

The Narragansett Electric Company

d/b/a National Grid

INVESTIGATION AS TO THE
PROPRIETY OF PROPOSED TARIFF
CHANGES

Testimony and Schedules of:

Howard S. Gorman

Book 12 of 17

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Testimony of Howard S. Gorman

Pre-filed Testimony of Howard S. Gorman

PRE-FILED DIRECT TESTIMONY
OF
HOWARD S. GORMAN

SUMMARY

Howard Gorman is the President of HSG Group, Inc., a consulting firm that specializes in rate and regulatory support for utilities. He testified before the PUC in the Company's last general rate case proceedings in RIPUC Docket Nos. 4065 and 4323. His testimony presents and supports the Company's Allocated Class Cost of Service Study, the Company's proposed class revenue allocation and rate design, and the typical bill impacts resulting from the rates proposed in this proceeding.

Table of Contents

I.	Introduction and Qualifications	1
II.	Purpose of Testimony	1
III.	Allocated Cost of Service Study	3
IV.	Proposed Revenue Allocation.....	21
V.	Proposed Rate Design.....	23
VI.	Typical Bills.....	45
VII.	Conclusion	46

1 **I. Introduction and Qualifications**

2 **Q. Please state your name, position and business address.**

3 A. My name is Howard Gorman. I am the President of HSG Group, Inc. My business
4 address is 45 Hill Park Avenue, Great Neck, New York 11021.

5

6 **Q. Please describe your educational background and business experience.**

7 A. My educational background and professional experience are outlined in my curriculum
8 vitae, which is included as Workpaper HSG-1.

9

10 **Q. Have you previously testified before the Rhode Island Public Utilities Commission
11 (PUC) or any other regulatory commission?**

12 A. Yes. I previously testified before the Commission in the Company's last base rate case
13 proceedings in Docket RIPUC No. 4065 and 4323. I have also testified in proceedings
14 before the Massachusetts Department of Public Utilities, New Jersey Board of Public
15 Utilities, New York State Public Service Commission, Pennsylvania Public Utility
16 Commission, and Ontario Energy Board.

17

18 **II. Purpose of Testimony**

19 **Q. On whose behalf are you testifying today?**

20 A. I am testifying on behalf of The Narragansett Electric Company (the Company), which is
21 a subsidiary of National Grid USA (National Grid).

1 **Q. Please explain the naming conventions that you will be using in your testimony and**
2 **associated schedules to identify the various entities involved in this proceeding.**

3 A. This proceeding is a ratemaking proceeding for the electric and gas distribution
4 operations of The Narragansett Electric Company, which together represent all the
5 regulated operations the Company conducts in Rhode Island. In this testimony, I will
6 refer to the regulated entity as the “Company,” when the reference is to both electric and
7 gas distribution operations on a collective basis. When there is a need to refer to the
8 “stand-alone” or individual electric or gas operations of The Narragansett Electric
9 Company, I will use the terms “Narragansett Electric” or “Narragansett Gas,”
10 respectively, as appropriate. When I refer to “National Grid USA,” I use the term
11 “National Grid;” when I refer to “National Grid plc,” I will use that specific term.

12
13 **Q. What is the purpose of your testimony?**

14 A. The purpose of my testimony is to present and support Narragansett Electric’s allocated
15 cost of service study, proposed class revenue allocation and rate design, and the typical
16 bill impacts resulting from the rates proposed in this proceeding.

17
18 **Q. How is your testimony organized?**

19 A. Section III of my testimony presents the allocated cost of service study. Section IV
20 presents the proposed revenue allocation. Section V presents the proposed rate design.
21 Section VI presents the typical bill impacts of the proposed rate changes.

1 **Q. What is Narragansett Electric's distribution revenue requirement?**

2 A. Narragansett Electric's revenue requirement is presented by Company Witness Melissa
3 A. Little. Rate Year distribution revenue requirement is \$320.5 million based on an
4 overall return on rate base of 7.43 percent. This represents an increase in revenue of
5 \$41.3 million, or 14.8 percent (15.2 percent of distribution-only revenue), as compared to
6 the Company's distribution revenue at current rates. This information is presented in
7 Schedule HSG-1A.

8
9 **Q. Are you sponsoring any schedules as part of this testimony?**

10 A. Yes, I am sponsoring the following schedules:

- 11 • Schedule HSG-1: Allocated Cost of Service Study for the Rate Year Revenue
12 Requirement
- 13 • Schedule HSG-2: Development of external allocators for the Allocated Cost
14 of Service Study
- 15 • Schedule HSG-3: Proposed Distribution Revenue Allocation
- 16 • Schedule HSG-4: Development of Proposed Rates
- 17 • Schedule HSG-5: Typical Bills and Street and Area Lighting Bill Impacts

18

19 The first page of each schedule is an Index that lists the individual schedules in that
20 schedule.

21

22 **III. Allocated Cost of Service Study**

23 **Overview**

24 **Q. Please describe what an allocated cost of service study is and why it is prepared.**

1 A. The purpose of an allocated cost of service study is to apportion fairly a utility's total
2 revenue requirement, including plant and other investments, operating expenses,
3 depreciation, and taxes among the rate classes served by the utility. The allocated cost of
4 service study produces a revenue amount for each rate class, equal to the revenue that
5 needs to be collected from that class to produce the system average rate of return on rate
6 base. This information provides valuable guidance for revenue allocation and the
7 development of rates necessary to recover the utility's overall revenue requirement from
8 all rate classes.

9
10 **Q. How is an allocated cost of service study prepared?**

11 A. To prepare an allocated cost of service study, each element (*i.e.*, cost or rate base) of the
12 utility's total revenue requirement is analyzed and assigned to or allocated among the rate
13 classes. A three-step process is traditionally used to analyze each element of the revenue
14 requirement. The first step is *functionalization* - assigning or allocating each element
15 among the Company's functions- Sub-transmission, Primary distribution, Secondary
16 distribution, and Billing.

17
18 The second step is *classification* of each functionalized element as Demand, Energy, or
19 Customer. The final step is *class allocation*, which is the allocation of each
20 functionalized, classified cost element among the rate classes. Each of these steps is
21 described below.

1 The results of the allocated cost of service study (the revenue requirement for each rate
2 class) is compared to the revenue at current rates, and this information is used for
3 guidance in designing the distribution rates proposed in this proceeding.
4

5 **Q. What is included in distribution revenue at present rates?**

6 A. Distribution revenue at present rates is based on forecast billing determinants (i.e., among
7 other factors, number of customer bills, kilowatt-hour (kWh) deliveries, billed kilowatt
8 (kW) demand) and present tariff rates. This includes:

- 9 • Revenue based on rates approved by the PUC in Docket No. 4323 (the 2012 Rate
10 Case);
- 11 • Infrastructure, Safety, and Reliability (ISR) Plan Capital Expenditure (CapEx)
12 revenue of \$16.0 million; and
- 13 • Annual Target Revenue adjustment (Revenue Decoupling Mechanism (RDM)
14 adjustment).

15
16 **Q. What rate classes are included in the allocated cost of service study?**

17 A. The allocated cost of service study includes all the rate classes in Narragansett Electric's
18 current tariffs, as follows:

- 19 • Basic Residential Rate A-16 and Residential Low Income Rate A-60 are
20 combined in the allocated cost of service study because their usage profiles are
21 similar;
- 22 • Small Commercial and Industrial Rate C-06;

- 1 • General Commercial and Industrial Rate G-02;
- 2 • Large Demand Rate G-32 and Large Demand Backup Service Rate B-32 were
- 3 combined in the allocated cost of service study because there is no substantial
- 4 difference in their usage of the distribution system;
- 5 • Optional Large Demand Rate G-62 and Optional Large Demand Backup Service
- 6 Rate B-62 were combined in the allocated cost of service study because there is
- 7 no substantial difference in their usage of the distribution system;
- 8 • All the Lighting classes, comprising S-05 (Street & Area Lighting, Customer
- 9 Owned Equipment), S-06 (Decorative Street & Area Lighting), S-10 (Limited
- 10 Service - Private Lighting), and S-14 (General Street & Area Lighting), were
- 11 combined because their usage profiles are similar; and
- 12 • Electric Propulsion Rate X-01.

13

14 The revenue from Station Power Rate M-01 is included with Other revenue in the

15 allocated cost of service study. An increase equal to the system average increase was

16 applied to the revenue from Rate M-01 customers.

17

18 **Q. Please describe the term “functions” as used in an allocated cost of service study.**

19 A. A function is an activity that the utility performs in providing service to customers.

1 **Q. What are the functions that the Narragansett Electric performs?**

2 A. The functions performed by Narragansett Electric are described below; in the allocated
3 cost of service study, each element of the revenue requirement is assigned or allocated
4 among the functions.

- 5 • The *Sub-transmission function* includes the portions of the electrical system that
6 are designed to operate at relatively high voltages to move power from the
7 transmission system to substations. These facilities operate at voltages 23kV up
8 to but not including 115 kV. In addition, transmission assets are included in the
9 sub-transmission function. These assets are a fairly small part of the utility plant
10 in service. The sub-transmission function also includes a very small amount for
11 hydroelectric production facilities;
- 12 • The *Primary distribution function* includes substations and conductors rated 4 kV
13 and up to but not including 23 kV, and related assets;
- 14 • The *Secondary distribution function* includes conductors and related assets that
15 move electricity from the primary system to customers' premises, including
16 service drops. Because some customers take service at primary voltages and do
17 not use the secondary portion of the distribution system, Primary distribution and
18 Secondary distribution are separated to allocate costs of service properly; and
- 19 • The *Billing function* includes the meter and the assets and activities related to
20 enabling the distribution of electricity to customers and billing and collecting for
21 the service provided to customers.

1 **Q. Please describe the information on Schedule HSG-1A - Summary of Results.**

2 A. The Summary of Results shows the return on Rate Base at current rates for the rate
3 classes served by Narragansett Electric (Line 11) and the relative rates of return (Line
4 12). On Line 13, the Summary of Results shows the base distribution revenue required
5 for each class to produce the rate of return on Rate Base requested in this proceeding
6 (7.43 percent as shown on Line 25), as well as the dollar changes (Line 27), percentage
7 changes (Line 28), and relative percentage changes (Line 29) in distribution revenue that
8 these represent.

9

10 **Q. Please describe the information on Schedule HSG-1B - Total Distribution Revenue**
11 **Requirement Class Allocation.**

12 A. The Total Distribution Revenue Requirement Class Allocation shows how each element
13 of the revenue requirement was allocated among the rate classes. This schedule is a
14 summary of the class allocations included in Schedules HSG-1F-1 to HSG-1F-5.

15

16 **Q. Please describe the information on Schedule HSG-1D - Functionalization.**

17 A. Schedule HSG-1D, Functionalization, shows how each element of the revenue
18 requirement has been allocated among the Functions: sub-transmission; primary
19 distribution, secondary distribution, and billing. The schedule lists each account and its
20 FERC account number, the account balance (dollars) included in the revenue
21 requirement, the allocator assigned to that account, and the result of the allocation, that is,
22 the dollars allocated to each function. The schedule lists each element of the revenue
23 requirement - Rate Base (Lines 1-62), Operating Expenses (Lines 63-120), Depreciation

1 Expense (Lines 121-136), and Taxes and other (Lines 137-149). Total expenses are
2 shown on Line 150. Next, distribution revenue at present rates is shown (Lines 151-161)
3 and the resulting Net operating income at current rates (Line 163). A Summary of Net
4 operating income at current rates is presented, as well as Rate Base and Return on Rate
5 Base (Lines 165-182). The revenue required to produce the required return on Rate Base
6 is computed, as well as the indicated revenue increases or decreases (Lines 183-199).

7
8 **Q. Please describe the information on Schedule HSG-1E - Classification.**

9 A. Schedule HSG-1E, Classification, shows how each element of the secondary distribution
10 function has been classified to either Demand or Customer. Classification schedules are
11 not needed for the other functions because they are classified 100 percent to Demand
12 (sub-transmission and primary distribution functions) or 100 percent to Customer (billing
13 function). The columns and lines on this schedule are the same as on the
14 Functionalization schedule, HSG-1D.

15
16 **Q. Please describe the information on Schedules HSG-1F-1 to HSG-1F-5, Class**
17 **Allocation.**

18 A. Schedule HSG-1F-1 to HSG-1F-5, Class Allocation, shows how each element of the
19 functionalized, classified costs has been allocated among the rate classes. A schedule is
20 included for each functional classification- Sub-transmission Demand (HSG-1F-1),
21 Primary Demand (HSG-1 F-2), Secondary Demand (HSG-1F-3), Secondary Customer
22 (HSG-1F-4) and Billing Customer (HSG-1F-5). The totals for Secondary Demand and
23 Secondary Customer are from Schedule HSG-1E, Classification. The totals for all other

1 functions are from Functionalization, HSG-1D. The lines on each page correspond to the
2 lines on the Functionalization schedule.

3
4 **Q. Please describe the information on Schedule HSG-1G - Allocator Assignments.**

5 A. Schedule HSG-1G, shows the allocator assigned to each element of the revenue
6 requirement at each level-functionalization, classification (for Secondary Distribution)
7 and class allocation. The lines on each page correspond to the lines on the
8 Functionalization, Classification, and Class Allocation schedules.

9
10 **Q. Please describe the information on Schedule HSG-1C-1 - Unit Costs by Functional**
11 **Classification.**

12 A. Schedule HSG-1C-1 presents a summary of revenue requirements by functional
13 classification, carried forward from line 199 on Schedules HSG-1F-1 to HSG-1F-5. It
14 also presents the results of the allocated cost of service study on a unitized basis; the units
15 for each functional classification are shown on the schedule. This information is useful
16 in developing rates and as a check on the reasonableness of the results.

17
18 **Q. Please describe the information on Schedules HSG-1C-2 and HSG-1C-3.**

19 A. Schedule HSG-1C-2 computes the portion of the Lighting revenue requirement that is
20 directly related to Lighting. This percentage is used to establish the Temporary Turn-off
21 charges for certain Lighting units. Schedule HSG-1C-3 computes the fixed portion of the
22 Lighting revenue requirement, and unitizes that amount. This rate is used to establish the
23 volumetric rate for Rate S-05, Customer-owned Lighting.

1 **Q. Please describe the information on Schedules HSG-1C-4 and HSG-1C-5.**

2 A. Schedule HSG-1C-4 computes the revenue requirement per unit of billed demand
3 applicable to Transformers. This information is used to establish the High Voltage
4 Delivery Billing Credit for untransformed power. Schedule HSG-1C-5 computes the
5 meter-related costs in the revenue requirement for Rate C-06. This information is used to
6 establish the customer-charge for unmetered customers.

7
8 **Q. Please describe the information on Schedules HSG-1G-1 through HSG-1G-4.**

9 A. Schedules HSG-1-G-1 shows, for each element of the revenue requirement, the allocator
10 selected for Functionalization, Classification, and Class Allocation. Schedules HSG-1G-
11 2, HSG-1G-3, and HSG-1G-4 present, respectively, the allocator values for
12 Functionalization, Classification, and Class Allocation.

13
14 **Q. Please describe the information on Schedule HSG-2 - Development of Allocators.**

15 A. Schedule HSG-2 develops the allocator values for the external allocators used in the
16 allocated cost of service study. I will discuss the development of the allocators in more
17 detail later in this testimony.

18
19 **Methodology to Perform the Allocated Cost of Service Study**

20 **Q. Please define external allocators and internal allocators.**

21 A. Two types of allocation bases, or allocators, are used in performing an allocated cost of
22 service study – external allocators and internal allocators. *External allocators* are
23 developed in special studies derived from the utility’s accounting, operating, and other

1 records. For example, the allocator “NCP” (*i.e.*, the sum of the class Non-Coincident
2 Peaks) measures the highest demand of each class during the year, and is used to allocate
3 certain demand costs. Other examples of external allocators are the number of customers
4 in each rate class and historical bad debt write-offs for each rate class.

5
6 *Internal allocators* are developed based on some combination of external allocators and
7 other internal allocators. For example, the internal allocator for property insurance costs
8 is based on plant investment; therefore it is necessary to allocate plant investments before
9 property insurance costs can be assigned. Both external and internal allocators are used
10 in each of the functionalization, classification, and allocation steps.

11
12 **Q. Was the same methodology used to prepare the allocated cost of service study in**
13 **Docket 4065, The Narragansett Electric Company d/b/a National Grid Application**
14 **for Approval of Change in Electric Base Distribution Rates (the 2009 Rate Case)**
15 **and the 2012 Rate Case?**

16 A. Yes.

17
18 **Q. How did you determine the appropriate allocators for functionalizing, classifying,**
19 **and allocating the components of the revenue requirement?**

20 A. Selection of the appropriate approach for functionalizing, classifying, and allocating each
21 component of the revenue requirement was based on careful consideration of cost
22 causality, as well as prior Company methodology, PUC precedent, and utility practice, as
23 stated in the *Electric Utility Cost Allocation Manual* (January 1992) of the National

1 Association of Regulatory Utility Commissioners (NARUC Manual). Cost causality
2 means the cause and effect relationships between customer requirements, load profiles,
3 and usage characteristics on one hand, and the costs incurred to serve those requirements
4 on the other hand.

5
6 **Q. Was the selection and the development of the allocators the same in this allocated
7 cost of service study as in the 2009 Rate Case and 2012 Rate Case?**

8 A. Yes, with the following changes, which had only a slight effect on the results:

- 9 • Transformer costs (Account 368) and related accumulated depreciation (Account
10 108), depreciation expense (Account 403), and Operation and Maintenance
11 (O&M) costs (Account 595) are assigned based on the Transformer cost study
12 presented in Schedule HSG 2D; in the past these items were allocated based on
13 the average of the allocators NCP_Pri and NCP_Sec.
- 14 • Materials and Supplies is allocated based on Operating expenses, which more
15 closely reflects the nature of the cost than the Plant allocators used in the past.
- 16 • Municipal taxes (Account 408) is allocated based on Net Plant, which more
17 closely reflects the cost than the Plant allocators used in the past.

18
19 **Q. What is the purpose of the functionalization step of the allocated cost of service
20 study?**

21 A. In the functionalization step, each element of the revenue requirement is assigned or
22 allocated to one or more of the utility's functions, identified above.

