.46%	17.46%	17.46%	17.46%	17.46%	17.46%	17.46%
(5) Annual Carrying Charge	\$88.27	\$86.32	\$92.38	\$139.40	\$167.67	\$140.92	\$384.36
<u>Non-Capital Delivery Service Charge</u>							
(6) Rate S-05 per kWh Charge	\$0.02654	\$0.02654	\$0.02654	\$0.02654	\$0.02654	\$0.02654	\$0.02654
(7) Annual Delivery Charge	\$2.34	\$3.45	\$6.77	\$15.63	\$30.60	\$6.77	\$13.54
(8) Proposed Luminaire Charge	\$90.61	\$89.77	\$99.15	\$155.03	\$198.27	\$147.69	\$397.90

- (3) Schedule NG-4, Page 1, Line (3)
- (4) Page 2, Line (6)
- (5) Line (3) x Line (4), truncated after 2 decimal places
- (6) RIPUC tariff 2095, distribution charge for S-05
- (7) Line (2) x Line (6), truncated after 2 decimal places
- (8) Line (5) + Line (7)

The Narragansett Electric Company
Annual Carrying Charge

(1)	Weighted Average Cost of Capital		9.68%
(2)	Depreciation Expense		5.56%
	Property Taxes		
(3)	Rate Year Municipal Taxes	\$29,743,324	
(4)	Gross Plant	\$1,337,227,839	
(5)			<u>2.22%</u>
(6)	Total Carrying Charge		17.46%

- (1) Docket 4323 Compliance Attachment 1, Schedule MDL-3-ELEC, Page 61, Column (c)
- (2) Straight-line depreciation rate for the 18 year life of streetlights
- (3) Docket 4323 Compliance Attachment 1 Schedule MDL-3-ELEC, Page 59, Line (12), Column (b)
- (4) Docket 4323 Compliance Attachment 1, Schedule MDL-3-ELEC, Page 63, Line (1), Column (c)
- (5) Line (3) ÷ Line (4)
- (6) Line (1) + Line (2) + Line (5)

Schedule NG - 4

Installed Cost of LED Fixtures

The Narragansett Electric Company
Summary of Installed Cost of LED Fixtures

		Roadway Offerings					Post Top	Twin Post Top
		<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>
		(a)	(b)	(c)	(d)	(e)	(f)	(g)
(1)	Wattage	20	30	60	140	275	60	60
(2)	Annual kWh	88	130	255	589	1,153	255	510
(3)	Installed Cost	\$505.56	\$494.41	\$529.09	\$798.42	\$960.33	\$807.09	\$2,201.39

- (a) Page 2, Line (12)
- (b) Page 3, Line (12)
- (c) Page 4, Line (12)
- (d) Page 5, Line (12)
- (e) Page 6, Line (12)
- (f) Page 7, Line (12)
- (g) Page 8, Line (12)

The Narragansett Electric Company
20 Watt LED Roadway Installed Cost

Tariff Luminaire Style Roadway

Tariff Code Description

Roadway luminaire, 20 watt, Light Emitting Diode

	<u>Material Cost</u>	<u>Unit of Issue</u>	<u>Overhead Percentage</u>	<u>Qty</u>	<u>Unit Price</u>	<u>Total Price</u>	
		(a)	(b)	(c)	(d)	(e)	
	Description						
(1)	Roadway Luminaire w/ LED Lamp	Each		1	\$144.00	\$144.00	
(2)	Photoelectric Control	Each		1	\$12.50	\$12.50	12 Rated Life (Years)
(3)	Bracket	Each		1	\$65.00	\$65.00	
(4)	Wire (Luminaire, 4-#10, 18')	Each		1	\$1.15	<u>\$1.15</u>	
(5)	Sub-Total Material					\$222.65	Sum of Lines (1) to (4)
(6)	Sales Tax		7.00%			\$15.59	Line (5) * Line (6), Column (b)
	<u>Material Overhead</u>						
(7)	Stores Handling		16.83%			<u>\$37.48</u>	Line (5) x Line (7), Column (b)
(8)	Total Material and Overhead					\$275.72	Line (5) + Line (6) + Line (7)
	<u>Crew Cost</u>						
(9)	Labor & Equipment					<u>\$189.68</u>	Page 9, Line (14)
(10)	Total Material and Labor					\$465.40	Line (8) + Line (9)
							Line (11), Column (b) x Page 9,
(11)	Plant Overhead		34.85%			<u>\$40.16</u>	Lines (4), (5), (13)
(12)	Total Plant Addition					\$505.56	Line (10) + Line (11)

