

MASSACHUSETTS ELECTRIC COMPANY

STREET AND AREA LIGHTING – CUSTOMER OWNED EQUIPMENT S-5
RETAIL DELIVERY SERVICE

AVAILABILITY

Street and Area Lighting Service is available under this rate to any municipal city or town, governmental entity, or other public authority, hereinafter referred to as Customer, in accordance with the qualifications and specifications set forth below. Any Customer that has purchased designated Company street and area lighting equipment pursuant to G.L. c. 164 § 34A and is receiving service and is subject to the provisions of this tariff that pertain to purchased street and area lighting equipment, shall also be referred to as Municipal Customer solely for the purpose of those specific provisions.

1. Existing Municipal Customers under the Company's Rate S-1, S-3 Option A, or S-6 that purchase street and area lights and/or dedicated poles, standards or accessories shall be served under this rate, provided that the Municipal Customer has complied with all provisions and terms of the rates and any related service agreements. Service under this rate is contingent upon the execution of a written purchase and sale agreement for the Company's designated street and area lighting equipment, and dedicated poles, standards or accessories, the completed transfer of title to the equipment from the Company to the Municipal Customer, and the execution of a license agreement between the Municipal Customer and the Company.
2. Any Municipal Customer that has purchased street and area lighting equipment pursuant to the Company's Rate S-2, Street Lighting – Overhead – Customer Owned Equipment or Rate S-3 Option B, Street Lighting – Underground – Division of Ownership, shall be served under this rate provided that the Municipal Customer has complied with all provisions and terms of the now closed rates and any related service agreements. The Municipal Customer must have completed all planned conversions from Company-owned street lighting equipment to Customer-owned street lighting equipment and have fulfilled the term of agreement under the applicable tariff. Service under this rate for Rate S-2 or Rate S-3 Option B is contingent upon the execution of a separate service agreement and license agreement between the Municipal Customer and the Company.
3. Street and area light replacements and additions installed by a Municipal Customer pursuant to (1) or (2) above, following its purchase of street and area lights, may be made by providing written notice to the Company.
4. Customers who are not specifically designated as Municipal Customers, as defined above, may make additions of Customer-owned luminaires under this rate by providing written notice to the Company. Service to a Customer under this rate shall be contingent upon the execution of a service agreement between the Customer and the Company.

Street and Area Lighting Service under this rate does not include maintenance of street and area lighting equipment owned by the Customer. The Customer shall be responsible for providing maintenance, and, absent a separate contract between the Company and the Customer, the Company shall have no obligation to maintain facilities and equipment owned by the Customer. The Company reserves the right to transition existing Customers previously under an applicable discontinued service to this Street and Area Lighting Service, whereby the Customer shall be compliant with all terms and conditions as set forth.

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I. STREET AND AREA LIGHTING – CUSTOMER OWNED EQUIPMENT

RATE

The Energy Charge provides the annual energy consumption (kWh) to be used in conjunction with the hours of operation to facilitate billing for the applicable customer-owned street and area luminaire and lamp combinations below.

1. Annual kWh per Incandescent & High Intensity Discharge (HID) Luminaire:

| <u>Lamp Type</u> | <u>Luminaire Type</u> | <u>Lumen Rating</u> | <u>Nominal Wattage</u> | <u>Annual kWh</u> |
|----------------------|-----------------------------------|---------------------|------------------------|-------------------|
| <u>Incandescent</u> | Roadway | 1,000 | 105 | 438 |
| | | 2,500 | 205 | 856 |
| <u>Mercury Vapor</u> | Post Top | 4,400 | 100 | 543 |
| | | 8,500 | 175 | 881 |
| | Roadway | 4,400 | 100 | 543 |
| | | 8,500 | 175 | 881 |
| | | 13,000 | 250 | 1,282 |
| | | 23,000 | 400 | 1,991 |
| | | 63,000 | 1,000 | 4,572 |
| | Floodlight | 23,000 | 400 | 1,991 |
| | | 63,000 | 1,000 | 4,572 |
| | <u>High Pressure Sodium Vapor</u> | Post Top | 4,000 | 50 |
| 6,300 | | | 100 | 359 |
| Roadway | | 4,000 | 50 | 255 |
| | | 6,300 | 70 | 359 |
| | | 9,600 | 100 | 493 |
| | | 16,000 | 150 | 722 |
| | | 27,500 | 250 | 1,269 |
| | | 50,000 | 400 | 1,962 |
| | | 140,000 | 1,000 | 4,618 |