1 **Q. How were assets and costs allocated among the functions?**

2 A. In general, functionalization follows costs as recorded in the FERC Uniform System of
3 Accounts. However, some accounts are functionalized (assigned or allocated) to more
4 than one function. For example, Poles, Towers and Fixtures (Account 364), Overhead
5 Conductors and Devices (Account 365), Underground Conduits (Account 366), and
6 Underground Conductors and Devices (Account 367) were functionalized among Sub-
7 transmission, Primary distribution, and Secondary distribution, based on a special study.
8 In this study, miles of assets were separated by voltage level, corresponding to the
9 voltages for Sub-transmission, Primary, and Secondary assets, and costs were allocated
10 based on the voltage level splits. The study is presented in Schedule HSG-2R.

11
12 Other assets were either functionalized by direct assignment based on the definition of
13 the functions (*i.e.*, Services to secondary, Meters to billing) or allocated based on an
14 appropriate allocator (*i.e.*, General Plant based on the labor content of the accounts).

15
16 Costs were also directly assigned to a function whenever possible. For example,
17 Customer Accounts and Service (Accounts 901-910) were assigned to the billing
18 function. Costs related directly to particular assets, such as Maintenance of Overhead
19 Lines (Account 593), were allocated in proportion to the assets. Certain items, such as
20 general plant and administrative and general expenses, are related to more than one
21 function. Each cost was analyzed and allocated using an appropriate basis of allocation
22 for that cost.

1 **Q. Please describe the classification step of an allocated cost of service study.**

2 A. In the classification step, the previously functionalized elements are separated into
3 Customer, Energy, or Demand, according to the system design or operating
4 characteristics that result in such accounts.

5
6 Narragansett Electric incurs customer-related costs to attach a customer to the
7 distribution system, to meter the customer's usage, and to maintain customer-related
8 distribution assets and the customer's account. Customer-related costs are primarily a
9 function of the number of customers served, and the Company incurs such costs whether
10 or not a particular customer uses any electricity. Typically, customer-related costs do not
11 vary with usage or load profile. Customer-related costs include capital costs associated
12 with services and meters and operating costs such as customer service, field service,
13 billing, and accounting.

14
15 Energy-related costs vary with the electricity sold to or delivered to customers. Demand-
16 related, or capacity-related costs are associated with plant that is designed, constructed,
17 and operated to meet system peak demand or non-coincident class peak demand.

18
19 **Q. How were assets and costs classified as Customer, Energy, and Demand?**

20 A. Most assets and costs fit into one of the three classifications, but some are split between
21 Demand and Customer based on special studies or the classification of related assets or
22 other related costs.

1 All assets and costs in the Sub-transmission and Primary distribution functions are
2 classified as Demand-related, and all assets and costs in the Billing function are classified
3 as Customer-related. Assets and costs in the Secondary distribution function were
4 classified to Demand or Customer based on the nature of the item. For example, Poles,
5 Towers and Fixtures; Overhead Conductors and Devices; Underground Conduits; and
6 Underground Conductors and Devices, are designed to meet system and local peak
7 demands, and, therefore, are classified to Demand. The investment in Line Transformers
8 was classified as Demand-related because Line Transformers are sized to meet local
9 demand. Services and Meters are classified to Customer because the investment is based
10 primarily on the number of customers.

11
12 Secondary distribution elements that are related to particular assets were classified in
13 proportion to those assets. For example, Maintenance of Overhead Lines (Account 593)
14 was classified using the same classification allocator as Overhead Lines. Other costs,
15 such as general plant and administrative and general expenses, are related to more than
16 one function, and, therefore, each other cost was analyzed to determine the appropriate
17 classification allocator.

18
19 **Q. Are any other methods typically used for classification?**

20 A. Yes. In some jurisdictions, a Minimum System Study or similar study may be used to
21 classify the following portions of the Primary and Secondary systems between Demand
22 and Customer: Poles, Towers and Fixtures; Overhead Conductors and Devices;
23 Underground Conduits; Underground Conductors and Devices; and Line Transformers.

1 The Minimum System Study recognizes that these assets have a dual purpose: to connect
2 customers to the system and meet peak demands. The Minimum System Study also
3 recognizes that the Company's investment in these assets is affected by both purposes.
4 The Company did not perform a Minimum System Study in its two last general rate cases
5 because this type of study is not routinely performed in Rhode Island as part of an
6 allocated cost of service study. In its order in the 2009 Rate Case, the PUC indicated that
7 it would not require a Minimum System Study in the next general rate case. Therefore, a
8 Minimum System Study was not performed for this allocated cost of service study.
9

10 **Q. Please describe the class allocation step of the allocated cost of service study.**

11 A. In the class allocation step, the functionalized, classified elements are allocated among
12 the rate classes based on causal relationships. These relationships are determined by
13 analyzing system design and operations, accounting records, and system and customer
14 load data. Based on those analyses, direct assignments of costs and cost allocators can be
15 chosen for each asset and cost.
16

17 **Q. How were assets and costs in the distribution revenue requirement allocated among**
18 **the rate classes?**

19 A. Demand-related assets were allocated in proportion to the non-coincident peaks at the
20 appropriate service level. Non-coincident peak allocators were used because they reflect
21 the diversity of demand on the system; that is, rate classes peak at different times and the
22 system is designed to meet demand at all times. Different non-coincident peak allocators

1 were developed for each service level: Sub-transmission, Primary, and Secondary
2 (Schedule HSG-2P).

3
4 The NCPs were developed based on the average of the actual load factors for the years
5 ended December 2008 and November 2011 (using data from the 2012 Rate Case) and
6 June 2017. The average load factors were applied to the normalized kWh sales levels for
7 the Rate Year, as presented at Schedule HSG-2M. This method provides a representative
8 picture of demands likely to be experienced in the Rate Year because it averages out the
9 effect of historical weather in the sample and applies the resulting load factors to
10 weather-normalized kWh sales.

11
12 Other assets and costs directly related to particular assets were classified in proportion to
13 the assets. For example, Overhead Line expenses and Maintenance of Overhead Lines
14 were allocated among the rate classes in the same proportion as Overhead Conductors
15 and Devices and Poles, Towers, and Fixtures.

16
17 For certain assets and costs, special studies were performed. For example, Line
18 Transformers (Account 368) were assigned based on a special study of the customers
19 served by each transformer (Schedules HSG-2D to HSG-2F). Services (Account 369)
20 and Meters (Account 370) were allocated based on studies of the number and types of
21 services (Schedule HSG-2G) and meters (Schedule HSG-2H) used by each rate class.

1 Customer Records and Accounting costs, Account 903, was allocated based on the
2 activities in the account, including Mailing Bills, Billing, Credit and Collections, Call
3 Center, and Payment processing (Schedule HSG-2J).

4
5 Uncollectible accounts expense (Account 904) was allocated based on total delivery
6 revenue, pursuant to the PUC's order in the 2009 Rate Case. Customer Assistance
7 Expense, Information and similar accounts (Account 907-919) were allocated based on
8 MWh, pursuant to the PUC's order in the 2009 Rate Case.

9
10 Administrative and General Expenses (Accounts 920-935) were allocated based on labor,
11 plant, rate base, or megawatt-hour (MWh), as appropriate.

12
13 Income tax expense (credit) at current rates was allocated in proportion to pretax revenue.

14
15 Revenue at current rates was computed as discussed above in this testimony and
16 presented at Schedule HSG-2C.

17
18 **Q. Did you prepare a schedule that presents the external allocator values calculated for**
19 **the allocated cost of service study?**

20 A. Yes, the Class Allocation allocator values are shown in Schedule HSG-2A, and the
21 Functional Allocator values are shown in Schedule HSG-2B.

1 **Q. Did you prepare a schedule that summarizes the results of the allocated cost of**
2 **service study?**

3 A. Yes, the results of the allocated cost of service study are shown in Total Distribution
4 Revenue Requirement Class Allocation (Schedule HSG-1B) and summarized in the
5 Summary of Results (Schedule HSG-1A), which are discussed above.
6

7 **Q. How was the revenue requirement for each class developed?**

8 A. The revenue requirement for each class was developed in the same manner as the total
9 revenue requirement. The revenue requirement is the amount that produces a Return on
10 Rate Base allocated to the class equal to Narragansett Electric's proposed cost of capital,
11 after reflecting the amounts allocated to the class for operating expenses, other expenses,
12 other revenue, and income tax expense. The rate class revenue requirements are shown
13 in Schedule HSG-1B, line 199 and Schedule HSG-1A, line 13.
14

15 **Q. How did you determine the revenue increase needed to produce the system average**
16 **rate of return?**

17 A. The overall increase needed to produce the system average rate of return excess is
18 computed by comparing the revenue requirement at the proposed cost of capital
19 (Schedule HSG-1A, Line 13) to revenue at current rates (Line 4). The results for the
20 system, and for each class, are shown on Line 27.

1 **IV. Proposed Revenue Allocation**

2 **Q. What is the purpose of the revenue allocation process?**

3 A. The purpose of the revenue allocation process is to allocate the revenue requirement and
4 the overall increase requested in this proceeding among the rate classes.

5

6 **Q. What are the guiding principles followed in allocating the proposed revenue
7 requirement?**

8 A. There are two guiding principles for the revenue allocation process. The first principle is
9 to reflect the results of the allocated cost of service study as closely as possible. The
10 second principle is to mitigate extreme rate impacts on rate classes and on individual
11 customer subgroups, which is known as gradualism. These concepts are described in the
12 book, *Principles of Public Utility Rates*, Bonbright et al., 1988 edition, which is often
13 cited and relied on for guidance regarding revenue and rate design for regulated utilities.
14 The same principles also guided Narragansett Electric's revenue allocation in its most
15 recent rate cases, the 2009 Rate Case and the 2012 Rate Case.

16

17 **Q. How did you implement the guiding principles for revenue allocation listed above?**

18 A. The first step was to examine the results of the allocated cost of service study and the
19 potential revenue impacts for each rate class at the proposed system average rate of
20 return.

21

22 The dollar increase in revenue necessary for each class to produce its allocated cost of
23 service at the proposed rate of return of 7.43 percent is presented on Schedule HSG-3,

1 Line 24, and the percentage changes are on Line 26 (and repeated on Line 29). The
2 changes range from a decrease of 84.4 percent to an increase of 24.7 percent,
3 representing relative changes ranging from decreases, to 1.62 times the average increase.
4

5 I applied the concept of gradualism by limiting increases to twice the system average
6 (which did not affect any class, Line 34) and by removing decreases for any class (which
7 affected Street and Area Lighting Rates S-05, S-06, S-10, and S-14, and Propulsion X-01,
8 Line 35). This produced a surplus of \$850,000 which was allocated among the rate
9 classes on the basis of allocated revenue requirement (Line 37).
10

11 **Q. Please summarize the results of the proposed revenue allocation.**

12 A. The proposed revenue increase or decrease for each class is shown on Schedule HSG-3,
13 Line 41, the percentage increases are on Line 42, and the relative changes (where an
14 increase of 15.2 percent = 100) are on Line 43. The returns on rate base produced by
15 these revenue changes are computed on Lines 45-53, the rates of return are on Line 55,
16 the relative rates of return (where system average of 7.43 percent = 1.00) are on Line 56,
17 progress toward unity (the portion of the gap between relative return at current rates, and
18 unity, that is closed by the proposed revenue allocation) is on Line 57.
19

20 **Q. Does the proposed revenue allocation achieve the guiding principles stated above?**

21 A. Yes, these results achieve a reasonable balancing of the competing principles of moving
22 the rate classes to their respective cost of service and mitigating extreme rate impacts.

1 **V. Proposed Rate Design**

2 **Q. What is the purpose of the rate design process?**

3 A. The purpose of the rate design process is to determine rates that will produce the revenue
4 for each rate class as determined in the revenue allocation process.

5

6 **Q. Is the Company proposing any changes to its existing electric service rate classes?**

7 A. Yes. The Company is proposing to eliminate Optional Large Demand Rates G-62 (Rate
8 G-62) and to transfer existing Rate G-62 customers to Large Demand Rate G-32 (Rate G-
9 32). The Company also proposes to eliminate Optional Large Demand Back-Up Service
10 Rate B-62 (Rate B-62). Presently, no customers are receiving back-up retail delivery
11 service on B-62. The proposal to consolidate these rate classes will be discussed in more
12 detail below.

13

14 **Q. What are the guiding principles for rate design?**

15 A. The guiding principles for rate design are:

- 16
- Produce the target revenue for each rate class, as determined in the revenue
17 allocation process;
 - Promote efficient use of resources, ultimately reducing costs to customers;
 - Produce costs for customers and revenue for the utility that are reasonably stable
18 and predictable while reflecting the nature of the costs they recover; (i.e.,
19 recovering customer-related costs in the monthly fixed charge); and
20
 - Mitigate extreme rate impacts on customer subgroups.
21
22

1 These principles are described in *Principles of Public Utility Rates*, cited above. The
2 same principles also guided Narragansett Electric's rate design in the 2009 Rate Case and
3 the 2012 Rate Case.

4
5 **Q. Did you prepare a summary of the proposed rates?**

6 A. Yes. Schedule HSG-4I presents the proposed rates for each rate class except Street and
7 Area Lighting, which are on Schedule HSG-4J. The proposed rate design for each rate
8 class is presented in Schedules HSG-4A to HSG-4G and discussed below.

9
10 **Q. What are the billing determinants used in the design of the proposed rates?**

11 A. The billing units used in the design of the proposed rates are based on the Rate Year rate
12 class forecasted customer counts and kWh deliveries developed by Company Witness
13 Joseph F. Gredder. The information is presented on Schedule HSG-2C.

14
15 **Q. Please discuss the nature of service and the current rates for Rates A-16 and A-60.**

16 A. Rate A-16 and Rate A-60 are Narragansett Electric's residential rate classes. Rate A-60
17 is available to low-income customers who meet the criteria specified in the tariff. The
18 current distribution rate structure for Rate A-16 includes a monthly customer charge and
19 a volumetric kWh-based charge.

20
21 Currently, Rate A-60 has no monthly customer charge and only a volumetric kWh-based
22 charge. The present Rate A-60 distribution rates are designed so that a customer on Rate
23 A-60 using an average number of kWh is billed base distribution charges that are

1 approximately 50 percent of the amount that a customer on Rate A-16 with the same
2 usage is billed for base distribution charges.

3
4 **Q. Where are the rates for Rates A-16 and A-60 computed?**

5 A. These rates are computed on Schedule HSG-4A.

6
7 **Q. Is the Company proposing to change the way that the discounts for Rate A-60 are
8 provided and recovered?**

9 A. Yes. Instead of having separate base distribution rates for Rate A-16 and Rate A-60
10 customers, the Company is proposing to have the same stated rates for the two classes, to
11 provide a percentage discount on the total bill for Rate A-60 customers, and to recover
12 the discount through a proposed Low Income Discount Recovery Factor, as described in
13 detail in the testimony of the Pricing Panel.

14
15 **Q. How are the proposed rates for Rates A-16 and A-60 computed?**

16 A. The Company's proposed revenue allocation includes an increase of 21.6 percent in
17 distribution-only revenue for Rates A-16 and A-60. The proposed monthly charge is
18 increased to \$8.50, and the balance of the revenue target is recovered in the volumetric
19 charge, \$0.04438 per kWh.

20
21 **Q. How did you compute the proposed fixed monthly charge for Rates A-16 and A-60?**

22 A. The costs considered for recovery in the fixed monthly charge are the typical customer-
23 related costs as well as a demand-related component. The customer-related costs

1 computed in the allocated cost of service study for A-16 / A-60 are \$9.61 per customer-
2 month (Schedule HSG-1C-1, Line 23). The demand-related cost computed in the
3 allocated cost of service study for A-16 /A-60 is \$11.57 per kW-month (Schedule HSG-
4 1C-1, Line 10). In developing the maximum fixed monthly charge, both the customer-
5 related costs of \$9.61 per month plus the cost associated with 0.50 kW, or \$5.78, are
6 included, for a total of \$15.39 per month as the maximum fixed charge. The proposed
7 charge is \$8.50 per month, which is approximately 55 percent of the maximum
8 considered.

9
10 **Q. Is it appropriate to include demand-related costs in the monthly charge?**

11 A. Yes. The Company, like all electric utilities, incurs distribution system costs based on
12 the number of customers connected to the system and the peak demand the system is
13 designed to serve. None of the distribution system costs, or at most only minimal costs,
14 is affected by kWh usage. For residential customers and many small non-residential
15 customers, the customer charge does not fully recover the customer-related costs. The
16 balance of customer-related costs, *as well as all demand-related costs*, are recovered in
17 the kWh charge. Historically, this was due to the lack of customer-level demand data
18 necessary to perform analyses, the need for revenue stability (for the utility) and cost
19 stability (for customers), and historical practice.

1 In my view, it is appropriate to include some portion of demand-related costs in the
2 monthly charge, in order to align the utility’s revenue and costs more closely, and to help
3 stabilize the utility’s revenue and customers’ costs.¹

4
5 **Q. How did you determine the portion of demand costs to include in the fixed charge?**

6 A. I computed the levels of demand incurred by residential customers by analyzing hourly
7 data from three separate residential samples. The results are presented in the table below.

Row	Demand Level	Narragansett Residential	Massachusetts Electric Residential	Massachusetts Electric SmartGrid Residential
1	Sample size – Customers	230	197	13,659
2	Months under 0.25 kW	5.3%	12.7%	1.5%
3	Customers under 0.25 kW all year	0.0%	1.0%	0.4%
4	Months under 0.50 kW	6.7%	14.3%	2.9%
5	Customers under 0.50 kW all year	0.0%	2.0%	0.8%
6	Months under 1.00 kW	10.5%	16.9%	6.5%
7	Customers under 1.00 kW all year	2.2%	3.0%	1.7%

8
9 The results show that 2.9 percent to 14.3 percent of residential customers incur less than
10 0.50 kW of demand each month (row 4); alternatively, 85.7 percent to 97.1 percent of
11 customers incur at least 0.50 kW of demand in a given month. In addition, 0.0 percent to
12 2.0 percent of customers did not reach 0.50 kW of demand at all during the year (row 5);

¹ There are reasons to continue to bill residential and small non-residential customers primarily on kWh, including the variability of month-to-month demand, and the complexity of demand compared to kWh.