Source: Lines (1) to (4): NG Engineering Construction Standards
Line (6), Column (b): RI State Sales Tax Rate
Line (7), Column (b): NG Accounting Services - Monthly Allocation Rates
Line (11), Column (b): NG Accounting Services - Monthly Allocation Rates

The Narragansett Electric Company
30 Watt LED Roadway Installed Cost

Tariff Luminaire Style Roadway

Tariff Code Description

Roadway luminaire, 30 watt, Light Emitting Diode

	<u>Material Cost</u>	<u>Unit of Issue</u>	<u>Overhead Percentage</u>	<u>Qty</u>	<u>Unit Price</u>	<u>Total Price</u>	
		(a)	(b)	(c)	(d)	(e)	
	Description						
(1)	Roadway Luminaire w/ LED Lamp	Each		1	\$135.00	\$135.00	
(2)	Photoelectric Control	Each		1	\$12.50	\$12.50	12 Rated Life (Years)
(3)	Bracket	Each		1	\$65.00	\$65.00	
(4)	Wire (Luminaire, 4-#10, 18')	Each		1	\$1.15	<u>\$1.15</u>	
(5)	Sub-Total Material					\$213.65	Sum of Lines (1) to (4)
(6)	Sales Tax		7.00%			\$14.96	Line (5) * Line (6), Column (b)
	<u>Material Overhead</u>						
(7)	Stores Handling		16.83%			\$35.96	Line (5) x Line (7), Column (b)
(8)	Total Material and Overhead					\$264.57	Line (5) + Line (6) + Line (7)
	<u>Crew Cost</u>						
(9)	Labor & Equipment					<u>\$189.68</u>	Page 9, Line (14)
(10)	Total Material and Labor					\$454.25	Line (8) + Line (9)
							Line (11), Column (b) x Page 9,
(11)	Plant Overhead		34.85%			<u>\$40.16</u>	Lines (4), (5), (13)
(12)	Total Plant Addition					\$494.41	Line (10) + Line (11)

Source: Lines (1) to (4): NG Engineering Construction Standards
Line (6), Column (b): RI State Sales Tax Rate
Line (7), Column (b): NG Accounting Services - Monthly Allocation Rates
Line (11), Column (b): NG Accounting Services - Monthly Allocation Rates

The Narragansett Electric Company
60 Watt LED Roadway Installed Cost

Tariff Luminaire Style Roadway

Tariff Style Description

Roadway luminaire, 60 watt, Light Emitting Diode

	<u>Material Cost</u>	<u>Unit of Issue</u>	<u>Overhead Percentage</u>	<u>Qty</u>	<u>Unit Price</u>	<u>Total Price</u>	
		(a)	(b)	(c)	(d)	(e)	
	Description						
(1)	Roadway Luminaire w/ LED Lamp	Each		1	\$163.00	\$163.00	
(2)	Photoelectric Control	Each		1	\$12.50	\$12.50	12 Rated Life (Years)
(3)	Bracket	Each		1	\$65.00	\$65.00	
(4)	Wire (Luminaire, 4-#10, 18')	Each		1	\$1.15	<u>\$1.15</u>	
(5)	Sub-Total Material					\$241.65	Sum of Lines (1) to (4)
(6)	Sales Tax		7.00%			\$16.92	Line (5) * Line (6), Column (b)
	<u>Material Overhead</u>						
(7)	Stores Handling		16.83%			\$40.68	Line (5) x Line (7), Column (b)
(8)	Total Material and Overhead					\$299.25	Line (5) + Line (6) + Line (7)
	<u>Crew Cost</u>						
(9)	Labor & Equipment					<u>\$189.68</u>	Page 9, Line (14)
(10)	Total Material and Labor					\$488.93	Line (8) + Line (9)
							Line (11), Column (b) x Page 9,
(11)	Plant Overhead		34.85%			<u>\$40.16</u>	Lines (4), (5), (13)
(12)	Total Plant Addition					\$529.09	Line (10) + Line (11)

Source: Lines (1) to (4): NG Engineering Construction Standards
Line (6), Column (b): RI State Sales Tax Rate
Line (7), Column (b): NG Accounting Services - Monthly Allocation Rates
Line (11), Column (b): NG Accounting Services - Monthly Allocation Rates