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RATE (CONTINUED)

| <u>Lamp Type</u> | <u>Luminaire Type</u> | <u>Lumen Rating</u> | <u>Nominal Wattage</u> | <u>Annual kWh</u> |
|---|-----------------------|---------------------|------------------------|-------------------|
| <u>High Pressure Sodium Vapor (Continued)</u> | | | | |
| | Floodlight | 27,500 | 250 | 1,269 |
| | | 50,000 | 400 | 1,962 |
| | Wallighter | | | |
| | | 27,500 (12 Hr.) | 250 | 1,332 |
| | | 27,500 (24 Hr.) | 250 | 2,663 |
| <u>Metal Halide</u> | | | | |
| | Floodlight | | | |
| | | 32,000 | 400 | 1,883 |

2. Annual kWh per Solid State Lighting (SSL) Luminaire:

Light Source Type

Light Emitting Diode (LED)

| <u>*Nominal Wattage (Range)</u> | <u>Billable Wattage</u> | <u>Continuous</u> | <u>Dusk-to-Dawn</u> | <u>Dimming 70%</u> | <u>Dimming 50%</u> | <u>Part-Night (4hr.)</u> |
|---------------------------------|-------------------------|-------------------|---------------------|--------------------|--------------------|--------------------------|
| 0.1 to 50.0 | 25 | 219 | 104 | 93 | 77 | 68 |
| 50.1 to 100.0 | 75 | 657 | 313 | 280 | 231 | 204 |
| 100.1 to 150.0 | 125 | 1,095 | 522 | 467 | 385 | 339 |
| 150.1 to 200.0 | 175 | 1,533 | 731 | 654 | 539 | 475 |
| 200.1 to 250.0 | 225 | 1,971 | 939 | 841 | 693 | 611 |
| 250.1 to 300.0 | 275 | 2,409 | 1,148 | 1,028 | 847 | 747 |

* LED Nominal Wattage includes the total device system wattage (LED array, driver and control) and applicable adjustments. For billing purposes, a streetlight will be placed on an operating schedule based on the following: (1) if the streetlight's annual operating hour equivalent is no more than five (5) percent above the closest operating schedule's annual operating hour equivalent identified below in the Hours of Operation section, the streetlight shall be placed on that operating schedule; or (2) if the streetlight's annual operating hour equivalent is more than five (5) percent above the closest operating schedule's annual operating hour equivalent, the streetlight shall be placed on the operating schedule with the next highest annual operating hour equivalent.

3. Other Fees and Charges:

| <u>Fee or Charge Type</u> | <u>Charge Amount</u> |
|---------------------------|---|
| Lighting Service Charge | See Terms and Conditions for Distribution Service, Appendix A. |
| Field Survey Charge | See License Agreement for Street and Area Lighting, Section 4.1 |

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4. Rates for Retail Delivery Service

Customers receiving delivery service under this rate shall be charged the applicable charges contained in the Summary of Electric Service Rates Tariff as in effect from time to time.

RATE ADJUSTMENT PROVISIONS

The charges for delivery service under this rate shall be subject to adjustment pursuant to the following provisions:

Advanced Metering Infrastructure Provision
Attorney General Consultant Expenses Provision
Basic Service Adjustment Provision
Electric Vehicle Program Provision
Energy Efficiency Provision
Grid Modernization Provision
Infrastructure, Safety, Reliability and Electrification Provision
Net Metering Provision
Pension/Post-retirement Benefits Other than Pension Mechanism Provision
Performance-Based Ratemaking Provision
Renewable Provision
Renewable Energy Recovery Provision
Residential Assistance Adjustment Provision
Revenue Decoupling Mechanism Provision
Smart Grid Adjustment Provision
SMART Provision
Solar Cost Adjustment Provision
Storm Fund Replenishment Provision
Tax Credit Provision
Transition Cost Adjustment Provision
Vegetation Management Pilot Provision

TRANSMISSION SERVICE

Transmission service is available to all retail customers taking service under this rate. For those customers, the transmission charge determined under this rate shall be calculated in accordance with the Company's Transmission Service Cost Adjustment Provision.