1 alternatively, 98.0 percent to 100.0 percent of customers incur at least 0.50 kW of
2 demand at least once per year.

3
4 Based on this information, I believe it is fair and appropriate to include the cost for 0.50
5 kW in the maximum fixed monthly charge considered, because each month
6 approximately 90 percent of residential customers meet this level, and over 98 percent of
7 residential customers meet this level at least once per year.

8
9 **Q. Is 0.50 kW-month of demand-related costs the maximum to consider including in**
10 **the fixed monthly charge?**

11 A. No. In my judgement, including 0.50 kW-month of costs in the residential customer
12 charge is an appropriate first step for Narragansett Electric. The PUC could increase this
13 in future cases based on the percentage of the customers that it deems appropriate and on
14 principles of gradualism.

15
16 **Q. For Rate A-60 customers, did you consider the effect of increasing the fixed charge**
17 **from zero at present, to \$8.50 per month?**

18 A. Yes. To mitigate this effect, the Company is proposing to phase in the Rate A-60 fixed
19 charge. The proposed amounts are \$2.75 in year 1, \$5.50 in year 2, and \$8.50 (the same
20 as the Rate A-16 charge) thereafter. Company Witnesses Ann E. Leary and Scott M.
21 McCabe (Pricing Panel) discuss how the Company proposes to recover the revenue
22 shortfall from this reduced fixed charge.

23

1 **Q. Please discuss the nature of service and the current rate design for the Small**
2 **Commercial and Industrial Rate C-06 class.**

3 A. Rate C-06 is the small commercial and industrial general service rate class. Rate C-06 is
4 available for all purposes; however, the Company may require customers with 12-month
5 average demand exceeding 200 kW to take service on Rate G-32. Rate C-06 includes
6 customers receiving unmetered service, such as cable TV pole attachments and fire box
7 lights.

8
9 The current distribution rate structure for Rate C-06 includes a fixed monthly charge and
10 a volumetric kWh-based charge. There is an additional charge if the customer requires a
11 transformer in excess of 25 kVA. Unmetered customers pay a location charge, which
12 reflects the fixed monthly charge reduced by meter-related costs, in place of paying the
13 regular fixed monthly charge.

14
15 **Q. Where are the proposed rates for Rate C-06 computed?**

16 A. These rates are computed on Schedule HSG-4B.

17
18 **Q. What are the proposed rates for Rate C-06?**

19 A. The proposed revenue allocation includes an increase of 17.4 percent in distribution-only
20 revenue for Rate C-06. The proposed monthly charge is increased to \$13.00, the
21 proposed location charge (for unmetered customers, in lieu of the fixed monthly charge)
22 is increased to \$8.75, the kVA charge remains at \$1.85 per kVA, and the balance of the
23 revenue target is recovered in the volumetric charge, \$0.04273 per kWh.

1 The costs considered for recovery in the fixed monthly charge are the typical customer-
2 related costs as well as a demand-related component. The customer-related costs
3 computed in the allocated cost of service study for Rate C-06 are \$13.78 per customer-
4 month (Schedule HSG-1C-1, Line 23). The demand-related cost computed in the
5 allocated cost of service study for Rate C-06 is \$11.63 per kW-month (Schedule HSG-
6 1C-1, Line 10). In developing the maximum fixed monthly charge, both the customer-
7 related costs of \$13.78 per month plus the cost associated with 0.25 kW of \$2.91 are
8 included, for a total of \$16.69 per month as the maximum fixed charge. The proposed
9 charge is \$13.00 per month, which is approximately 78 percent of the maximum
10 considered.

11
12 **Q. Is it appropriate to include demand-related costs in the monthly charge?**

13 A. Yes, for the same reasons as discussed above with regard to residential customers.
14

15 **Q. How did you determine the portion of demand costs to include in the fixed charge?**

16 A. I computed the levels of demand incurred by small commercial customers by analyzing
17 hourly data from three separate small commercial customer samples. The results are
18 presented in the table below.

Row	Demand Level	Narragansett Small Commercial	Massachusetts Electric Small Commercial	Massachusetts Electric SmartGrid Small Commercial
1	Sample size – Customers	153	103	696
2	Months under 0.25 kW	15.7%	25.8%	23.7%
3	Customers under 0.25 kW all year	2.6%	11.7%	11.2%
4	Months under 0.50 kW	19.2%	28.9%	35.0%
5	Customers under 0.50 kW all year	5.9%	15.5%	20.7%
6	Months under 1.00 kW	28.5%	35.4%	46.5%
7	Customers under 1.00 kW all year	9.8%	23.3%	35.9%

1

2

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9

The results show that 74.2 percent to 84.3 percent of customers incur at least 0.25 kW of demand in a given month (row 2), and 88.3 percent to 97.4 percent of customers incur at least 0.25 kW of demand at least once per year (row 3).

Based on this information, I believe it is fair and appropriate to include the cost for 0.25 kW in the maximum fixed monthly charge considered, because each month approximately 80 percent of small commercial customers meet this level, and 90 percent of small commercial customers meet this level at least once per year.

1 **Q. Please discuss the nature of service and the current rate design for General**
2 **Commercial and Industrial Rate G-02.**

3 A. Rate G-02 is available for all purposes to small and medium commercial and industrial
4 customers. Rate G-02 customers must have demand of 10 kW or more, and the Company
5 may require customers with 12-month average demand exceeding 200 kW to take service
6 on Rate G-32. The current distribution rate structure for Rate G-02 includes a monthly
7 customer charge, an energy-based charge, and a demand-based charge. The demand
8 charge is assessed on demand in excess of 10 kW per month. Some customers receive
9 discounts for taking service at higher voltages.

10

11 **Q. Where are the proposed rates for Rate G-02 computed?**

12 A. These rates are computed on Schedule HSG-4C.

13

14 **Q. What are the proposed rates for Rate G-02?**

15 A. The proposed revenue allocation includes an increase of 7.9 percent in distribution-only
16 revenue for Rate G-02. The proposed monthly charge is increased to \$145.00, the
17 proposed demand charge (applicable to excess of 10 kW per month) is increased to \$6.50,
18 the high voltage delivery (HVD) discount for untransformed power is \$0.42 per kW, and
19 the balance of the revenue target is recovered in the volumetric charge, \$0.00608 per
20 kWh.

21

22 The costs considered for recovery in the fixed monthly charge are the typical customer-
23 related costs as well as a demand-related component. The customer-related costs

1 computed in the allocated cost of service study for Rate G-02 are \$28.46 per customer-
2 month (Schedule HSG-1C-1, Line 23). The demand-related cost computed in the
3 allocated cost of service study for Rate G-02 is \$11.84 per kW-month (Schedule HSG-
4 1C-1, Line 10). In developing the maximum fixed monthly charge, both the customer
5 costs of \$28.46 per month plus the cost associated with 10 kW of demand of \$118.41 per
6 month are included, for a total of \$146.87 per month as the maximum fixed charge. The
7 proposed charge is unchanged at \$145.00 per month, approximately equal to the
8 maximum considered.

9
10 The HVD discount for customers supplied at not less than 2,400 volts and not needing a
11 line transformer is the revenue requirement for transformers, \$0.42 per billed kW-month
12 month (Schedule HSG-1C-4).

13
14 The final step is to compute the demand-based kW rate and the volumetric kWh-based
15 rate needed to produce the target revenue. The current rates include a ISR CapEx factor
16 of \$0.67 per kW. The proposed rates are computed so as to minimize intra-class cost
17 shifts.

18
19 **Q. Please discuss the nature of service and the current rate design for Rate G-32 and**
20 **Rate G-62.**

21 A. The Company requires any customer with a maximum 12-month demand of 200 kW or
22 greater for three consecutive months to be on Rate G-32. The current Rate G-32

1 distribution rates include a monthly customer charge, an energy-based charge, and a
2 demand-based charge for kW in excess of 200 kW.

3
4 Customers with maximum 12-month demand in excess of 5,000 kW have the option to
5 take service on Rate G-62. The current Rate G-62 distribution rates include a monthly
6 customer charge and a demand-based charge. Customers receiving service on Rate G-32
7 or Rate G-62 receive discounts for taking service at higher voltages. Both rates contain a
8 provision for Second Feeder Service.

9
10 Rates G-32 and G-62 have “companion” back-up service rates, Rates B-32 and B-62,
11 respectively, for customers who provide some or all of their electricity from their own
12 generation source but require firm back-up service from the Company. Rates for back-up
13 service are designed in conjunction with their full-service counterparts.

14
15 **Q. Is Narragansett Electric proposing to eliminate Rate G-62 and Rate B-62?**

16 A. Yes. Rates G-62 and B-62 are optional rates; customers on Rates G-62 or B-62 can elect
17 to take service under Rates G-32 or B-32 at any time. The Company computed that if
18 Rate G-32 and Rate G-62 remain in separate classes, the proposed rates for Rate G-62
19 would result in every Rate G-62 customer paying more as a Rate G-62 customer than
20 they would as a Rate G-32 customer under the proposed Rate G-32 rates. This would
21 occur because, as the allocated cost of service results show, this class is paying
22 significantly less than its cost of service, and would require a substantial rate increase,
23 resulting in rates for Rate G-62 customers that would produce higher bills at all levels of

1 use than proposed rates for Rate G-32. Therefore, if the Company were to maintain
2 separate rate classes, the Company would expect all Rate G-62 customers to migrate to
3 Rate G-32.

4
5 If the Company were to keep Rates G-32 and G-62 as separate classes, and current Rate
6 G-62 customers opted to migrate to Rate G-32, the Company would have a significant
7 loss of revenue that would flow through the operation of its RDM that would be
8 recovered from all customers. Therefore, the Company is proposing to eliminate Rate G-
9 62. The rate design for Rate G-32 reflects the migration of current Rate G-62 customers
10 to Rate G-32.

11
12 **Q. Where are the proposed rates for Rate G-32 computed?**

13 A. These rates are computed on Schedule HSG-4D.

14
15 **Q. What are the proposed rates for Rate G-32?**

16 A. The proposed revenue allocation includes no increase or decrease in distribution-only
17 revenue for Rate G-32, and an increase of 24.3 percent for Rate G-62. Narragansett
18 Electric has combined the proposed revenue allocation of Rates G-32 and G-62 for the
19 purposes of designing rates for this rate class. The proposed monthly charge is \$1,100.00
20 (currently Rate G-32 is \$825.00 and Rate G-62 is \$17,000.00), the proposed demand
21 charge (applicable to kW in excess of 200 kW per month) is increased to \$5.00 per kW-
22 month (currently Rate G-32 is \$3.70 per kW applicable to kW in excess of 200 kW per
23 month, and Rate G-62 is \$2.99 per kW applicable to all kW), the HVD discount for

1 untransformed power is \$0.42 per kW, and the balance of the revenue target is recovered
2 in the proposed volumetric charge, \$0.00631 per kWh (currently the Rate G-32
3 volumetric charge is \$0.00551 per kWh and the Rate G-62 volumetric charge is zero).

4
5 The costs considered for recovery in the fixed monthly charge are the typical customer-
6 related costs as well as a demand-related component. The customer-related costs
7 computed in the allocated cost of service study for Rate G-32 are \$127.23 and for Rate
8 G-62 are \$2,105.13 (Schedule HSG-1C-1, Line 23). The demand-related costs computed
9 in the allocated cost of service study for Rate G-32 are \$8.30 per kW-month and for Rate
10 G-62 are \$7.91 per kW-month (Schedule HSG-1C-1, Line 10). In developing the
11 maximum fixed monthly charge, both the customer costs plus the cost associated with
12 200 kW of demand are included, for a total of \$1,787.44 per month for Rate G-32 as the
13 maximum fixed charge. The proposed charge is \$1,100.00 per month, which is
14 approximately 62 per cent of the maximum considered.

15
16 The HVD for customers supplied at not less than 2,400 volts and not needing a line
17 transformer is the revenue requirement for transformers, \$0.42 per billed kW-month
18 month (Schedule HSG-1C-4). The Second Feeder Service rate is \$3.28 per kW-month,
19 equal to the revenue requirement per kW for Secondary Distribution (Schedule HSG-1C-
20 1).

21
22 The final step is to compute the demand-based kW rate and the volumetric kWh-based
23 rate needed to produce the target revenue. The current rates include an ISR CapEx factor

1 of \$0.71 per kW. The proposed rates are computed so as to minimize intra-class cost
2 shifts.

3
4 **Q. Is the Company proposing changes to the structure of Rate B-32?**

5 A. No. At this time, the Company is not proposing any changes to the structure of the Rate
6 B-32.

7
8 The calculation of the back-up service demand charge for Rate B-32 is shown in
9 Schedule HSG-4D. The proposed rate is designed using the same design criteria as used
10 in developing the current rates.

11
12 **Q. Please discuss the nature of service and the current rate design for Electric
13 Propulsion Rate X-01.**

14 A. Rate X-01 is the rate for traction power, or electricity supplied to railroads. The current
15 rates include a monthly customer charge and an energy-based charge. The proposed
16 revenue allocation includes no change in total distribution-only revenue for Rate X-01.

17
18 **Q. Where are the proposed rates for Rate X-01 computed?**

19 A. These rates are computed on Schedule HSG-4E.

20
21 **Q. What are the proposed distribution rates for Rate X-01?**

22 A. The proposed monthly charge for Rate X-01 is increased to \$21,000.00, and the balance
23 of the revenue target is recovered in the volumetric charge, \$0.01816 per kWh.

1
2 The customer-related costs computed in the allocated cost of service study for Rate X-01
3 are \$1,175.39 per customer-month (Schedule HSG-1C-1, Line 23). The present monthly
4 charge is above this amount, so the present monthly charge is unchanged; however this
5 rate design is consistent with the historical rate design for this class, which is intended to
6 promote stability and predictability of costs.

7

8 **Q. Please describe the existing Street and Area Lighting classes.**

9 A. The present Street and Area Lighting classes comprise:

- 10 • Rate S-05, Customer-owned Lighting.
- 11 • Rate S-06, Decorative Street and Area Lighting. This rate is available to any
12 customer, including municipality, governmental entity, or other public
13 authority
- 14 • Rate S-10, Private Lighting. This rate is closed to new customers.
- 15 • Rate S-14, General Street and Area Lighting. This rate is available to cities,
16 towns, and other public authorities, and certain other customers as stated in
17 Narragansett Electric's tariff.

18

19 **Q. What is the current rate design for the Street and Area Lighting classes?**

20 A. All Street and Area Lighting rates are unmetered. The current rates for Rates S-06, S-10,
21 and S-14 are comprised of a monthly charge based on the type and size of the luminaire

1 and support (i.e., poles and attachments). The current rate for Rate S-05 is a kWh rate
2 based on imputed usage.

3
4 **Q. Where are the proposed rates for Street and Area Lighting computed?**

5 A. These rates are computed on Schedule HSG-4F.

6
7 **Q. How did you develop the proposed rates for the Street and Area Lighting classes?**

8 A. The proposed revenue allocation includes no change to total distribution-only revenue for
9 Street and Area Lighting.

10
11 Approximately 80 percent of the revenue in Street and Area Lighting is from High
12 Pressure Sodium (HPS) fixtures, Standards (poles), and Metal Halide fixtures. For these
13 items, the proposed rates are equal to current rates (including the ISR CapEx factor,
14 which is based on imputed kWh) plus an increase of 3.00 percent.

15
16 For mercury vapor and incandescent lamps that the Company would replace with HPS
17 lamps, the proposed rate is the same as the proposed rate for the appropriate HPS lamp.

18
19 For light emitting diode (LED) lamps and Rate S-06 (Decorative), the proposed rates are
20 set equal to the levelized annual costs of owning and maintaining each item over its life.

21
22 For Rate S-05, the kWh rate is developed on Schedule HSG-1C-3.

23

1 **Q. Is the Company proposing to revise rates for Street and Area Lighting temporary**
2 **turn-off service?**

3 A. Yes. The temporary turn-off rates are proposed to be 53.11 percent of the full service
4 luminaire and support rates (Schedule HSG-1C-2). Narragansett Electric continues to
5 incur costs while a street light has been “red capped,” or turned off, including
6 depreciation expense, property taxes, return on investment, and related income taxes on
7 that return, billing costs, related general and administrative costs, and deferred tax
8 expense. The costs that would cease, temporarily, are operation and maintenance costs
9 and related general and administrative costs and taxes.

10

11 **Q. Please describe Station Power Delivery and Reliability Service Rate M-1.**

12 A. Rate M-1 customers are merchant generators that are interconnected directly or indirectly
13 with high voltage facilities at 115 kV or greater. Rate M-1 customers pay a fixed
14 monthly distribution charge. An increase equal to the system average increase was
15 applied to the revenue from Rate M-1 customers. The revenue from Rate M-1 is included
16 with other distribution revenue, which is used to reduce the revenue required to be
17 collected from all other customers through distribution rates. The proposed rates are
18 presented on Schedule HSG-4-G.

19

20 **HVD Discounts at 2.4 kV and 115 KV**

21 **Q. Is the Company proposing updated HVD discounts for the 2.4 kV credit and 115 kV**
22 **credit it currently provides customers?**

1 A. Yes. The HVD discount for customers supplied at not less than 2,400 volts and not
2 needing a line transformer is computed on Schedule HSG-1H. The HVD credit for
3 customers receiving service at 115kV or greater is set equal to the demand-based charge
4 for the combined Rate B/G-32 and Rate B/G-62 classes. As in the current tariffs, the
5 Second Feeder Service charge is set equal to the 115 kV credit. The rates are shown on
6 Schedule HSG-4H.

7
8 **Q. How does the Company's proposed rate design comport with the Docket 4600 rate**
9 **design Guidelines?**

10 A. It is my understanding that, in Docket No. 4600, the PUC determined that, in setting
11 future electric distribution rates, it must take into account and balance specific factors that
12 include not only traditional ratemaking principles, but also principles more specific to the
13 intent of legislation that supports distributed energy resource programs.