The Narragansett Electric Company
140 Watt LED Roadway Installed Cost

Tariff Luminaire Style Roadway

Tariff Style Description

Roadway luminaire, 140 watt, Light Emitting Diode

	<u>Material Cost</u>	<u>Unit of Issue</u>	<u>Overhead Percentage</u>	<u>Qty</u>	<u>Unit Price</u>	<u>Total Price</u>	
		(a)	(b)	(c)	(d)	(e)	
	Description						
(1)	Roadway Luminaire w/ LED Lamp	Each		1	\$355.50	\$355.50	
(2)	Photoelectric Control	Each		1	\$12.50	\$12.50	12 Rated Life (Years)
(3)	Bracket	Each		1	\$90.00	\$90.00	
(4)	Wire (Luminaire, 4-#10, 18')	Each		1	\$1.15	<u>\$1.15</u>	
(5)	Sub-Total Material					\$459.15	Sum of Lines (1) to (4)
(6)	Sales Tax		7.00%			\$32.14	Line (5) * Line (6), Column (b)
	<u>Material Overhead</u>						
(7)	Stores Handling		16.83%			\$77.29	Line (5) x Line (7), Column (b)
(8)	Total Material and Overhead					\$568.58	Line (5) + Line (6) + Line (7)
	<u>Crew Cost</u>						
(9)	Labor & Equipment					<u>\$189.68</u>	Page 9, Line (14)
(10)	Total Material and Labor					\$758.26	Line (8) + Line (9)
							Line (11), Column (b) x Page 9,
(11)	Plant Overhead		34.85%			<u>\$40.16</u>	Lines (4), (5), (13)
(12)	Total Plant Addition					\$798.42	Line (10) + Line (11)

Source: Lines (1) to (4): NG Engineering Construction Standards
Line (6), Column (b): RI State Sales Tax Rate
Line (7), Column (b): NG Accounting Services - Monthly Allocation Rates
Line (11), Column (b): NG Accounting Services - Monthly Allocation Rates

The Narragansett Electric Company
275 Watt LED Roadway Installed Cost

Tariff Luminaire Style Roadway

Tariff Style Description

Roadway luminaire, 275 watt, Light Emitting Diode

	<u>Material Cost</u>	<u>Unit of Issue</u>	<u>Overhead Percentage</u>	<u>Qty</u>	<u>Unit Price</u>	<u>Total Price</u>	
		(a)	(b)	(c)	(d)	(e)	
	Description						
(1)	Roadway Luminaire w/ LED Lamp	Each		1	\$486.25	\$486.25	
(2)	Photoelectric Control	Each		1	\$12.50	\$12.50	12 Rated Life (Years)
(3)	Bracket	Each		1	\$90.00	\$90.00	
(4)	Wire (Luminaire, 4-#10, 18')	Each		1	\$1.15	<u>\$1.15</u>	
(5)	Sub-Total Material					\$589.90	Sum of Lines (1) to (4)
(6)	Sales Tax		7.00%			\$41.29	Line (5) * Line (6), Column (b)
	<u>Material Overhead</u>						
(7)	Stores Handling		16.83%			\$99.30	Line (5) x Line (7), Column (b)
(8)	Total Material and Overhead					\$730.49	Line (5) + Line (6) + Line (7)
	<u>Crew Cost</u>						
(9)	Labor & Equipment					<u>\$189.68</u>	Page 9, Line (14)
(10)	Total Material and Labor					\$920.17	Line (8) + Line (9)
							Line (11), Column (b) x Page 9,
(11)	Plant Overhead		34.85%			<u>\$40.16</u>	Lines (4), (5), (13)
(12)	Total Plant Addition					\$960.33	Line (10) + Line (11)

Source: Lines (1) to (4): NG Engineering Construction Standards
Line (6), Column (b): RI State Sales Tax Rate
Line (7), Column (b): NG Accounting Services - Monthly Allocation Rates
Line (11), Column (b): NG Accounting Services - Monthly Allocation Rates