BASIC SERVICE

Any Customer who does not have a supplier other than the Company will receive and pay the Company for Basic Service in accordance with the terms and price for Basic Service established by the Department of Public Utilities.

HOURS OF OPERATION

The Customer's street and area lighting may be operated for the hours and at the light level of the Customer's choice. However, for billing purposes all individual street and area lighting sources will be billed on an applicable Operating Schedule based upon the nature of the street and area lighting services as follows:

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1. Continuous – Street and area lights operate continuously each day of the year, a total of approximately 8,760 hours each year.
2. Dusk-To-Dawn – Street and area lights operate daily at full energy requirements from approximately one-half hour after sunset until approximately one-half hour before sunrise, a total of no greater than 4,175 hours each year.
3. Dimming to 70% – Street and area lights operate daily at full energy consumption from approximately one-half hour after sunset until a time equal to the mid-point of the previous Dusk-To-Dawn service period, then an assumed 30% reduction in wattage and energy requirements for a period of reduced light output not to exceed four hours, as necessary, at which time returning to full energy requirements until approximately one-half hour before sunrise, determined to be a total of 2,715 hours at full energy requirements and 1,460 hours at reduced energy requirements, respectively, for a total annual hourly equivalent of no greater than 3,737 hours each year.
4. Dimming to 50% - Street and area lights operate daily at full energy consumption from approximately one half hour after sunset until a time equal to the mid-point of the previous Dusk-To-Dawn service period, then an assumed 50% reduction in wattage and energy requirements for a period of reduced light output not to exceed six hours, as necessary, at which time returning to full energy requirements until approximately one-half hour before sunrise, determined to be a total of 1,985 hours at full energy requirements and 1,095 hours at reduced energy requirements, respectively, for a total annual hourly equivalent of no greater than 3,080 hours each year.
5. Part-Night – Street and area lights operate daily from approximately one-half hour after sunset then turn off at a time equal to the mid-point of the previous Dusk-To-Dawn service period and as necessary, turn back on four hours later until approximately one-half hour before sunrise, a total of no greater than 2,715 hours each year.

For billing purposes, a streetlight will be placed on an operating schedule based on the following: (1) if the streetlight's annual operating hours equivalent is no more than five (5) percent above the closest operating schedule's annual operating hour equivalent identified below in the hours of Operation section, the streetlight shall be placed on that operating schedule; or (2) if the streetlight's annual operating hour equivalent is more than five (5) percent above the closed operating schedule's annual operating hour equivalent, the street light shall be placed on the operating schedule with the next highest annual operating hour equivalent.

Customers requesting a change in Hours of Operation of a light due to the installation or removal of a control device will be required to provide the estimated annual operating hours and energy reduction conditions it anticipates that the control device will provide as defined by the manufacturer's specifications. The Company will assign the Customer to the appropriate Operating Schedule based upon the Customer's light source type, billable wattage and expected annual operating hours. It is the Customer's responsibility to notify the Company prior to any changes to its scheduled usage to allow for billing adjustments as may be needed, however, changes in operating schedules at the request of the Customer are limited to once per calendar year, per light.

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DETERMINATION OF MONTHLY BILL

The monthly bill will be based on the following:

1. Energy Charges

The Energy Charges for customer-owned street and area lighting are determined by multiplying the current energy rates by the aggregation of Billable kWh delivered for each light per billing period. The monthly billable kWh delivered shall be determined by allocating the Annual Billable kWh Delivered to each month based upon the Monthly Operating Schedule, the sum of the monthly billable kWh delivered for each light equals the annual billable kWh delivered in this tariff. Each month’s daily kWh amount is determined from the monthly amount by dividing the monthly kWh by the number of days in the month. The daily kWh amount is multiplied by the actual number of days for each month during the billing period as measured from the prior billing date to the current billing date, and then multiplied by the energy charges per kWh.