14
15 To assess the reasonableness of proposed rate designs, at its May 4, 2017 Open Meeting,
16 the PUC adopted rate design principles in Section 3.1 of the April 5, 2017 Report to the
17 Rhode Island Public Utilities Commission on the Stakeholder Working Group Process in
18 Docket No. 4600 (Report). The PUC determined that these principles should be
19 considered by the utility and other parties to dockets that proposed changes to their
20 current rate design.² Specifically, a party proposing a specific rate design is required to

² See Report and Order No. 22851 (issued July 31, 2017) in Docket No. 4600, at 23 (Docket No. 4600 Order).

1 include accompanying evidence that addresses how the proposal advances, detracts from,
2 or is neutral as to each of the stated rate design principles listed below.³

3
4 The Company’s allocated cost of service study and rate design proposals in this filing
5 help to advance many of the rate design principles outlined in Section 3.1 of the Docket
6 No. 4600 Report.

“New” Rate Design Principles	Advances / Detracts From / Neutral To
Ensure safe, reliable, affordable, and environmentally responsible electricity service today and in the future.	<i>Advances</i> – Promotes distributed generation and aligns rates with costs.
Promote economic efficiency over the short and long term.	<i>Advances</i> – Revenue allocation moves classes very close to cost of service, and rate design (<u>i.e.</u> , fixed monthly charges) moves somewhat closer to the unit costs to serve.
Provide efficient price signals that reflect long-run marginal cost.	<i>Neutral</i> – Long run marginal cost not available.
Future rates and rate structures should appropriately address “externalities” that are not adequately counted in current rate structures.	<i>Neutral</i> – ISR and RDM address events that cannot be forecasted at the time of the rate case, but in a limited way.
Empower consumers to manage their costs.	<i>Advances</i> – Rates are easy to understand. <i>Neutral</i> – While other rate structures, such as those commonly referred to as time varying rates, would provide more opportunities for consumers to manage their electric bills, such rate structures are more appropriate for electric commodity rates, such as Standard Offer Service rates, and not for distribution services, which are substantially fixed.

³ Id. The PUC recognized that no one rate design proposal may advance each principle, but each should be addressed so that the PUC can appropriately balance the interests of all parties in setting just and reasonable rates across rate classes and programs. Docket No. 4600 Order at 23. Adoption of these principles is intended to augment the PUC’s role in ensuring just and reasonable rates for all classes of customers. Id.

“New” Rate Design Principles	Advances / Detracts From / Neutral To
<p>Enable a fair opportunity for utility cost recovery of prudently incurred costs and revenue stability.</p>	<p><i>Neutral</i> – Revenue stability due to higher fixed costs, however, operation of RDM provides a fixed level of distribution revenue for the recovery of embedded capital investment and expenses, while future costs to service are subject to change. The ISR Plan mitigates the impact of additional capital investment above the amounts reflected in base distribution rates.</p>
<p>All parties should provide fair compensation for value and services received and should receive fair compensation for value and benefits delivered.</p>	<p><i>Neutral</i> – Rates are based on embedded costs not current costs. <i>Advances</i> – Proposed rates appropriately reflect unit cost to serve and ensure all customers pay an equitable share of distribution system costs.</p>
<p>Be transparent and understandable to all customers.</p>	<p><i>Advances</i> – Proposed rates maintain current rate structures, including only fixed monthly costs, kWh-based and kW-based, and are easy to understand. Low income rates and the proposal for the low income discount simplifies the rate structure, provides transparency to this customer group of the value of the discount they are receiving, and identifies the cost of the discount to be recovered from all other customers.</p>
<p>Any changes in rate structures should be implemented with due consideration to the principle of gradualism in order to allow ample time for customers (including DER customers) to understand new rates and to lessen immediate bill impacts.</p>	<p><i>Advances</i> – Bill impacts within customer classes, and the effect of combining Rates G-32 and G-62, were carefully considered in the rate design. The proposal for the low income discount and phase-in of the Rate A-60 customer charge address the impacts to this customer group.</p>
<p>Provide opportunities to reduce energy burden, and address low income and vulnerable customers’ needs.</p>	<p><i>Advances</i> – Proposed low income discount offers assistance to customers meeting need criteria.</p>

“New” Rate Design Principles	Advances / Detracts From / Neutral To
Be consistent with policy goals (e.g., environmental, climate (Resilient Rhode Island Act), energy diversity, competition, innovation, power/data security, least cost procurement, etc.).	<i>Advances</i> – Promotes distributed generation and aligns rates with costs <i>Neutral</i> - While other rate structures, such as those commonly referred to as time varying rates, would provide more opportunities for consumers to manage their electric bills, such rate structures are more appropriate for electric commodity rates, such as Standard Offer Service rates, and not for distribution services, which are substantially generally fixed.
Rate structures should be evaluated on whether they encourage or discourage appropriate investments that enable the evolution of the future energy system.	<i>Neutral</i> – Rates are based on embedded costs, not current costs.

1

2 **Proof of Revenue for Proposed Rates**

3 **Q. Did you prepare a proof of revenue for the proposed rates?**

4 A. Yes. Schedule HSG-4K shows that the revenue at proposed rates produces the revenue
5 for each rate class proposed in the revenue allocation presented on Schedule HSG-3, with
6 small differences due to rounding.

7

8 **Q. Is the Company proposing rate changes related to any other existing rate
9 mechanisms?**

10 A. Yes. The Company is proposing to revise the Standard Offer Service Administrative
11 Cost Factor (SOSACF), transmission charges, the Energy Efficiency Program (EEP)
12 Charge, the Long Term Contracting Renewable Energy Recovery (LTCRER) Factor, the
13 Renewable Energy (RE) Growth Factors, and ISR Factors.

1 **Q. What revisions is the Company proposing to the aforementioned rates?**

2 A. The Company is proposing to update these rates to reflect the uncollectible percentage
3 proposed in this filing. The Company will also change factors impacted by the
4 elimination of Rates G-62 and B-62 through combining the costs recovered from Rates
5 G-62/G-62 with those of Rates G-32/B-32. These include transmission charges, RE
6 Growth Factors, ISR Operations and Maintenance Factors, and ISR CapEx Factors.

7
8 **Q. What is the effective date on which the Company proposing to implement the**
9 **changes to these rates?**

10 A. The Company is proposing to revise these factors effective on the same date that base
11 distribution rates resulting from this proceeding go into effect, or January 1, 2018.

12
13 **VI. Typical Bills**

14 **Q. Has the Company included bill impacts in its filing?**

15 A. Yes. Schedule HSG-5 presents the bill impacts of the proposed rates for customers who
16 are receiving Standard Offer Service. As a result of the rates proposed in this filing, a
17 500 kWh-per month residential customer's monthly bill would increase by \$6.66, or by
18 6.3 percent, from \$105.27 to \$111.93 (Schedule HSG-5-A).

19
20 **Q. Please describe the proposed rates shown in the bill comparisons included in**
21 **Schedule HSG-5.**

22 A. The proposed rates shown under each bill impact table reflect the rates proposed in this
23 filing as shown on Schedule HSG-4, plus adjustments to the SOSACF, transmission

1 charges, the EEP Charge, the LTCRER Factor, and the RE Growth Factors, to illustrate
2 the impact of the Company's proposed uncollectible percentage on each of those charges.
3 The proposed rates also reflect the rates changing as a result of the elimination of Rates
4 G-62 and B-62. Support for both the present and proposed rates included in the bill
5 comparisons presented in Schedule HSG-5 is provided in Workpaper HSG-5.
6

7 **Q. Please describe the street and area lighting bill impacts shown in Schedule HSG-5-F.**

8 A. Schedule HSG-5-F presents the impact relating to the Street and Area Lighting rate
9 classes. This schedule is based on a simple assumption that a customer could be served
10 by only one street lighting fixture and presents the impact of the Company's proposed
11 rates on that basis. In this schedule, the Company calculates a total bill for one luminaire
12 as the annual luminaire charge plus the annual energy charges under present and
13 proposed rates.
14

15 **VII. Conclusion**

16 Q. Does this conclude your testimony?

17 A. Yes.

Schedules of Howard S. Gorman

Index of Schedules

INDEX OF SCHEDULES

Schedule HSG-1	Allocated Cost of Service for the Rate Year Revenue Requirement
Schedule HSG-2	Development of external allocators for the Allocated Cost of Service Study
Schedule HSG-3	Proposed Distribution Revenue Allocation
Schedule HSG-4	Development of Proposed Rates
Schedule HSG-5	Typical Bills and Street and Area Lighting Bill Impacts

LIST OF WORKPAPERS

Workpaper HSG-1	Resume of Howard S. Gorman
Workpaper HSG-4	Street and Area Lighting Replacement Cost Study for Decorative and Light Emitting Diode (LED) Lighting
Workpaper HSG-5	Present and Proposed Rates for Bill Impacts

Schedule HSG-1

Allocated Cost of Service for the Rate Year Revenue Requirement

Exhibit	Description
HSG-1 Index	Index to Class Cost of Service Study
<u>HSG-1A</u>	Summary of Results
<u>HSG-1B</u>	Class Allocations- Total
<u>HSG-1C-1</u>	Unit Costs By Functional Classification
<u>HSG-1C-2</u>	Temporary Turn-Off Charge for Lighting
<u>HSG-1C-3</u>	S-05 kWh Rate
<u>HSG-1C-4</u>	Transformer Costs
<u>HSG-1C-5</u>	Meter Costs
<u>HSG-1D</u>	Functionalization
<u>HSG-1E</u>	Classification
<u>HSG-1F-1</u>	Class Allocation- SubTransmission Demand
<u>HSG-1F-2</u>	Class Allocation- Primary Demand
<u>HSG-1F-3</u>	Class Allocation- Secondary Demand
<u>HSG-1F-4</u>	Class Allocation- Secondary Customer
<u>HSG-1F-5</u>	Class Allocation- Billing Customer
<u>HSG-1G-1</u>	Allocator Assignments
<u>HSG-1G-2</u>	Functionalization Factors
<u>HSG-1G-3</u>	Classification Factors
<u>HSG-1G-4</u>	Class Allocation Factors

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Summary of Results

Sum
Sch. HSG-1A
Tot
Summary

Line	Account	Balance	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	Distribution revenue	270,662	144,451	28,729	42,965	38,950	6,584	8,291	692
2	Late Payments Charges	1,657	884	176	263	238	40	51	4
3	Other revenue	6,873	3,833	758	1,148	802	162	163	7
4	Total Revenue	279,192	149,168	29,663	44,377	39,991	6,786	8,504	703
5									
6	Expenses	249,347	139,613	27,269	37,188	31,253	6,199	7,595	230
7	Net income	29,845	9,555	2,394	7,189	8,738	587	909	474
8									
9	Rate Base	758,251	419,790	77,886	121,564	107,500	22,689	8,606	216
10									
11	Return on Rate Base	3.9360%	2.28%	3.07%	5.91%	8.13%	2.59%	10.56%	219.46%
12	Relative Return	1.00	0.58	0.78	1.50	2.07	0.66	2.68	55.76
13	Revenue Requirement	320,488	180,965	34,766	47,918	40,067	8,414	8,240	119
14									
15	Operating expenses	150,797	85,437	16,563	21,896	17,214	3,737	5,879	71
16	Uncollectibles- Delivery	4,660	2,631	506	697	583	122	120	2
17	Depreciation expense	50,933	29,970	5,787	6,943	6,207	1,173	839	14
18	General tax / Other	35,648	19,494	3,851	5,805	4,941	1,034	512	10
19	GRT	0	0	0	0	0	0	0	0
20		242,038	137,533	26,707	35,340	28,945	6,067	7,350	96
21	Pre-tax income	78,450	43,432	8,058	12,577	11,122	2,347	890	22
22	Income taxes	22,112	12,242	2,271	3,545	3,135	662	251	6
23	Net income	56,338	31,190	5,787	9,032	7,987	1,686	639	16
24									
25	Return on Rate Base	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%
26									
27	Revenue increase (decrease)	41,296	31,797	5,103	3,541	76	1,628	(264)	(585)
28	Revenue increase (decrease) %	14.79%	21.32%	17.2%	7.98%	0.2%	23.99%	(3.1%)	(83.1%)
29	Relative incr (decr)	1.00	1.44	1.16	0.54	0.01	1.62	(0.21)	(5.62)

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocations- Total

Line	Account	No.	Balance	Check	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	I. ELECTRIC PLANT IN SERVICE										
2	A. HYDRO PRODUCTION PLANT	302	3,126	0	1,281	260	561	812	175	27	10
3	Production Plant		3,126	0	1,281	260	561	812	175	27	10
4	Hydro Production Plant										
5											
6	C. TRANSMISSION PLANT	361	-	0	-	-	-	-	-	-	-
7	Transmission Plant										
8	Transmission Plant	350-359	-	0	-	-	-	-	-	-	-
9											
10	D. DISTRIBUTION PLANT										
11	Land and Land Rights	360	12,970	0	6,331	1,264	2,135	2,561	575	103	-
12	Structures and Improvements	361	10,145	0	4,952	989	1,670	2,003	450	81	-
13	Station Equipment	362	254,614	0	124,278	24,818	41,915	50,275	11,297	2,030	-
14	Poles, Towers and Fixtures	364	237,915	0	134,708	26,901	44,941	23,782	5,339	2,201	43
15	OH Conductors and Devices	365	308,051	0	167,007	33,351	55,885	39,995	8,974	2,729	110
16	UG Conduit	366	71,882	0	36,969	7,383	12,418	11,814	2,649	604	45
17	UG Conductors & Devices	367	173,809	0	87,818	17,537	29,536	30,478	6,827	1,435	179
18	Line Transformers	368	189,828	0	90,559	19,824	41,822	34,688	2,935	-	-
19	Services	369	107,009	0	95,006	10,647	1,328	27	0	-	-
20	Meters	370	57,072	0	32,234	16,965	6,034	1,825	7	-	7
21	Install on Cust Premises	371	120	0	104	12	2	0	0	1	0
22	Street Light & Signal	373	39,684	0	-	-	-	-	-	39,684	-
23	Electric Plant ARO	374	-	0	-	-	-	-	-	-	-
24	Distribution Plant	360-373	1,463,099	0	779,965	159,692	237,685	197,449	39,055	48,868	384
25											
26	E. GENERAL PLANT										
27	Land and Land Rights	389	-	0	-	-	-	-	-	-	-
28	General Plant	390	47,682	0	26,710	5,362	6,982	5,314	1,162	2,132	21
29	General Plant	389-399	47,682	0	26,710	5,362	6,982	5,314	1,162	2,132	21
30											
31	TOTAL UTILITY PLANT		1,513,907	0	807,956	165,315	245,228	203,574	40,392	51,027	415
32											

Total
Sch. HSG-1B
Tot
Class All

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocations- Total

Line	Account	No.	Balance	Check	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
II. DEPRECIATION RESERVE												
33	Production Plant	108.3	3,119	0	1,278	260	560	810	174	27	10	
34	Structures and Improvements	108.5	5,100	0	2,489	497	840	1,007	226	41	-	
36	Station Equipment	108.5	51,252	0	25,016	4,996	8,437	10,120	2,274	409	-	
37	Poles, Towers and Fixtures	108.5	107,524	0	60,880	12,158	20,311	10,748	2,413	995	19	
38	OH Conductors and Devices	108.5	127,510	0	69,128	13,805	23,132	16,555	3,715	1,129	46	
39	UG Conduit	108.5	33,881	0	17,425	3,480	5,853	5,569	1,249	285	21	
40	UG Conductors & Devices	108.5	67,415	0	34,062	6,802	11,456	11,821	2,648	556	69	
41	Line Transformers	108.5	117,426	0	56,019	12,263	25,870	21,458	1,816	-	-	
42	Services	108.5	41,311	0	36,677	4,110	513	11	0	-	-	
43	Meters	108.5	46,003	0	25,983	13,675	4,864	1,471	6	-	5	
44	Install on Cust Premises	108.5	10	0	9	1	0	0	0	0	0	
45	Street Light & Signal	108.5	37,190	0	-	-	-	-	-	37,190	-	
46	General Plant	108.5	14,663	0	8,214	1,649	2,147	1,634	357	656	6	
47	Net Additions / Retirements	108.6	36,338	0	19,393	3,968	5,886	4,886	970	1,225	10	
48	Depreciation Reserve	108	688,742	0	356,573	77,663	109,869	86,090	15,847	42,512	187	
III. OTHER RATE BASE ITEMS												
50	Property Held for Future Use		2,494	0	1,328	275	405	336	67	84	1	
52	Unamortized Debt costs		5,165	0	2,859	531	828	732	155	59	1	
53	Materials and Supp / Prepay		3,494	0	1,997	386	499	392	85	133	2	
54	Injuries & Damages Reserve		-	0	-	-	-	-	-	-	-	
55	Cash Working Capital		19,102	0	10,915	2,112	2,731	2,142	465	728	9	
56	Accumulated Deferred FIT		(175,937)	0	(96,241)	(18,689)	(28,861)	(25,049)	(5,233)	(1,816)	(49)	
57	Customer Deposits		(8,889)	0	(400)	(3,692)	(3,778)	(1,017)	-	(2)	-	
58	Net Additions / Retirements		87,657	0	47,950	9,311	14,379	12,480	2,607	905	24	
59	Other Rate Base	131-283	(66,914)	0	(31,592)	(9,766)	(13,796)	(9,984)	(1,855)	91	(12)	
60												
61	TOTAL RATE BASE		758,251	0	419,790	77,886	121,564	107,500	22,689	8,606	216	
62												