The Narragansett Electric Company
60 Watt LED Post Top Installed Cost

Tariff Luminaire Style Post Top

Tariff Style Description

Post Top luminaire, 60 watt, Light Emitting Diode

	<u>Material Cost</u>	<u>Unit of Issue</u>	<u>Overhead Percentage</u>	<u>Qty</u>	<u>Unit Price</u>	<u>Total Price</u>	
		(a)	(b)	(c)	(d)	(e)	
	Description						
(1)	Post Top Luminaire w/ LED Lamp	Each		1	\$452.50	\$452.50	
(2)	Photoelectric Control	Each		1	\$12.50	\$12.50	12 Rated Life (Years)
(3)	Bracket	Each		1	\$0.00	\$0.00	
(4)	Wire (Luminaire, 4-#10, 18')	Each		1	\$1.15	<u>\$1.15</u>	
(5)	Sub-Total Material					\$466.15	Sum of Lines (1) to (4)
(6)	Sales Tax		7.00%			\$32.63	Line (5) * Line (6), Column (b)
	<u>Material Overhead</u>						
(7)	Stores Handling		16.83%			\$78.47	Line (5) x Line (7), Column (b)
(8)	Total Material and Overhead					<u>\$577.25</u>	Line (5) + Line (6) + Line (7)
	<u>Crew Cost</u>						
(9)	Labor & Equipment					<u>\$189.68</u>	Page 9, Line (14)
(10)	Total Material and Labor					\$766.93	Line (8) + Line (9)
							Line (11), Column (b) x Page 9,
(11)	Plant Overhead		34.85%			<u>\$40.16</u>	Lines (4), (5), (13)
(12)	Total Plant Addition					\$807.09	Line (10) + Line (11)

Source: Lines (1) to (4): NG Engineering Construction Standards
Line (6), Column (b): RI State Sales Tax Rate
Line (7), Column (b): NG Accounting Services - Monthly Allocation Rates
Line (11), Column (b): NG Accounting Services - Monthly Allocation Rates

The Narragansett Electric Company
Twin Fixture 60 Watt LED Post Top Installed Cost

Tariff Luminaire Style Decorative Post Top - Twin

Tariff Style Description

Twin Post Top luminaire, 60 watt, Light Emitting Diode - Traditional style

<u>Material Cost</u>		<u>Unit of Issue</u>	<u>Overhead Percentage</u>	<u>Qty</u>	<u>Unit Price</u>	<u>Total Price</u>	
		(a)	(b)	(c)	(d)	(e)	
Description							
(1)	Post Top Luminaire w/ LED Lamp	Each		2	\$452.50	\$905.00	
(2)	Photoelectric Control	Each		2	\$12.50	\$25.00	12 Rated Life (Years)
(3)	Cross-Arm	Each		1	\$412.33	\$412.33	
(4)	Wire (Luminaire, 4-#10, 18')	Each		2	\$1.15	<u>\$2.30</u>	
(5)	Sub-Total Material					\$1,344.63	Sum of Lines (1) to (4)
(6)	Sales Tax		7.00%			\$94.12	Line (5) * Line (6), Column (b)
<u>Material Overhead</u>							
(7)	Stores Handling		16.83%			<u>\$226.35</u>	Line (5) x Line (7), Column (b)
(8)	Total Material and Overhead					\$1,665.10	Line (5) + Line (6) + Line (7)
<u>Crew Cost</u>							
(9)	Labor & Equipment					<u>\$442.58</u>	Page 9, Line (28)
(10)	Total Material and Labor					\$2,107.68	Line (8) + Line (9)
(11)	Plant Overhead		34.85%			<u>\$93.71</u>	Line (11), Column (b) x Page 9, Lines (18), (19), (27)
(12)	Total Plant Addition					\$2,201.39	Line (10) + Line (11)

Source: Lines (1) to (4): NG Engineering Construction Standards
Line (6), Column (b): RI State Sales Tax Rate
Line (7), Column (b): NG Accounting Services - Monthly Allocation Rates
Line (11), Column (b): NG Accounting Services - Monthly Allocation Rates

The Narragansett Electric Company
Labor and Equipment Costs

Initial Installation Cost-Single Fixture

Labor

(1)	Crew Leader - Hourly Rate	\$47.12	
(2)	Lineworker - Hourly Rate	\$32.75	
(3)	Installation & Travel Time (Minutes)	45	
(4)	Total Direct Labor		\$59.90
(5)	Design and Supervision	29.78%	\$17.84
(6)	ADD: Overhead Labor Cost	81.84%	<u>\$63.62</u>
(7)	Total Labor		\$141.36

Equipment

(8)	Truck-Aerial 45 ML OC	\$14.42	
(9)	Installation & Travel Time (Minutes)	45	
(10)	Total Equipment		\$10.82