The Monthly Operating Hour Equivalents provided below represents the equivalent time of full energy deliveries to an individual light following the defined Hours of Operation defined above:

Table of Monthly Operating Hour Equivalents (Hrs.)

| Month | Days | Operating Schedule | | | | Part-Night-4hr |
|-----------|------|--------------------|--------------|-------------|-------------|----------------|
| | | Continuous | Dusk-To-Dawn | Dimming-70% | Dimming-50% | |
| January | 31 | 744 | 442 | 401 | 348 | 316 |
| February | 28 | 672 | 367 | 332 | 282 | 254 |
| March | 31 | 744 | 363 | 326 | 270 | 238 |
| April | 30 | 720 | 309 | 273 | 218 | 188 |
| May | 31 | 744 | 280 | 244 | 187 | 156 |
| June | 30 | 720 | 251 | 218 | 162 | 132 |
| July | 31 | 744 | 267 | 233 | 176 | 146 |
| August | 31 | 744 | 301 | 267 | 210 | 179 |
| September | 30 | 720 | 338 | 300 | 247 | 218 |
| October | 31 | 744 | 392 | 353 | 298 | 268 |
| November | 30 | 720 | 418 | 379 | 328 | 297 |
| December | 31 | 744 | 447 | 411 | 354 | 323 |
| Annual | 365 | 8,760 | 4,175 | 3,737 | 3,080 | 2,715 |

2. 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 agreements, 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, Appendix A, and presented as adjustments on the Customer’s bill.

LIABILITY AND INDEMNIFICATION

The Customer has the responsibilities and obligations associated with luminaire and support or accessory ownership and maintenance of the street and area lighting facilities served under this tariff. The Customer assumes all liability and shall indemnify the Company for all damages, claims, and liabilities associated with the ownership, maintenance, and operation or failure of operation of the street and area lighting facilities, and the Company shall have the right to require the Customer to purchase insurance or a bond naming the Company as beneficiary to assure such

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indemnification and assumption of liability is effective. Under no circumstance shall the Company have the obligation to maintain facilities and equipment sold to or owned by the Customer absent the execution of a separate agreement for maintenance. All facilities and equipment purchased by a Municipal Customer pursuant to G.L. c. 164 § 34A shall be on an AS IS basis without any warranty, whether express or implied.

FIELD SURVEY CHARGE

As specified in the license agreements executed by the Company and the Customer at the purchase and sale closing, the Company will charge a Field Survey Charge per on-site and/or office survey at the request of the Customer when the Customer intends to either make a new lighting attachment or relocate or alter an existing lighting attachment, in order to determine if the support(s) can safely accommodate the requested lighting attachment.

INVENTORY OF LIGHTS

The Customer shall be responsible for reporting to the Company the number and type of luminaires by location and applicable reference that are operating at any time. The Customer shall provide the Company with a complete listing of all luminaires served under this rate no less than thirty (30) days following any changes to this listing as those changes occur during the year. Such reporting is necessary to ensure that the Company will bill the Customer accurately for the cost of distribution, transmission, transition, demand side management, renewables, and where appropriate, Basic Service. The Company will perform random confirmation of operating lights in a municipality to ensure accuracy of such reports. If the Customer fails to meet the referenced reporting requirements or the identification of unreported lights by the Company, the Company will have the right to terminate service under this tariff and require the Customer to obtain service under an applicable metered service.

TERMINATION OF MUNICIPAL OWNERSHIP

If a Municipal Customer that has purchased designated Company street and area lighting equipment pursuant to G.L. c. 164 § 34A subsequently chooses to terminate its ownership of street and area lighting equipment, the Municipal Customer must provide six months written notice of such termination. Upon termination, the Customer will accept service under the appropriate tariff and shall transfer to the Company the ownership of all street and area lights and poles, standards or accessories previously owned by the Municipal Customer at the time of termination at no cost to the Company, and the Company shall operate and maintain the street and area lighting equipment as part of its street and area lighting system under the appropriate Company-Owned street and area lighting tariff accepted by the Municipal Customer in effect at the time. In the event that the street and area lights and poles, standards or accessories do not conform to the Company's standards, the Municipal Customer shall remove the Municipal Customer's street and area lights from Company-owned poles and discontinue service for street and area lights on Municipal Customer-owned poles or standards.

FARM DISCOUNT

Customers who meet the eligibility requirements for being engaged in the business of agriculture or farming as defined in M.G.L. Chapter 128 Section 1a at their service location are eligible for an additional discount from their distribution service rates. The discount will be calculated as 10% of the Customer's total bill for service provided by the Company before application of this discount. Customers who meet the requirements of this section must provide the Company with appropriate documentation of their eligibility under this provision.

TERMS AND CONDITIONS

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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.