Total
Sch. HSG-1B
Tot
Class All

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocations- Total

Total
Sch. HSG-1B
Tot
Class All

Line	Account	No.	Balance	Check	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
I. OPERATING AND MAINTENANCE EXPENSES												
63	B. TRANSMISSION EXPENSE											
64	Transmission Expense		-	0	-	-	-	-	-	-	-	
65	Transmission Expense		-	0	-	-	-	-	-	-	-	
66												
67												
C. DISTRIBUTION EXPENSE												
68	Purchased Power- Borderline	555	-	0	-	-	-	-	-	-	-	
69	Dist Oper-Supervision & Eng	580	2,369	0	1,199	268	399	312	68	123	1	
70	Dist Oper-Load Dispatching	581	2,427	0	995	202	435	630	136	21	7	
71	Dist Oper-Substations	582	1,316	0	642	128	217	260	58	10	-	
72	Dist Oper-Overhead Lines	583	2,678	0	1,480	296	495	313	70	24	1	
73	Dist Oper-Underground Lines	584	370	0	187	37	63	65	15	3	0	
74	Dist Oper-Outdoor Lighting	585	318	0	-	-	-	-	-	318	-	
75	Dist Oper-Electric Meters	586	1,420	0	802	422	150	45	0	-	0	
76	Dist Oper-Cust Install	587	102	0	41	8	18	27	6	1	0	
77	Dist Oper-Misc Expenses	588	7,353	0	3,720	831	1,238	969	211	381	4	
78	Dist Oper-Rents	589	295	0	157	32	48	40	8	10	0	
79	Dist Maint-Supervision & Eng	590	1,033	0	523	117	174	136	30	53	1	
80	Dist Maint-Structures	591	81	0	40	8	13	16	4	1	-	
81	Dist Maint-Substations	592	1,670	0	815	163	275	330	74	13	-	
82	Dist Maint-Overhead Lines	593	19,858	0	10,974	2,192	3,667	2,320	521	179	6	
83	Dist Maint-Underground Lines	594	2,369	0	1,197	239	403	415	93	20	2	
84	Dist Maint-Line Transformers	595	392	0	187	41	86	72	6	-	-	
85	Dist Maint-Outdoor Lighting	596	916	0	-	-	-	-	-	916	-	
86	Dist Maint-Electric Meters	597	57	0	32	17	6	2	0	-	0	
87	Oper. & Maint. Exp.	500-599	45,024	0	22,991	5,000	7,687	5,952	1,298	2,073	23	
88												
89												
D. CUSTOMER ACCOUNTS AND SERVICE												
90	Supervision	901	707	0	604	69	22	4	2	6	0	
91	Meter Reading Exp- Comp	902	383	0	216	114	40	12	0	-	0	
92	Cust Recs & Coll	903	12,306	0	10,511	1,192	385	76	35	107	0	
93	Uncollectible- Delivery	904	4,122	0	2,200	438	654	593	100	126	11	
94	Misc Cust Acct	905	920	0	798	95	16	2	0	9	0	
95	Customer Accts. Exp.	901-905	18,438	0	14,329	1,907	1,118	688	137	248	11	
96												
97	Cust Service-Supervision	907	62	0	25	5	11	17	4	1	0	
98	Cust Assistance Expenses	908	1,138	0	460	93	201	305	66	10	4	
99	Info&Instrct Advertising Exp	9090	518	0	209	43	92	139	30	4	2	
100	Cust Service-Misc Expenses	910	1,102	0	445	90	195	295	63	9	4	
101	Demo & Selling Expenses	912	287	0	116	24	51	77	17	2	1	
102	Sales-Misc Expenses	916	579	0	234	48	102	155	33	5	2	
103	Customer Serv. Exp.		3,686	0	1,489	303	652	987	212	31	12	
104	Customer Accts. & Serv. Exp.	901-919	22,124	0	15,818	2,210	1,770	1,675	350	280	23	
105												

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocations- Total

Total
Sch. HSG-1B
Tot
Class All

Line	Account	No.	Balance	Check	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
106	E. ADMINISTRATIVE AND GENERAL											
107	A&G-Salaries	920	18,783	0	10,522	2,112	2,750	2,093	458	840	8	
108	A&G-Office Supplies	921	6,391	0	3,580	719	936	712	156	286	3	
109	A&G-Outside Services	923	5,459	0	3,058	614	799	608	133	244	2	
110	Property Insurance	924	8,210	0	4,382	897	1,330	1,104	219	277	2	
111	Injuries & Damages Insurance	925	3,459	0	1,846	378	560	465	92	117	1	
112	Employee Pensions & Benefits	926	24,688	0	13,829	2,776	3,615	2,751	601	1,104	11	
113	Regulatory Comm Expenses	928	4,290	0	2,375	441	688	608	128	49	1	
114	A&G-Misc Expenses	930200	2	0	1	0	0	1	0	0	0	
115	A&G-Rents	931	16,288	0	9,124	1,832	2,385	1,815	397	728	7	
116	A&G Maint-Gen Plant-Elec	935	201	0	113	23	29	22	5	9	0	
117	Admin & Genl. Exp.	920-932	87,771	0	48,829	9,791	13,093	10,181	2,189	3,653	36	
118	Total Operating Expenses		154,919	0	87,637	17,001	22,550	17,807	3,838	6,005	81	
119												
120												
121	II. DEPRECIATION EXPENSE											
122	Structures and Improvements		-	0	-	-	-	-	-	-	-	
123	Station Equipment		5,698	0	2,781	555	938	1,125	253	45	-	
124	Poles, Towers and Fixtures		44	0	1	0	0	0	0	0	0	
125	OH Conductors and Devices		18,322	0	9,423	1,882	3,165	3,011	675	154	12	
126	UG Conduit		311	0	157	31	53	55	12	3	0	
127	UG Conductors & Devices		7,052	0	3,364	736	1,554	1,289	109	-	-	
128	Line Transformers		10,572	0	9,386	1,052	131	3	0	-	-	
129	Services		3,223	0	1,820	958	341	103	0	-	0	
130	Meters		654	0	568	67	11	1	0	6	0	
131	Install on Cust Premises		476	0	-	-	-	-	-	476	-	
132	Street Light & Signal		-	0	-	-	-	-	-	-	-	
133	General Plant		4,579	0	2,445	500	741	615	122	154	1	
134	Net Additions / Retirements	403	50,933	0	29,970	5,787	6,943	6,207	1,173	839	14	
135	Depreciation Expense											
136												

Narragansett Electric Company d/b/a National Grid
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Class Allocations- Total

Total
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Class All

Line	Account	No.	Balance	Check	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
137	III. TAXES and OTHER											
138	A. GENERAL TAXES											
139	Municipal property tax	408140	30,530	0	16,701	3,243	5,008	4,347	908	315	8	
140	Payroll related	408110	4,199	0	2,352	472	615	468	102	188	2	
141	Other tax, Reg deferrals	408170	787	0	436	81	126	112	24	9	0	
142	General Taxes		35,516	0	19,488	3,796	5,749	4,926	1,034	512	10	
143												
144	B. FEDERAL / STATE INCOME TAXES											
145	Income Tax Exp		7,847	0	2,512	629	1,890	2,297	154	239	125	
146	Income Taxes	409-411	7,847	0	2,512	629	1,890	2,297	154	239	125	
147	Total Taxes	408-411	43,363	0	22,001	4,426	7,639	7,224	1,188	751	135	
148												
149	Interest on Customer deposits		132	0	6	55	56	15	-	0	-	
150	TOTAL EXPENSES		249,347	0	139,613	27,269	37,188	31,253	6,199	7,595	230	
151					0							
152	IV. OPERATING REVENUES at Present Rates											
153	Distribution charge revenue		270,662	0	144,451	28,729	42,965	38,950	6,584	8,291	692	
154	Forfeited discounts		1,657	0	884	176	263	238	40	51	4	
155	Rent from Utility Property		2,885	0	1,633	326	545	288	65	27	1	
156	Misc Service Revenue		1,368	0	730	145	217	197	33	42	3	
157	Other revenue		594	0	317	63	94	85	14	18	2	
158	CIAC / Cost Recovery		1,883	0	1,076	208	269	211	46	72	1	
159	M1 Revenue		143	0	76	15	23	21	3	4	0	
160	Operating Revenues		279,192	0	149,168	29,663	44,377	39,991	6,786	8,504	703	
161												
162	TOTAL EXPENSES		249,347	0	139,613	27,269	37,188	31,253	6,199	7,595	230	
163	V. NET INCOME at Present Rates		29,845	0	9,555	2,394	7,189	8,738	587	909	474	
164			36,148		14,801	3,075	7,380	9,306	764	940	(118)	

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocations- Total

Total
Sch. HSG-1B
Tot
Class All

Line	Account	No.	Balance	Check	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
165	SUMMARY REPORT										
166	Utility Revenues	440-446	270,662	0	144,451	28,729	42,965	38,950	6,584	8,291	692
167	Other Operating Revenues	450-456	8,530	0	4,717	934	1,411	1,041	202	214	11
168	Total Operating Revenues		279,192	0	149,168	29,663	44,377	39,991	6,786	8,504	703
169											
170	Distribution / Transmission	580-599	45,024	0	22,991	5,000	7,687	5,952	1,298	2,073	23
171	Customer Acctg & Service	901-919	22,124	0	15,818	2,210	1,770	1,675	350	280	23
172	Admin & General	920-932	87,771	0	48,829	9,791	13,093	10,181	2,189	3,653	36
173	Total Operating Expenses		154,919	0	87,637	17,001	22,550	17,807	3,838	6,005	81
174											
175	Depreciation Expense	403	50,933	0	29,970	5,787	6,943	6,207	1,173	839	14
176	Taxes Other Than Inc / Other	408	35,648	0	19,494	3,851	5,805	4,941	1,034	512	10
177	Income before Income tax		37,692	0	12,067	3,023	9,079	11,035	741	1,148	598
178	Income Taxes	409-411	7,847	0	2,512	629	1,890	2,297	154	239	125
179	NET INCOME		29,845	0	9,555	2,394	7,189	8,738	587	909	474
180											
181	RATE BASE		758,251	0	419,790	77,886	121,564	107,500	22,689	8,606	216
182	Return on Rate Base		3.94%		2.28%	3.07%	5.91%	8.13%	2.59%	10.56%	219.46%
183											
184	REVENUE REQUIREMENTS										
185	Target Rate of Return		7.4300%		7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%
186	Rate Base		758,251	0	419,790	77,886	121,564	107,500	22,689	8,606	216
187											
188	Operating expenses		150,797	0	85,437	16,563	21,896	17,214	3,737	5,879	71
189	Uncollectibles- Delivery		4,660	0	2,631	506	697	583	122	120	2
190	Depreciation expense		50,933	0	29,970	5,787	6,943	6,207	1,173	839	14
191	General taxes / Other		35,648	0	19,494	3,851	5,805	4,941	1,034	512	10
192	Subtotal- Operating Costs to recc		242,038	0	137,533	26,707	35,340	28,945	6,067	7,350	96
193											
194	Target Return on Rate Base- Aftu		56,338	0	31,190	5,787	9,032	7,987	1,686	639	16
195	Income taxes to recover		22,112	0	12,242	2,271	3,545	3,135	662	251	6
196											
197	Subtotal- Rev Req before GRT		320,488	0	180,965	34,766	47,918	40,067	8,414	8,240	119
198	GRT needed		0	0.00%	0	0	0	0	0	0	0
199	TOTAL REVENUE REQ.		320,488	0	180,965	34,766	47,918	40,067	8,414	8,240	119
200											
201	Revenue at Present rates		279,192	0	149,168	29,663	44,377	39,991	6,786	8,504	703
202	Revenue Excess (Deficiency)		(41,296)	0	(31,797)	(5,103)	(3,541)	(76)	(1,628)	264	585

	Account Description	Total	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	Demand-related								
2	SubTransmission	22,355	10,181	2,043	3,792	4,965	1,083	190	100
3	Primary Dist	151,059	74,097	14,762	24,824	29,501	6,618	1,254	2
4	Secondary Dist	76,472	45,912	9,328	16,316	3,908	383	624	2
5		249,886	130,191	26,133	44,932	38,374	8,085	2,068	104
6	Per kW / month-Transmission Level								
7	SubTransmission	\$0.96	\$0.90	\$0.91	\$1.00	\$1.07	\$1.06	\$1.04	\$0.75
8	Primary Dist	\$6.50	\$6.59	\$6.57	\$6.54	\$6.38	\$6.47	\$6.82	\$0.02
9	Secondary Dist	\$3.29	\$4.08	\$4.15	\$4.30	\$0.85	\$0.37	\$3.39	\$0.01
10	Total Per kW / month	\$10.75	\$11.57	\$11.63	\$11.84	\$8.30	\$7.91	\$11.25	\$0.78
11									
12	NCP_at_115	1,938	938	187	316	385	85	15	11
13									
14	Customer-related								
15	Primary Dist	0	0	0	0	0	0	0	0
16	Secondary Dist	26,605	18,150	2,068	372	113	23	5,879	0
17	Billing	43,997	32,624	6,565	2,614	1,580	306	293	14
18		70,602	50,774	8,633	2,986	1,693	329	6,172	14
19	Per monthly bill								
20	Primary Dist	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
21	Secondary Dist	\$4.37	\$3.43	\$3.30	\$3.54	\$8.46	\$145.31	\$97.58	\$21.08
22	Billing	\$7.22	\$6.17	\$10.48	\$24.91	\$118.77	\$1,959.82	\$4.86	\$1,154.31
23	Per bill	\$11.59	\$9.61	\$13.78	\$28.46	\$127.23	\$2,105.13	\$102.44	\$1,175.39
24									
25	Number of Bills	6,089,923	5,284,666	626,592	104,935	13,307	156	60,254	12
26									
27	Regulatory Asset Amortization								
28	Billing	0	0	0	0	0	0	0	0
29	Per MWh	-	-	-	-	-	-	-	-
30	Number of MWh	7,773,861	3,186,181	647,655	1,394,628	2,019,488	434,854	67,092	23,963
31									
32	Competitive								
33	Competitive	0	0	0	0	0	0	0	0
34	Open	0	0	0	0	0	0	0	0
35		0	0	0	0	0	0	0	0
36	Per monthly bill								
37	Competitive	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
38	Open	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
39		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
40									
41	Total revenue requirement	320,488	180,965	34,766	47,918	40,067	8,414	8,240	119

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Temporary Turn-Off Charge for Lighting

Temp-Off
Sch. HSG-1C-2
Imp
Temp-Off

	FACILITIES (\$000s)
1	Production Plant
2	Transmission Plant
3	Distribution Plant
4	General Plant
5	Total Gross Utility Plant
6	Less: Depreciation Reserve
7	Total Net Utility Plant
8	Other Rate Base, net
9	Total Rate Base
10	Return on Equity
11	Return on Rate Base
12	
13	Power Supply Expenses
14	Transmission O & M
15	Distribution O & M
16	Customer Accounts & Service
17	Administrative & General (A&G)
18	Depreciation
19	Taxes Other than Income
20	Customer Deposits
21	Income Tax
22	Total Operating Expenses
23	Other Operating Revenue
24	Total Revenue Requirement
25	
26	TOTAL LIGHTING
27	REVENUE
28	PERCENTAGE

S-05
Sch. HSG-1C-3
Inp
S-05

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
S-05 kWh Rate

Line	Account	No.	Lighting Balance	Allocator	Facilities Costs	Distribution System Cost
1	I. ELECTRIC PLANT IN SERVICE					
2	A. HYDRO PRODUCTION PLANT					
3	Production Plant	302	27	None	-	27
4	Hydro Production Plant		27		-	27
5						
6	C. TRANSMISSION PLANT					
7	Transmission Plant	361	-	None	-	-
8	Transmission Plant	350-359	-		-	-
9						
10	D. DISTRIBUTION PLANT					
11	Land and Land Rights	360	103	None	-	103
12	Structures and Improvements	361	81	None	-	81
13	Station Equipment	362	2,030	None	-	2,030
14	Poles, Towers and Fixtures	364	2,201	None	-	2,201
15	OH Conductors and Devices	365	2,729	None	-	2,729
16	UG Conduit	366	604	None	-	604
17	UG Conductors & Devices	367	1,435	None	-	1,435
18	Line Transformers	368	-	Xfmr_Cost	-	-
19	Services	369	-	Services_Cost	-	-
20	Meters	370	-	None	-	-
21	Install on Cust Premises	371	1	None	-	1
22	Street Light & Signal	373	39,684	Lighting	39,684	-
23	Electric Plant ARO	374	-	None	-	-
24	Distribution Plant	360-373	48,868		39,684	9,184
25						
26	E. GENERAL PLANT					
27	Land and Land Rights	389	-	SecC-Lab	-	-
28	General Plant	390	2,132	SecC-Lab	1,757	375
29	General Plant	389-399	2,132		1,757	375
30						
31	TOTAL UTILITY PLANT		51,027		41,441	9,586
32						

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
S-05 kWh Rate

S-05
Sch. HSG-1C-3
Inp
S-05

Line	Account	No.	Lighting Balance	Allocator	Facilities Costs	Distribution System Cost
II. DEPRECIATION RESERVE						
33	Production Plant	108.3	27	None	-	27
34	Structures and Improvements	108.5	41	None	-	41
35	Station Equipment	108.5	409	None	-	409
36	Poles, Towers and Fixtures	108.5	995	None	-	995
37	OH Conductors and Devices	108.5	1,129	None	-	1,129
38	UG Conduit	108.5	285	None	-	285
39	UG Conductors & Devices	108.5	556	None	-	556
40	Line Transformers	108.5	-	Xfmr_Cost	-	-
41	Services	108.5	-	Services_Cost	-	-
42	Meters	108.5	-	None	-	-
43	Install on Cust Premises	108.5	0	None	-	0
44	Street Light & Signal	108.5	37,190	Lighting	37,190	-
45	General Plant	108.5	656	SecC-Lab	540	115
46	Net Additions / Retirements	108.6	1,225	SecC-PT	995	230
47	Depreciation Reserve	108	42,512		38,725	3,787
48						
49						
III. OTHER RATE BASE ITEMS						
50	Property Held for Future Use	84		SecC-PT	68	16
51	Unamortized Debt costs	59		RateBase	5	54
52	Materials and Supp / Prepay	133		SecC-OpExp	106	28
53	Injuries & Damages Reserve	-		SecC-PT	-	-
54	Cash Working Capital	728		SecC-OpExp	578	151
55	Accumulated Deferred FIT	(1,816)		SecC-NetPT	(579)	(1,236)
56	Customer Deposits	(2)		None	-	(2)
57	Net Additions / Retirements	905		SecC-NetPT	288	616
58	Other Rate Base	131-283			466	(375)
59						
60						
61	TOTAL RATE BASE		8,606		3,181	5,424
62						