Miscellaneous

(11)	Work Zone Protection/Police Detail	\$50.00	
(12)	Installation & Travel Time (Minutes)	45	
(13)	Total Equipment		<u>\$37.50</u>
(14)	Total Labor & Equipment Cost		<u>\$189.68</u>

Initial Installation Cost-Twin Fixture

Labor

(15)	Crew Leader - Hourly Rate	\$47.12	
(16)	Lineworker - Hourly Rate	\$32.75	
(17)	Installation & Travel Time (Minutes)	105	
(18)	Total Direct Labor		\$139.77
(19)	Design and Supervision	29.78%	\$41.62
(20)	ADD: Overhead Labor Cost	81.84%	<u>\$148.45</u>
(21)	Total Labor		\$329.84

Equipment

(22)	Truck-Aerial 45 ML OC	\$14.42	
(23)	Installation & Travel Time (Minutes)	105	
(24)	Total Equipment		\$25.24

Miscellaneous

(25)	Work Zone Protection/Police Detail	\$50.00	
(26)	Installation & Travel Time (Minutes)	105	
(27)	Total Equipment		<u>\$87.50</u>
(28)	Total Labor & Equipment Cost		<u>\$442.58</u>

Schedule NG - 5

Proposed Temporary Turn-Off Pricing for LED Offering

The Narragansett Electric Company
Temporary Turn-off Pricing for LED Offering

<u>Luminaire Description</u>	<u>Proposed Annual Charges</u>	
	<u>Full Service</u>	<u>Temp Off</u>
	(a)	(b)
(1) Roadway luminaire, 20 watt, Light Emitting Diode	\$90.61	\$54.36
(2) Roadway luminaire, 30 watt, Light Emitting Diode	\$89.77	\$53.86
(3) Roadway luminaire, 60 watt, Light Emitting Diode	\$99.15	\$59.49
(4) Roadway luminaire, 140 watt, Light Emitting Diode	\$155.03	\$93.01
(5) Roadway luminaire, 275 watt, Light Emitting Diode	\$198.27	\$118.96
(6) Post Top luminaire, 60 watt, Light Emitting Diode	\$147.69	\$88.61

(1) - (6) Schedule NG-3, Page 1, Columns (a) through (f)

The proposed LED fixture on Schedule NG-3, Page 1, Column (g) is applicable only to Rate S-06, Decorative Street and Area Lighting Service, and this service currently does not have a temporary turn-off provision.

(a) Schedule NG-3, Page 1, Line (8)

(b) Column (a) x 60%, truncated to 2 decimal places; representing the costs the Company continues to incur when service to a streetlight is temporarily suspended.

The Narragansett Electric Company

d/b/a National Grid

RIPUC Docket No. _____

Company-Owned LED Streetlighting Offering

Joint Testimony: Raymond J. Sheridan III,

Jeanne A. Lloyd and Robin E. Pieri

Schedule NG - 6

Bill Comparison of Company-Owned LED and HPS Pricing

[illegible]