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
S-05 kWh Rate

S-05
Sch. HSG-1C-3
Inp
S-05

Line	Account	No.	Lighting Balance	Allocator	Facilities Costs	Distribution System Cost
I. OPERATING AND MAINTENANCE EXPENSES						
63	B. TRANSMISSION EXPENSE					
64	Transmission Expense		-	None	-	-
65	Transmission Expense		-		-	-
66						
67						
68	C. DISTRIBUTION EXPENSE					
69	Purchased Power- Borderline	555	-	None	-	-
70	Dist Oper-Supervision & Eng	580	123	SecC-Lab	104	18
71	Dist Oper-Load Dispatching	581	21	None	-	21
72	Dist Oper-Substations	582	10	None	-	10
73	Dist Oper-Overhead Lines	583	24	None	-	24
74	Dist Oper-Underground Lines	584	3	None	-	3
75	Dist Oper-Outdoor Lighting	585	318	Lighting	318	-
76	Dist Oper-Electric Meters	586	-	None	-	-
77	Dist Oper-Cust Install	587	1	None	-	1
78	Dist Oper-Misc Expenses	588	381	SecC-Lab	324	57
79	Dist Oper-Rents	589	10	SecC-PT	8	2
80	Dist Maint-Supervision & Eng	590	53	SecC-Lab	45	8
81	Dist Maint-Structures	591	1	None	-	1
82	Dist Maint-Substations	592	13	None	-	13
83	Dist Maint-Overhead Lines	593	179	None	-	179
84	Dist Maint-Underground Lines	594	20	None	-	20
85	Dist Maint-Line Transformers	595	-	Xfmr_Cost	-	-
86	Dist Maint-Outdoor Lighting	596	916	Lighting	916	-
87	Dist Maint-Electric Meters	597	-	None	-	-
88	Oper. & Maint. Exp.	500-599	2,073		1,715	358
89			2,073		1,715	358
D. CUSTOMER ACCOUNTS AND SERVICE						
90	Supervision	901	6	None	-	6
92	Meter Reading Exp- Comp	902	-	None	-	-
93	Cust Rees & Coll	903	107	None	-	107
94	Uncollectible- Delivery	904	126	None	-	126
95	Misc Cust Acct	905	9	None	-	9
96	Customer Accts. Exp.	901-905	248		-	248
97						
98	Cust Service-Supervision	907	1	None	-	1
99	Cust Assistance Expenses	908	10	None	-	10
100	Info&Instruct Advertising Exp	9090	4	None	-	4
101	Cust Service-Misc Expenses	910	9	None	-	9
102	Demo & Selling Expenses	912	2	None	-	2
103	Sales-Misc Expenses	916	5	None	-	5
104	Customer Serv. Exp.		31		-	31
105	Customer Accts. & Serv. Exp.	901-919	280		-	280

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
S-05 kWh Rate

S-05
Sch. HSG-1C-3
Inp
S-05

Line	Account	No.	Lighting Balance	Allocator	Facilities Costs	Distribution System Cost
106	E. ADMINISTRATIVE AND GENERAL					
107	A&G-Salaries	920	840	SecC-Lab	692	148
108	A&G-Office Supplies	921	286	SecC-Lab	235	50
109	A&G-Outside Services	923	244	SecC-Lab	201	43
110	Property Insurance	924	277	SecC-PT	225	52
111	Injuries & Damages Insurance	925	117	SecC-PT	95	22
112	Employee Pensions & Benefits	926	1,104	SecC-Lab	910	194
113	Regulatory Comm Expenses	928	49	RateBase	4	45
114	A&G-Misc Expenses	930200	0	MWh-Gen	0	0
115	A&G-Rents	931	728	SecC-Lab	600	128
116	A&G Maint-Gen Plant-Elec	935	9	SecC-Lab	7	2
117	Admin & Genl. Exp.	920-932	3,653		2,969	684
118	Total Operating Expenses		6,005		4,684	1,321
119						
120						
121	II. DEPRECIATION EXPENSE					
122	Structures and Improvements	403	-	None	-	-
123	Station Equipment	403	45	None	-	45
124	Poles, Towers and Fixtures	403	0	None	-	0
125	OH Conductors and Devices	403	0	None	-	0
126	UG Conduit	403	154	None	-	154
127	UG Conductors & Devices	403	3	None	-	3
128	Line Transformers	403	-	Xfmtr_Cost	-	-
129	Services	403	-	Services_Cost	-	-
130	Meters	403	-	None	-	-
131	Install on Cust Premises	403	6	None	-	6
132	Street Light & Signal	403	476	Lighting	476	-
133	General Plant	403	-	SecC-Lab	-	-
134	Net Additions / Retirements	407300	154	SecC-PT	125	29
135	Depreciation Expense	403	839		601	238

S-05
Sch. HSG-1C-3
Inp
S-05

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
S-05 kWh Rate

Line	Account	No.	Lighting Balance	Allocator	Facilities Costs	Distribution System Cost
137	III. TAXES and OTHER					
138	A. GENERAL TAXES					
139	Municipal property tax	408140	315	SecC-NetPt	100	215
140	Payroll related	408110	188	SecC-Lab	155	33
141	Other tax, Reg deferrals	408170	9	RateBase	1	8
142	General Taxes		512		256	256
143						
144	B. FEDERAL / STATE INCOME TAXES					
145	Income Tax Exp		239	SecC-Pretax	(1,006)	1,245
146	Income Taxes	409-411	239		(1,006)	1,245
147	Total Taxes	408-411	751		(750)	1,501
148						
149	Interest on Customer deposits		0	None	-	0
150	TOTAL EXPENSES		7,595		4,535	3,060
151						
152	IV. OPERATING REVENUES at Present Rates					
153	Distribution charge revenue		8,291	Total_Del_Rev	651	7,640
154	Forfeited discounts		51	None	-	51
155	Rent from Utility Property		27	None	-	27
156	Misc Service Revenue		42	Total_Del_Rev	-	42
157	Other revenue		18	Total_Del_Rev	1	17
158	CIAC / Cost Recovery		72	SecC-OpExp	57	15
159	MI Revenue		4	Total_Del_Rev	0	4
160	Operating Revenues		8,504		709	7,795
161						
162	TOTAL EXPENSES		7,595		4,535	3,060
163	V. NET INCOME at Present Rat		909		(3,826)	4,735
164						

S-05
Sch. HSG-1C-3
Inp
S-05

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
S-05 kWh Rate

Line	Account	No.	Lighting Balance	Allocator	Facilities Costs	Distribution System Cost
165	SUMMARY REPORT					
166	Utility Revenues	440-446	8,291		651	7,640
167	Other Operating Revenues	450-456	214		59	155
168	Total Operating Revenues		8,504		709	7,795
169						
170	Distribution / Transmission	580-599	2,073		1,715	358
171	Customer Acctg & Service	901-919	280		0	280
172	Admin & General	920-932	3,653		2,969	684
173	Total Operating Expenses		6,005		4,684	1,321
174						
175	Depreciation Expense	403	839		601	238
176	Taxes Other Than Inc / Other	408	512		256	256
177	Income before Income tax		1,148		(4,832)	5,980
178	Income Taxes	409-411	239		(1,006)	1,245
179	NET INCOME		909		(3,826)	4,735
180						
181	RATE BASE		8,606		3,181	5,424
182	Return on Rate Base		10.56%			
183						
184	REVENUE REQUIREMENTS					
185	Target Rate of Return		7.4300%		7.4300%	7.4300%
186	Rate Base		8,606		3,181	5,424
187						
188	Operating expenses		5,879		4,684	1,195
189	Uncollectibles- Delivery		120	Total_RevReq	9	111
190	Depreciation expense		839		601	238
191	General taxes / Other		512		256	256
192	Subtotal- Operating Costs to rec		7,350		5,550	1,800
193						
194	Target Return on Rate Base- Aft		639		236	403
195	Income taxes to recover		251	SecC-RB	93	158
196						
197	Subtotal- Rev Req before GRT		8,240		5,879	2,361
198	GRT needed		0		0	0
199	TOTAL REVENUE REQ.		8,240		5,879	2,361
200	Streetlighting Rate Year kWh					62,049,950
201				Return	0.00649	
202	Rate S-05 per kWh charge			Costs and Other	0.03155	0.03804
203						

Xfmr Narragansett Electric Company d/b/a National Gri
HSG-1C- Class Cost of Service Study (\$000s)
Inp Rate Year Ending August 31, 2019
Transfornr **Transformer Costs**

	Account Description	Total
1	Line Transformer cost, net	72,402
2	Other Rate Base items, net	(5,871)
3	Line Transformer-Related Rate Base	66,531
4	Rate of return on rate base	7.43%
5	Return on Service / Meter rate base	4,943
6	Income tax gross-up	1,940
7	Return component	6,883
8		
9	Maintenance-Line Transformers	392
10	Line Transformers share of A&G costs	512
11	Line Transformers Depreciation Expense	7,052
12	Expense component	7,956
13		
14	Revenue requirement-total	14,840
15		
16	Demand units	1,341,258
17		
18	Transformer Cost per Month	\$0.92
19		
20	Annual Demand Units- B32/G32/B62/G62	3,442,070
21	Annual Billing Demand Units- B32/G32/B62/G62	7,608,765
22	Convert NCP to Billing Units	\$0.42
23		
24	Distribution Plant in Service, net	825,165
25	Transformers % of Plant	8.8%
26	Other Rate Base items, net	(66,914)
27		
28	Distribution O&M	45,024
29	Customer Accounts	22,124
30		67,148
31	Line Transformers % of Operating Costs	0.6%
32	A&G Costs	87,771
33		
34	Income tax gross-up	39.2%

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Meter Costs

Meter
HSG-1C-5
Inp
Meter Co

	Account Description	Total	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	Meter cost, net	11,069	6,252	3,290	1,170	354	1	0	1
2	ADJT- Services / Meters / Xfirms	(6,694)	(3,840)	(1,918)	(710)	(225)	(1)	0	(1)
3	Service / Meter-Related Rate Base	4,375	2,412	1,372	460	129	0	0	1
4	Rate of return on rate base	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%	7.43%
5	Return on Service / Meter rate base	325	179	102	34	10	0	0	0
6	Income tax gross-up	128	70	40	13	4	0	0	0
7	Return component	453	250	142	48	13	0	0	0
8									
9	Meter expenses	1,420	802	422	150	45	0	0	0
10	Meter maintenance	57	32	17	6	2	0	0	0
11	Meter depreciation expense	3,223	1,820	958	341	103	0	0	0
12	Property tax- Meters	1,162	666	333	123	39	0	0	0
13	Labor-related costs	2,462	1,393	729	260	79	0	0	0
14	Cost component	8,324	4,714	2,459	880	268	1	0	1
15									
16	Total	8,776	4,964	2,601	928	282	1	0	1
17									
18	Number of Bills	6,089,923	5,284,666	626,592	104,935	13,307	156	60,254	12
19									
20	Total per Customer-month	\$1.44	\$0.94	\$4.15	\$8.84	\$21.18	\$7.15	\$0.00	\$83.01
21									

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Meter Costs

Meter
HSG-1C-5
Inp
Meter Co

	Account Description	Total	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
22	Utility Plant in Service- Cost	1,513,907	807,956	165,315	245,228	203,574	40,392	51,027	415
23	Meters % of Plant	3.8%	4.0%	10.3%	2.5%	0.9%	0.0%	0.0%	1.6%
24	ADIT	(175,937)	(96,241)	(18,689)	(28,861)	(25,049)	(5,233)	(1,816)	(49)
25	Municipal property tax	30,530	16,701	3,243	5,008	4,347	908	315	8
26									
27	Income tax gross-up	39,25%	39,25%	39,25%	39,25%	39,25%	39,25%	39,25%	39,25%
28									
29	Labor costs included above	1,256	709	373	133	40	0	0	0
30	Total Labor costs	33,255	18,628	3,740	4,869	3,706	810	1,487	14
31	Portion of Labor included above	3.78%	3.81%	9.98%	2.73%	1.08%	0.02%	0.00%	1.01%
32									
33	Labor-related Costs								
34	A&G-Salaries	25,174	14,101	2,831	3,686	2,805	613	1,126	11
35	A&G-Office Supplies	5,459	3,058	614	799	608	133	244	2
36	A&G-Rents / General Plant	201	113	23	29	22	5	9	0
37	A&G Outside services	0							
38	Injures & Damages	4,290	2,375	441	688	608	128	49	1
39	Employee benefits	24,688	13,829	2,776	3,615	2,751	601	1,104	11
40	PR taxes	4,199	2,352	472	615	468	102	188	2
41	General / Common Plant	1,174	757	144	113	44	20	94	1
42	Total Labor-related costs	65,185	36,585	7,301	9,546	7,308	1,603	2,813	28

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Functionalization

Functions
Sch. HSG-1D
Fnc
Function:

Line	Account	No.	Balance	Allocator	SubTransmission	Primary Dist	Secondary Dist	Billing
1	I. ELECTRIC PLANT IN SERVICE							
2	A. HYDRO PRODUCTION PLANT	302	3,126	SubT	3,126	-	-	-
3	Production Plant		3,126					
4	Hydro Production Plant					0	0	0
5								
6	C. TRANSMISSION PLANT	361	0	None	-	-	-	-
7	Transmission Plant		0					
8	Transmission Plant	350-359						
9								
10	D. DISTRIBUTION PLANT							
11	Land and Land Rights	360	12,970	Stations	-	12,970	-	-
12	Structures and Improvements	361	10,145	Stations	-	10,145	-	-
13	Station Equipment	362	254,614	Stations	-	254,614	-	-
14	Poles, Towers and Fixtures	364	237,915	Func-364	7,532	112,861	117,522	-
15	OH Conductors and Devices	365	308,051	Func-365	19,249	183,175	105,627	-
16	UG Conduit	366	71,882	Func-366	7,934	51,844	12,103	-
17	UG Conductors & Devices	367	173,809	Func-367	31,274	122,866	19,668	-
18	Line Transformers	368	189,828	Sec	-	-	189,828	-
19	Services	369	107,009	Sec	-	-	107,009	-
20	Meters	370	57,072	Bill	-	-	-	57,072
21	Install on Cust Premises	371	120	Bill	-	-	-	120
22	Street Light & Signal	373	39,684	Sec	-	-	-	-
23	Electric Plant ARO	374	0	None	-	-	39,684	-
24	Distribution Plant	360-373	1,463,099		65,989	748,476	591,442	57,192
25								
26	E. GENERAL PLANT							
27	Land and Land Rights	389	0	None	-	-	-	-
28	General Plant	390	47,682	Labor	5,023	19,609	12,743	10,307
29	General Plant	389-399	47,682		5,023	19,609	12,743	10,307
30								
31	TOTAL UTILITY PLANT		1,513,907		74,139	768,085	604,184	67,499
32								

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Functionalization

Functions
Sch. HSG-1D
Fnc
Function:

Line	Account	No.	Balance	Allocator	SubTransmission	Primary Dist	Secondary Dist	Billing
33	II. DEPRECIATION RESERVE							
34	Production Plant	108.3	3,119	SubT	3,119	-	-	-
35	Structures and Improvements	108.5	5,100	Stations	-	5,100	-	-
36	Station Equipment	108.5	51,252	Stations	-	51,252	-	-
37	Poles, Towers and Fixtures	108.5	107,524	Func-364	3,404	51,007	53,113	-
38	OH Conductors and Devices	108.5	127,510	Func-365	7,968	75,821	43,722	-
39	UG Conduit	108.5	33,881	Func-366	3,740	24,436	5,705	-
40	UG Conductors & Devices	108.5	67,415	Func-367	12,130	47,656	7,629	-
41	Line Transformers	108.5	117,426	Sec	-	-	117,426	-
42	Services	108.5	41,311	Sec	-	-	41,311	-
43	Meters	108.5	46,003	Bill	-	-	-	46,003
44	Install on Cust Premises	108.5	10	Bill	-	-	-	10
45	Street Light & Signal	108.5	37,190	Sec	-	-	37,190	-
46	General Plant	108.5	14,663	Labor	1,545	6,030	3,919	3,170
47	Net Additions / Retirements	108.6	36,338	Plant	1,780	18,436	14,502	1,620
48	Depreciation Reserve	108	688,742		33,685	279,738	324,516	50,803
49								
50	III. OTHER RATE BASE ITEMS							
51	Property Held for Future Use		2,494	Plant	122	1,265	995	111
52	Unamortized Debt costs		5,165	RateBase	262	3,060	1,760	82
53	Materials and Supp / Prepay		3,494	OpExp	310	1,369	903	911
54	Injuries & Damages Reserve		0	Plant	-	-	-	-
55	Cash Working Capital		19,102	OpExp	1,696	7,484	4,939	4,983
56	Accumulated Deferred FIT		(175,937)	NetPlant	(8,625)	(104,122)	(59,629)	(3,560)
57	Customer Deposits		(8,889)	Bill	-	-	-	(8,889)
58	Net Additions / Retirements	131-283	87,657	NetPlant	4,297	51,877	29,709	1,774
59	Other Rate Base		(66,914)		(1,938)	(39,067)	(21,322)	(4,587)
60								
61	TOTAL RATE BASE		758,251		38,516	449,280	258,346	12,109
62			758,251					

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Functionalization

Functions
Sch. HSG-1D
Fnc
Function

Line	Account	No.	Balance	Allocator	SubTransmission	Primary Dist	Secondary Dist	Billing
63	I. OPERATING AND MAINTENANCE EXPENSES							
64	B. TRANSMISSION EXPENSE							
65	Transmission Expense		0	None	-	-	-	-
66	Transmission Expense		0		-	-	-	-
67								
68	C. DISTRIBUTION EXPENSE							
69	Purchased Power - Borderline	555	0	SubT	-	-	-	-
70	Dist Oper-Supervision & Eng	580	2,369	Dist-Lab	298	1,164	756	151
71	Dist Oper-Load Dispatching	581	2,427	SubT	2,427	-	-	-
72	Dist Oper-Substations	582	1,316	Stations	-	1,316	-	-
73	Dist Oper-Overhead Lines	583	2,678	OH_Total	131	1,452	1,095	-
74	Dist Oper-Underground Lines	584	370	Func-367	67	262	42	-
75	Dist Oper-Outdoor Lighting	585	318	Sec	-	-	318	-
76	Dist Oper-Electric Meters	586	1,420	Bill	-	-	-	1,420
77	Dist Oper-Cust Install	587	102	Func-364	3	48	50	-
78	Dist Oper-Misc Expenses	588	7,353	Dist-Lab	925	3,612	2,347	468
79	Dist Oper-Rents	589	295	Plant	14	150	118	13
80	Dist Maint-Supervision & Eng	590	1,033	Dist-Lab	130	507	330	66
81	Dist Maint-Structures	591	81	Stations	-	81	-	-
82	Dist Maint-Substations	592	1,670	Stations	-	1,670	-	-
83	Dist Maint-Overhead Lines	593	19,858	OH_Total	974	10,767	8,116	-
84	Dist Maint-Underground Lines	594	2,369	Func-367	426	1,675	268	-
85	Dist Maint-Line Transformers	595	392	Sec	-	-	392	-
86	Dist Maint-Outdoor Lighting	596	916	Sec	-	-	916	-
87	Dist Maint-Electric Meters	597	57	Bill	-	-	-	57
88	Oper. & Maint. Exp.	500-599	45,024		5,396	22,704	14,748	2,175
89			45,024	Check	5,396	22,704	14,748	2,175
90	D. CUSTOMER ACCOUNTS AND SERVICE							
91	Supervision	901	707	Bill	-	-	-	707
92	Meter Reading Exp- Comp	902	383	Bill	-	-	-	383
93	Cust Recs & Coll	903	12,306	Bill	-	-	-	12,306
94	Uncollectible- Delivery	904	4,122	Bill	-	-	-	4,122
95	Misc Cust Acct	905	920	Bill	-	-	-	920
96	Customer Accts. Exp.	901-905	18,438		-	-	-	18,438
97								
98	Cust Service-Supervision	907	62	Bill	-	-	-	62
99	Cust Assistance Expenses	908	1,138	Bill	-	-	-	1,138
100	Info&Instruct Advertising Exp	9090	518	Bill	-	-	-	518
101	Cust Service-Misc Expenses	910	1,102	Bill	-	-	-	1,102
102	Demo & Selling Expenses	912	287	Bill	-	-	-	287
103	Sales-Misc Expenses	916	579	Bill	-	-	-	579
104	Customer Serv. Exp.		3,686		-	-	-	3,686
105	Customer Accts. & Serv. Exp.	901-919	22,124		-	-	-	22,124

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Functionalization

Functions
Sch. HSG-1D
Fnc
Function:

Line	Account	No.	Balance	Allocator	SubTransmission	Primary Dist	Secondary Dist	Billing
106								
	E. ADMINISTRATIVE AND GENERAL							
107	A&G-Salaries	920	18,783	Labor	1,979	7,724	5,020	4,060
108	A&G-Office Supplies	921	6,391	Labor	673	2,628	1,708	1,382
109	A&G-Outside Services	923	5,459	Labor	575	2,245	1,459	1,180
110	Property Insurance	924	8,210	Plant	402	4,165	3,277	366
111	Injuries & Damages Insurance	925	3,459	Plant	169	1,755	1,380	154
112	Employee Pensions & Benefits	926	24,688	Labor	2,601	10,153	6,598	5,337
113	Regulatory Comm Expenses	928	4,290	RateBase	218	2,542	1,462	69
114	A&G-Misc Expenses	930200	2	Plant	0	1	1	0
115	A&G-Rents	931	16,288	Labor	1,716	6,698	4,353	3,521
116	A&G-Maint-Gen Plant-Elec	935	201	Labor	21	83	54	43
117	Admin & Genl. Exp.	920-932	87,771		8,354	37,995	25,310	16,112
118	Total Operating Expenses		154,919		13,751	60,699	40,058	40,411
119								
120								
	II. DEPRECIATION EXPENSE							
121	Structures and Improvements	403	0	Stations	-	-	-	-
122	Station Equipment	403	5,698	Stations	-	5,698	-	-
123	Poles, Towers and Fixtures	403	2	Func-364	0	1	1	-
124	OH Conductors and Devices	403	44	Func-365	3	26	15	-
125	UG Conduit	403	18,322	Func-366	2,022	13,215	3,085	-
126	UG Conductors & Devices	403	311	Func-367	56	220	35	-
127	Line Transformers	403	7,052	Sec	-	-	7,052	-
128	Services	403	10,572	Sec	-	-	10,572	-
129	Meters	403	3,223	Bill	-	-	-	3,223
130	Install on Cust Premises	403	654	Bill	-	-	-	654
131	Street Light & Signal	403	476	Sec	-	-	-	-
132	General Plant	403	0	Labor	-	-	476	-
133	Net Additions / Retirements	407300	4,579	Plant	224	2,323	1,827	204
134	Depreciation Expense	403	50,933		2,305	21,483	23,064	4,081
135								
136								

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Functionalization

Functions
Sch. HSG-1D
Fnc
Function:

Line	Account	No.	Balance	Allocator	SubTransmission	Primary Dist	Secondary Dist	Billing
137	III. TAXES and OTHER							
138	A. GENERAL TAXES							
139	Municipal property tax	408140	30,530	NetPlant	1,497	18,068	10,347	618
140	Payroll related	408110	4,199	Labor	442	1,727	1,122	908
141	Other tax, Reg deferrals	408170	787	RateBase	40	466	268	13
142	General Taxes		35,516		1,979	20,261	11,738	1,538
143								
144	B. FEDERAL / STATE INCOME TAXES							
145	Income Tax Exp		7,847	Pretax	361	4,969	2,864	(347)
146	Income Taxes	409-411	7,847		361	4,969	2,864	(347)
147	Total Taxes	408-411	43,363		2,340	25,230	14,601	1,191
148								
149	Interest on Customer deposits		132	Bill	-	-	-	132
150	TOTAL EXPENSES		249,347		18,396	107,412	77,723	45,815
151								
152	IV. OPERATING REVENUES at Present Rates							
153	Distribution charge revenue		270,662	RevReqPF	19,459	123,868	86,468	40,866
154	Forfeited discounts		1,657	Bill	-	-	-	1,657
155	Rent from Utility Property		2,885	Func-364	91	1,369	1,425	-
156	Misc Service Revenue		1,368	Bill	-	-	-	1,368
157	Other revenue		594	RevReqPF	43	272	190	90
158	CIAC / Cost Recovery		1,883	OpExp	167	738	487	491
159	M1 Revenue		143	RevReqPF	10	65	46	22
160	Operating Revenues		279,192		19,771	126,312	88,616	44,494
161								
162	TOTAL EXPENSES		249,347		18,396	107,412	77,723	45,815
163	V. NET INCOME at Present Rates		29,845		1,374	18,900	10,892	(1,321)
164			29,845	Check	582	15,651	11,164	1,391

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Functionalization

Functions
Sch. HSG-1D
Fnc
Function:

Line	Account	No.	Balance	Allocator	SubTransmission	Primary Dist	Secondary Dist	Billing
165	SUMMARY REPORT							
166	Utility Revenues	440-446	270,662		19,459	123,868	86,468	40,866
167	Other Operating Revenues	450-456	8,530		311	2,444	2,147	3,627
168	Total Operating Revenues		279,192		19,771	126,312	88,616	44,494
169								
170	Distribution / Transmission	580-599	45,024		5,396	22,704	14,748	2,175
171	Customer Acctg & Service	901-919	22,124		-	-	-	22,124
172	Admin & General	920-932	87,771		8,354	37,995	25,310	16,112
173	Total Operating Expenses		154,919		13,751	60,699	40,058	40,411
174								
175	Depreciation Expense	403	50,933		2,305	21,483	23,064	4,081
176	Taxes Other Than Inc / Other	408	35,648		1,979	20,261	11,738	1,670
177	Income before Income tax		37,692		1,736	23,869	13,756	(1,668)
178	Income Taxes	409-411	7,847		361	4,969	2,864	(347)
179	NET INCOME		29,845		1,374	18,900	10,892	(1,321)
180								
181	RATE BASE		758,251		38,516	449,280	258,346	12,109
182	Return on Rate Base		3.9360%		3.6%	4.2%	4.2%	(10.9%)
183								
184	REVENUE REQUIREMENTS							
185	Target Rate of Return		7.43%		7.43%	7.43%	7.43%	7.43%
186	Rate Base		758,251		38,516	449,280	258,346	12,109
187								
188	Operating expenses		150,797		13,751	60,699	40,058	36,289
189	Uncollectibles- Delivery		4,660		335	2,133	1,489	704
190	Depreciation expense		50,933	RevReqPF	2,305	21,483	23,064	4,081
191	General taxes / Other		35,648		1,979	20,261	11,738	1,670
192	Subtotal- Operating Costs to recover		242,038		18,370	104,576	76,348	42,744
193								
194	Target Return on Rate Base- After taxes		56,338		2,862	33,382	19,195	900
195	Income taxes to recover		22,112	RateBase	1,123	13,102	7,534	353
196				28.19%				
197	Subtotal- Rev Req before GRT		320,488	39.25%	22,355	151,059	103,077	43,997
198	GRT needed			0.00%	0	0	0	0
199	TOTAL REVENUE REQ.		320,488		22,355	151,059	103,077	43,997

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Classify
Sch. HSG-1E
Cls
Classification

Line	Account	No.	Primary Dist			Secondary Dist		
			Total	Demand	Customer	Total	Demand	Customer
1	I. ELECTRIC PLANT IN SERVICE							
2	A. HYDRO PRODUCTION PLANT							
3	Production Plant	302	0	0	0	0	0	0
4	Hydro Production Plant		0	None	0	0	None	0
5								
6	C. TRANSMISSION PLANT							
7	Transmission Plant	361	0	None	0	0	None	0
8	Transmission Plant	350-359	0	None	0	0	None	0
9								
10	D. DISTRIBUTION PLANT							
11	Land and Land Rights	360	12,970	Demand	12,970	0	None	0
12	Structures and Improvements	361	10,145	Demand	10,145	0	None	0
13	Station Equipment	362	254,614	Demand	254,614	0	None	0
14	Poles, Towers and Fixtures	364	112,861	Demand	112,861	0	Demand	117,522
15	OH Conductors and Devices	365	183,175	Demand	183,175	0	Demand	105,627
16	UG Conduit	366	51,844	Demand	51,844	0	Demand	12,103
17	UG Conductors & Devices	367	122,866	Demand	122,866	0	Demand	19,668
18	Line Transformers	368	0	None	0	0	Demand	189,828
19	Services	369	0	None	0	0	Customer	0
20	Meters	370	0	None	0	0	None	0
21	Install on Cust Premises	371	0	None	0	0	None	0
22	Street Light & Signal	373	0	None	0	0	None	0
23	Electric Plant ARO	374	0	None	0	39,684	Customer	39,684
24	Distribution Plant	360-373	748,476		748,476	0	None	0
25						591,442		444,749
26	E. GENERAL PLANT							
27	Land and Land Rights	389	0	None	0	0	None	0
28	General Plant	390	19,609	Demand	19,609	0	Sec Labor	10,986
29	General Plant	389-399	19,609		19,609	0		10,986
30								
31	TOTAL UTILITY PLANT		768,085		768,085	0		455,735
32						604,184		146,450

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Classify
Sch. HSG-1E
Cls
Classification

Line	Account	No.	Primary Dist			Secondary Dist		
			Total	Demand	Customer	Total	Demand	Customer
33	II. DEPRECIATION RESERVE							
34	Production Plant	108.3	0	None	0	0	0	0
35	Structures and Improvements	108.5	5,100	Demand	5,100	0	0	0
36	Station Equipment	108.5	51,252	Demand	51,252	0	0	0
37	Poles, Towers and Fixtures	108.5	51,007	Demand	51,007	0	0	0
38	OH Conductors and Devices	108.5	75,821	Demand	75,821	0	0	0
39	UG Conduit	108.5	24,436	Demand	24,436	0	0	0
40	UG Conductors & Devices	108.5	47,656	Demand	47,656	0	0	0
41	Line Transformers	108.5	0	None	0	117,426	0	0
42	Services	108.5	0	None	0	41,311	0	41,311
43	Meters	108.5	0	None	0	0	0	0
44	Install on Cust Premises	108.5	0	None	0	0	0	0
45	Street Light & Signal	108.5	0	None	0	0	0	0
46	General Plant	108.5	6,030	Demand	6,030	37,190	0	37,190
47	Net Additions / Retirements	108.6	18,436	Demand	18,436	3,919	3,378	540
48	Depreciation Reserve	108	279,738		279,738	14,502	10,939	3,563
49						324,516	241,912	82,604
50	III. OTHER RATE BASE ITEMS							
51	Property Held for Future Use		1,265	Demand	1,265	995	751	245
52	Unamortized Debt costs		3,060	Demand	3,060	1,760	1,349	411
53	Materials and Supp / Prepay		1,369	Demand	1,369	903	771	132
54	Injuries & Damages Reserve		0	Demand	0	0	0	0
55	Cash Working Capital		7,484	Demand	7,484	4,939	4,216	723
56	Accumulated Deferred FIT		(104,122)	Demand	(104,122)	(59,629)	(45,590)	(14,039)
57	Customer Deposits		0	None	0	0	0	0
58	Net Additions / Retirements	131-283	51,877	Demand	51,877	29,709	22,714	6,995
59	Other Rate Base		(39,067)		(39,067)	(21,322)	(15,789)	(5,533)
60								
61	TOTAL RATE BASE		449,280		449,280	258,346	198,034	60,312
62								

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Classify
Sch. HSG-1E
Cls
Classifier

Line	Account	No.	Primary Dist			Secondary Dist		
			Total	Demand	Customer	Total	Demand	Customer
63	I. OPERATING AND MAINTENANCE EXPENSES:							
64	B. TRANSMISSION EXPENSE							
65	Transmission Expense		0	None	0	0	0	0
66	Transmission Expense		0	None	0	0	0	0
67								
68	C. DISTRIBUTION EXPENSE							
69	Purchased Power- Borderline	555	0	None	0	0	0	0
70	Dist Oper-Supervision & Eng	580	1,164	Demand	1,164	756	SecDxLabor	652
71	Dist Oper-Load Dispatching	581	0	None	0	0	None	0
72	Dist Oper-Substations	582	1,316	Demand	1,316	0	None	0
73	Dist Oper-Overhead Lines	583	1,452	Demand	1,452	1,095	Sec_OH	1,095
74	Dist Oper-Underground Lines	584	262	Demand	262	42	Sec_UG	42
75	Dist Oper-Outdoor Lighting	585	0	None	0	318	Customer	318
76	Dist Oper-Electric Meters	586	0	None	0	0	None	0
77	Dist Oper-Cust Install	587	48	Demand	48	50	Demand	50
78	Dist Oper-Misc Expenses	588	3,612	Demand	3,612	2,347	SecDxLabor	2,024
79	Dist Oper-Rents	589	150	Demand	150	118	SecPlant	89
80	Dist Maint-Supervision & Eng	590	507	Demand	507	330	SecLabor	284
81	Dist Maint-Structures	591	81	Demand	81	0	None	0
82	Dist Maint-Substations	592	1,670	Demand	1,670	0	None	0
83	Dist Maint-Overhead Lines	593	10,767	Demand	10,767	8,116	Demand	8,116
84	Dist Maint-Underground Lines	594	1,675	Demand	1,675	268	Demand	268
85	Dist Maint-Line Transformers	595	0	None	0	392	Demand	392
86	Dist Maint-Outdoor Lighting	596	0	None	0	916	Customer	0
87	Dist Maint-Electric Meters	597	0	None	0	0	None	0
88	Oper. & Maint. Exp.	500-599	22,704	None	22,704	14,748		13,012
89			22,704	None	22,704	14,748		13,012
90	D. CUSTOMER ACCOUNTS AND SERVICE							
91	Supervision	901	0	None	0	0	None	0
92	Meter Reading Exp- Comp	902	0	None	0	0	None	0
93	Cust Rees & Coll	903	0	None	0	0	None	0
94	Uncollectible- Delivery	904	0	None	0	0	None	0
95	Misc Cust Acct	905	0	None	0	0	None	0
96	Customer Accts. Exp.	901-905	0	None	0	0	None	0
97								
98	Cust Service-Supervision	907	0	None	0	0	None	0
99	Cust Assistance Expenses	908	0	None	0	0	None	0
100	Info&Instrct Advertising Exp	9090	0	None	0	0	None	0
101	Cust Service-Misc Expenses	910	0	None	0	0	None	0
102	Demo & Selling Expenses	912	0	None	0	0	None	0
103	Sales-Misc Expenses	916	0	None	0	0	None	0
104	Customer Serv. Exp.		0	None	0	0	None	0
105	Customer Accts. & Serv. Exp.	901-919	0	None	0	0	None	0

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Classify
Sch. HSG-1E
Cls
Classifier

Line	Account	No.	Primary Dist			Secondary Dist				
			Total	Demand	Customer	Total	Demand	Customer		
106										
107	E. ADMINISTRATIVE AND GENERAL									
108	A&G-Salaries	920	7,724	Demand	7,724	0	5,020	SecLabor	4,328	692
109	A&G-Office Supplies	921	2,628	Demand	2,628	0	1,708	SecLabor	1,472	235
110	A&G-Outside Services	923	2,245	Demand	2,245	0	1,459	SecLabor	1,258	201
111	Property Insurance	924	4,165	Demand	4,165	0	3,277	SecPlant	2,471	805
112	Injuries & Damages Insurance	925	1,755	Demand	1,755	0	1,380	SecPlant	1,041	339
113	Employee Pensions & Benefits	926	10,153	Demand	10,153	0	6,598	SecLabor	5,688	910
114	Regulatory Comm Expenses	928	2,542	Demand	2,542	0	1,462	Sec_RB	1,120	341
930200	A&G-Misc Expenses		1	Demand	1	0	1	SecPlant	1	0
931	A&G-Rents	931	6,698	Demand	6,698	0	4,353	SecLabor	3,753	600
935	A&G Maint-Gen Plant-Elec	935	83	Demand	83	0	54	SecLabor	46	7
920-932	Admin & Genl. Exp.		37,995	Demand	37,995	0	25,310		21,179	4,131
118	Total Operating Expenses		60,699		60,699	0	40,058		34,191	5,867
119										
120										
121	II. DEPRECIATION EXPENSE									
122	Structures and Improvements	403	0	Demand	0	0	0	None	0	0
123	Station Equipment	403	5,698	Demand	5,698	0	0	None	0	0
403	Poles, Towers and Fixtures	403	1	Demand	1	0	1	Demand	1	0
125	OH Conductors and Devices	403	26	Demand	26	0	15	Demand	15	0
126	UG Conduit	403	13,215	Demand	13,215	0	3,085	Demand	3,085	0
127	UG Conductors & Devices	403	220	Demand	220	0	35	Demand	35	0
128	Line Transformers	403	0	None	0	0	7,052	Demand	7,052	0
129	Services	403	0	None	0	0	10,572	Customer	0	10,572
130	Meters	403	0	None	0	0	0	None	0	0
131	Install on Cust Premises	403	0	None	0	0	0	None	0	0
132	Street Light & Signal	403	0	None	0	0	476	Customer	0	476
133	General Plant	403	0	Demand	0	0	0	SecLabor	0	0
407300	Net Additions / Retirements		2,323	Demand	2,323	0	1,827	SecPlant	1,378	449
135	Depreciation Expense	403	21,483		21,483	0	23,064		11,567	11,497
136										