Schedule NG - 7

Proposed Streetlighting Summary of Retail Rates

THE NARRAGANSETT ELECTRIC COMPANY
Summary of Retail Delivery Rates

Rate	Charge Description	Distribution Charge			
A	B	C			
Rate S-06 <i>Decorative Street and Area Lighting Service</i> RIPUC No. 2166	<u>Fixture Charges</u>	<u>Full Service</u> S-06	<u>Full Service</u> S-10	<u>Full Service</u> S-14	<u>Temp-off</u> S-14
	<u>Luminaires</u>				
Rate S-10 <i>Limited Service - Private Lighting</i> RIPUC No. 2167	<u>Incandescent</u>				
	Roadway				
	LUM INC RWY 105W	n/a	\$77.43	\$77.43	\$46.46
	LUM INC RWY 205W (S-14 Only)	n/a	n/a	\$77.43	\$46.46
	<u>Mercury Vapor</u>				
	Roadway				
	LUM MV RWY 100W	n/a	\$78.06	\$78.06	\$46.84
	LUM MV RWY 175W	n/a	\$78.06	\$78.06	\$46.84
	LUM MV RWY 250W (S-14 Only)	n/a	n/a	\$120.39	\$72.23
	LUM MV RWY 400W	n/a	\$163.46	\$163.46	\$98.08
	LUM MV RWY 1000W	n/a	\$163.46	\$163.46	\$98.08
	Post-top				
	LUM MV POST 175W (S-14 Only)	n/a	n/a	\$156.80	\$94.08
	Flood				
	LUM MV FLD 400W	n/a	\$181.37	\$181.37	\$108.82
	LUM MV FLD 1000W	n/a	\$181.37	\$181.37	\$108.82
	<u>Sodium Vapor</u>				
	Roadway				
	LUM HPS RWY 50W	n/a	\$77.43	\$77.43	\$46.46
	LUM HPS RWY 70W	n/a	\$76.91	\$76.91	\$46.15
	LUM HPS RWY 100W	n/a	\$78.06	\$78.06	\$46.84
	LUM HPS RWY 150W	n/a	\$78.58	\$78.58	\$47.15
	LUM HPS RWY 250W	n/a	\$120.39	\$120.39	\$72.23
	LUM HPS RWY 400W	n/a	\$163.46	\$163.46	\$98.08
	Flood				
	LUM HPS FLD 250W	n/a	\$146.11	\$146.11	\$87.67
	LUM HPS FLD 400W	n/a	\$181.37	\$181.37	\$108.82
	Post-top				
	LUM HPS POST 50W	n/a	\$155.49	\$155.49	\$93.29
	LUM HPS POST 100W	n/a	\$156.80	\$156.80	\$94.08
	WALL HPS 250W 24HR	n/a	\$172.21	\$172.21	\$103.33
	SHOEBOX - LUM HPS REC 100W-C1	n/a	\$98.99	n/a	n/a
	<u>Metal Halide</u>				
	Flood				
	LUM MH FLD 400W	n/a	\$181.37	\$181.37	\$108.82
	LUM MH FLD 1000W	n/a	\$181.37	\$181.37	\$108.82
	<u>Light Emitting Diode</u>				
	Roadway				
	LUM LED RWY 20W	n/a	\$90.61	\$90.61	\$54.36
	LUM LED RWY 30W	n/a	\$89.77	\$89.77	\$53.86
	LUM LED RWY 60W	n/a	\$99.15	\$99.15	\$59.49
	LUM LED RWY 140W	n/a	\$155.03	\$155.03	\$93.01
	LUM LED RWY 275W	n/a	\$198.27	\$198.27	\$118.96
	Post-top				
	LUM LED POST 60W	n/a	\$147.69	\$147.69	\$88.61
	DEC LED TR 60W	\$147.69	n/a	n/a	n/a
	DEC LED TR-TW 60W	\$397.90	n/a	n/a	n/a
	<u>Decorative</u>				
	DEC HPS TR 50W	\$155.49	n/a	n/a	n/a
	DEC HPS TR 100W	\$156.80	n/a	n/a	n/a
	DEC HPS AG 50W	\$292.34	n/a	n/a	n/a
	DEC HPS AG 100W	\$280.77	n/a	n/a	n/a
	DEC HPS WL 50W	\$325.35	n/a	n/a	n/a
	DEC HPS WL 100W	\$325.30	n/a	n/a	n/a
	DEC HPS TR-TW 50W	\$506.29	n/a	n/a	n/a
	DEC HPS TR-TW 100W	\$509.46	n/a	n/a	n/a
	DEC HPS AG-TW 50W	\$693.84	n/a	n/a	n/a
	DEC HPS AG-TW 100W	\$670.71	n/a	n/a	n/a
	DEC HPS WL-TW 50W	\$759.87	n/a	n/a	n/a
	DEC HPS WL-TW 100W	\$759.77	n/a	n/a	n/a
	<u>Standards</u>				
	POLE-WOOD	n/a	\$133.71	\$133.71	\$133.71
	POLE FIBER PT EMB <25' w/out foundation	n/a	\$260.22	\$260.22	\$260.22
	POLE FIBER RWY <25 w/ foundation	n/a	\$424.14	\$424.14	\$424.14
	POLE FIBER RWY => 25 w/ foundation	n/a	\$473.53	\$473.53	\$473.53
	POLE METAL EMBEDDED (S-14 Only)	n/a	n/a	\$405.16	\$405.16
	POLE METAL=>25FT (with foundation)	n/a	\$484.72	\$484.72	\$484.72
	DEC VILL PT/FDN	\$566.70	n/a	n/a	n/a
	DEC WASH PT/FDN	\$575.78	n/a	n/a	n/a
	<u>Effective Date</u>	10/1/16	10/1/16	10/1/16	

Taxes and other rate clauses apply as usual and will appear on customer bills as applicable.

Effective: 10/1/2016
(Replacing RIPUC No. 2095 effective 4/1/16)
Issued: 7/1/2016