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Classify
Sch. HSG-1E
Cls
Classifier

Line	Account	No.	Primary Dist		Secondary Dist						
			Total	Demand	Customer	Total	Demand	Customer			
137	III. TAXES and OTHER										
138	A. GENERAL TAXES										
139	Municipal property tax	408140	18,068	Demand	18,068	0	0	10,347	SecNetPlant	7,911	2,436
140	Payroll related	408110	1,727	Demand	1,727	0	0	1,122	SecLabor	967	155
141	Other tax, Reg deferrals	408170	466	Demand	466	0	0	268	Sec_RB	206	63
142	General Taxes		20,261		20,261	0	0	11,738		9,084	2,653
143											
144	B. FEDERAL / STATE INCOME TAXES										
145	Income Tax Exp		4,969	Demand	4,969	0	0	2,864	SecPretax	2,581	282
146	Income Taxes	409-411	4,969		4,969	0	0	2,864		2,581	282
147	Total Taxes	408-411	25,230		25,230	0	0	14,601		11,666	2,936
148											
149	Interest on Customer deposits		0	None	0	0	0	0	None	0	0
150	TOTAL EXPENSES		107,412		107,412	0	0	77,723		57,423	20,300
151											
152	IV. OPERATING REVENUES at Present Rates										
153	Distribution charge revenue		123,868	Demand	123,868	0	0	86,468	SecPlant	65,223	21,245
154	Forfeited discounts		0	None	0	0	0	0	None	0	0
155	Rent from Utility Property		1,369	Demand	1,369	0	0	1,425	Demand	1,425	0
156	Misc Service Revenue		0	Demand	0	0	0	0	None	0	0
157	Other revenue		272	Demand	272	0	0	190	SecPlant	143	47
158	CIAC / Cost Recovery		738	Demand	738	0	0	487	SecOpExp	416	71
159	M1 Revenue		65	Demand	65	0	0	46	Sec_RB	35	11
160	Operating Revenues		126,312		126,312	0	0	88,616		67,242	21,374
161											
162	TOTAL EXPENSES		107,412		107,412	0	0	77,723		57,423	20,300
163	V. NET INCOME at Present Rates		18,900		18,900	0	0	10,892		9,818	1,074
164											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Classify
Sch. HSG-1E
Cls
Classifier

Line	Account	No.	Primary Dist			Secondary Dist		
			Total	Demand	Customer	Total	Demand	Customer
165	SUMMARY REPORT							
166	Utility Revenues	440-446	123,868	123,868	0	86,468	65,223	21,245
167	Other Operating Revenues	450-456	2,444	2,444	0	2,147	2,019	129
168	Total Operating Revenues		126,312	126,312	0	88,616	67,242	21,374
169								
170	Distribution / Transmission	580-599	22,704	22,704	0	14,748	13,012	1,736
171	Customer Acctg & Service	901-919	0	0	0	0	0	0
172	Admin & General	920-932	37,995	37,995	0	25,310	21,179	4,131
173	Total Operating Expenses		60,699	60,699	0	40,058	34,191	5,867
174								
175	Depreciation Expense	403	21,483	21,483	0	23,064	11,567	11,497
176	Taxes Other Than Inc / Other	408	20,261	20,261	0	11,738	9,084	2,653
177	Income before Income tax		23,869	23,869	0	13,756	12,400	1,356
178	Income Taxes	409-411	4,969	4,969	0	2,864	2,581	282
179	NET INCOME		18,900	18,900	0	10,892	9,818	1,074
180								
181	RATE BASE		449,280	449,280	0	258,346	198,034	60,312
182	Return on Rate Base							
183								
184	REVENUE REQUIREMENTS							
185	Target Rate of Return		7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%
186	Rate Base		449,280	449,280	0	258,346	198,034	60,312
187								
188	Operating expenses		60,699	60,699	0	40,058	34,191	5,867
189	Uncollectibles- Delivery		2,133	2,133	0	1,489	1,141	348
190	Depreciation expense		21,483	21,483	0	23,064	11,567	11,497
191	General taxes / Other		20,261	20,261	0	11,738	9,084	2,653
192	Subtotal- Operating Costs to recover		104,576	104,576	0	76,348	55,983	20,365
193								
194	Target Return on Rate Base- After taxes		33,382	33,382	0	19,195	14,714	4,481
195	Income taxes to recover		13,102	13,102	0	7,534	5,775	1,759
196								
197	Subtotal- Rev Req before GRT		151,059	151,059	0	103,077	76,472	26,605
198	GRT needed		0	0	0	0	0	0
199	TOTAL REVENUE REQ.		151,059	151,059	0	103,077	76,472	26,605

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- SubTransmission Demand

SubTDem
Sch. HSG-1F-1
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	I. ELECTRIC PLANT IN SERVICE										
2	A. HYDRO PRODUCTION PLANT										
3	Production Plant	302	3,126	MWh-Gen	1,281	260	561	812	175	27	10
4	Hydro Production Plant		3,126		1,281	260	561	812	175	27	10
5											
6	C. TRANSMISSION PLANT										
7	Transmission Plant	361	-	None	-	-	-	-	-	-	-
8	Transmission Plant	350-359	-		-	-	-	-	-	-	-
9											
10	D. DISTRIBUTION PLANT										
11	Land and Land Rights	360	-	None	-	-	-	-	-	-	-
12	Structures and Improvements	361	-	None	-	-	-	-	-	-	-
13	Station Equipment	362	-	None	-	-	-	-	-	-	-
14	Poles, Towers and Fixtures	364	7,532	NCP_at_115	3,644	728	1,229	1,497	331	60	43
15	OH Conductors and Devices	365	19,249	NCP_at_115	9,313	1,860	3,141	3,827	847	152	110
16	UG Conduit	366	7,934	NCP_at_115	3,839	767	1,295	1,577	349	63	45
17	UG Conductors & Devices	367	31,274	NCP_at_115	15,131	3,022	5,103	6,217	1,375	247	179
18	Line Transformers	368	-	None	-	-	-	-	-	-	-
19	Services	369	-	None	-	-	-	-	-	-	-
20	Meters	370	-	None	-	-	-	-	-	-	-
21	Install on Cust Premises	371	-	None	-	-	-	-	-	-	-
22	Street Light & Signal	373	-	None	-	-	-	-	-	-	-
23	Electric Plant ARO	374	-	None	-	-	-	-	-	-	-
24	Distribution Plant	360-373	65,989		31,926	6,376	10,768	13,118	2,902	522	378
25											
26	E. GENERAL PLANT										
27	Land and Land Rights	389	-	None	-	-	-	-	-	-	-
28	General Plant	390	5,023	SubT-Lab	2,180	440	875	1,205	261	42	20
29	General Plant	389-399	5,023		2,180	440	875	1,205	261	42	20
30											
31	TOTAL UTILITY PLANT		74,139		35,387	7,076	12,203	15,136	3,339	591	407
32											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- SubTransmission Demand

SubTDem
Sch. HSG-1F-1
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
II. DEPRECIATION RESERVE											
33	Production Plant	108.3	3,119	MWh-Gen	1,278	260	560	810	174	27	10
34	Structures and Improvements	108.5	-	None	-	-	-	-	-	-	-
36	Station Equipment	108.5	-	None	-	-	-	-	-	-	-
37	Poles, Towers and Fixtures	108.5	3,404	NCP_at_115	1,647	329	555	677	150	27	19
38	OH Conductors and Devices	108.5	7,968	NCP_at_115	3,855	770	1,300	1,584	350	63	46
39	UG Conduit	108.5	3,740	NCP_at_115	1,809	361	610	743	164	30	21
40	UG Conductors & Devices	108.5	12,130	NCP_at_115	5,869	1,172	1,979	2,411	533	96	69
41	Line Transformers	108.5	-	None	-	-	-	-	-	-	-
42	Services	108.5	-	None	-	-	-	-	-	-	-
43	Meters	108.5	-	None	-	-	-	-	-	-	-
44	Install on Cust Premises	108.5	-	None	-	-	-	-	-	-	-
45	Street Light & Signal	108.5	-	None	-	-	-	-	-	-	-
46	General Plant	108.5	1,545	SubT-Lab	670	135	269	371	80	13	6
47	Net Additions / Retirements	108.6	1,780	SubT-Pt	849	170	293	363	80	14	10
48	Depreciation Reserve	108	33,685		15,978	3,197	5,567	6,960	1,533	269	181
49											
III. OTHER RATE BASE ITEMS											
50	Property Held for Future Use		122	SubT-Pt	58	12	20	25	5	1	1
52	Unamortized Debt costs		262	RateBase	145	27	42	37	8	3	0
53	Materials and Supp / Prepay		310	SubT-OpEx	136	27	54	73	16	3	1
54	Injuries & Damages Reserve		-	SubT-Pt	-	-	-	-	-	-	-
55	Cash Working Capital		1,696	SubT-OpEx	745	150	294	399	87	14	7
56	Accumulated Deferred FIT		(8,625)	SubT-NetPt	(4,138)	(827)	(1,415)	(1,743)	(385)	(69)	(48)
57	Customer Deposits		-	None	-	-	-	-	-	-	-
58	Net Additions / Retirements	131+283	4,297	SubT-NetPt	2,062	412	705	869	192	34	24
59	Other Rate Base		(1,938)		(992)	(199)	(301)	(340)	(77)	(14)	(15)
60											
61	TOTAL RATE BASE		38,516		18,417	3,680	6,336	7,836	1,728	308	210
62											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation-SubTransmission Demand

SubTDem
Sch. HSG-1F-1
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
I. OPERATING AND MAINTENANCE EXPENSES												
63	B. TRANSMISSION EXPENSE											
64	Transmission Expense			None								
65	Transmission Expense											
66	Transmission Expense											
67	Transmission Expense											
C. DISTRIBUTION EXPENSE												
68	Purchased Power- Borderline	555		MWh-Gen								
69	Dist Oper-Supervision & Eng	580	298	SubT-Lab	129	26	52	72	16	3	1	
70	Dist Oper-Load Dispatching	581	2,427	MWh-Gen	995	202	435	630	136	21	7	
71	Dist Oper-Substations	582		None								
72	Dist Oper-Overhead Lines	583	131	NCP_at_115	64	13	21	26	6	1	1	
73	Dist Oper-Underground Lines	584	67	NCP_at_115	32	6	11	13	3	1	0	
74	Dist Oper-Outdoor Lighting	585		None								
75	Dist Oper-Electric Meters	586		None								
76	Dist Oper-Cust Install	587	3	MWh-Meter	1	0	1	1	0	0	0	
77	Dist Oper-Misc Expenses	588	925	SubT-Lab	401	81	161	222	48	8	4	
78	Dist Oper-Rents	589	14	SubT-Pt	7	1	2	3	1	0	0	
79	Dist Maint-Supervision & Eng	590	130	SubT-Lab	56	11	23	31	7	1	1	
80	Dist Maint-Structures	591		None								
81	Dist Maint-Substations	592		None								
82	Dist Maint-Overhead Lines	593	974	NCP_at_115	471	94	159	194	43	8	6	
83	Dist Maint-Underground Lines	594	426	NCP_at_115	206	41	70	85	19	3	2	
84	Dist Maint-Line Transformers	595		None								
85	Dist Maint-Outdoor Lighting	596		None								
86	Dist Maint-Electric Meters	597		None								
87	Oper. & Maint. Exp.	500-599	5,396	None	2,363	477	935	1,277	277	45	22	
88	Oper. & Maint. Exp.	500-599	5,396	None	2,363	477	935	1,277	277	45	22	
89	Oper. & Maint. Exp.	500-599	5,396	None	2,363	477	935	1,277	277	45	22	
D. CUSTOMER ACCOUNTS AND SERVICE												
90	Supervision	901		None								
91	Meter Reading Exp- Comp	902		None								
92	Cust Rees & Coll	903		None								
93	Uncollectible- Delivery	904		None								
94	Misc Cust Acct	905		None								
95	Customer Accts. Exp.	901-905		None								
96	Customer Accts. Exp.	901-905		None								
97	Cust Service-Supervision	907		None								
98	Cust Assistance Expenses	908		None								
99	Info&Instrct Advertising Exp	9090		None								
100	Cust Service-Misc Expenses	910		None								
101	Demo & Selling Expenses	912		None								
102	Sales-Misc Expenses	916		None								
103	Customer Serv. Exp.	901-919		None								
104	Customer Accts. & Serv. Exp.	901-919		None								
105	Customer Accts. & Serv. Exp.	901-919		None								

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- SubTransmission Demand

SubTDem
Sch. HSG-1F-1
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
106											
	E. ADMINISTRATIVE AND GENERAL										
107	A&G-Salaries	920	1,979	SubT-Lab	859	173	345	475	103	17	8
109	A&G-Office Supplies	921	673	SubT-Lab	292	59	117	162	35	6	3
110	A&G-Outside Services	923	575	SubT-Lab	250	50	100	138	30	5	2
111	Property Insurance	924	402	SubT-Pt	192	38	66	82	18	3	2
112	Injuries & Damages Insurance	925	169	SubT-Pt	81	16	28	35	8	1	1
113	Employee Pensions & Benefits	926	2,601	SubT-Lab	1,128	228	453	624	135	22	10
114	Regulatory Comm Expenses	928	218	RateBase	121	22	35	31	7	2	0
115	A&G-Misc Expenses	930200	0	MWh-Gen	0	0	0	0	0	0	0
116	A&G-Rents	931	1,716	SubT-Lab	745	150	299	412	89	14	7
117	A&G Maint-Gen Plant-Elec	935	21	SubT-Lab	9	2	4	5	1	0	0
118	Admin & Genl. Exp.	920-932	8,354		3,676	740	1,446	1,963	426	71	33
119	Total Operating Expenses		13,751		6,039	1,217	2,381	3,240	703	116	55
120											
	II. DEPRECIATION EXPENSE										
121	Structures and Improvements	403	-	None	-	-	-	-	-	-	-
122	Station Equipment	403	-	None	-	-	-	-	-	-	-
124	Poles, Towers and Fixtures	403	0	NCP_at_115	0	0	0	0	0	0	0
125	OH Conductors and Devices	403	3	NCP_at_115	1	0	0	1	0	0	0
126	UG Conduit	403	2,022	NCP_at_115	978	195	330	402	89	16	12
127	UG Conductors & Devices	403	56	NCP_at_115	27	5	9	11	2	0	0
128	Line Transformers	403	-	None	-	-	-	-	-	-	-
129	Services	403	-	None	-	-	-	-	-	-	-
130	Meters	403	-	None	-	-	-	-	-	-	-
131	Install on Cust Premises	403	-	None	-	-	-	-	-	-	-
132	Street Light & Signal	403	-	None	-	-	-	-	-	-	-
133	General Plant	403	-	None	-	-	-	-	-	-	-
134	Net Additions / Retirements	407300	224	SubT-Lab	-	-	-	-	-	-	-
135	Depreciation Expense	403	2,305	NCP_at_115	108	22	37	45	10	2	1
136					1,115	223	376	458	101	18	13

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- SubTransmission Demand

SubTDem
Sch. HSG-1F-1
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
137	III. TAXES and OTHER										
138	A. GENERAL TAXES										
139	Municipal property tax	408140	1,497	SubT-NetPt	718	144	246	302	67	12	8
140	Payroll related	408110	442	SubT-Lab	192	39	77	106	23	4	2
141	Other tax, Reg deferrals	408170	40	RateBase	22	4	6	6	1	0	0
142	General Taxes		1,979		932	186	329	414	91	16	10
143											
144	B. FEDERAL / STATE INCOME TAXES										
145	Income Tax Exp		361	SubT-Pretax	509	98	11	(260)	(85)	94	(6)
146	Income Taxes	409-411	361		509	98	11	(260)	(85)	94	(6)
147	Total Taxes	408-411	2,340		1,441	284	340	155	6	110	4
148											
149	Interest on Customer deposits		-	None	-	-	-	-	-	-	-
150	TOTAL EXPENSES		18,396		8,596	1,724	3,098	3,853	811	244	73
151											
152	IV. OPERATING REVENUES at Present Rates		19,459	Total_DeI_Rev	10,385	2,065	3,089	2,800	473	596	50
153	Distribution charge revenue			None	-	-	-	-	-	-	-
154	Forfeited discounts			NCP_at_115	44	9	15	18	4	1	1
155	Rent from Utility Property		91	None	-	-	-	-	-	-	-
156	Misc Service Revenue			Total_DeI_Rev	23	5	7	6	1	1	0
157	Other revenue		43	SubT-OpEx	73	15	29	39	9	1	1
158	CIAC / Cost Recovery		167	Total_DeI_Rev	5	1	2	1	0	0	0
159	MI Revenue		10		10,531	2,095	3,141	2,865	487	600	51
160	Operating Revenues		19,771								
161											
162	TOTAL EXPENSES		18,396		8,596	1,724	3,098	3,853	811	244	73
163	V. NET INCOME at Present Rat		1,374		1,935	371	44	(987)	(324)	356	(22)
164											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- SubTransmission Demand

SubTDem
Sch. HSG-1F-1
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
165	SUMMARY REPORT										
166	Utility Revenues	440-446	19,459		10,385	2,065	3,089	2,800	473	596	50
167	Other Operating Revenues	450-456	311		146	29	52	65	14	4	1
168	Total Operating Revenues		19,771		10,531	2,095	3,141	2,865	487	600	51
169											
170	Distribution / Transmission	580-599	5,396		2,363	477	935	1,277	277	45	22
171	Customer Acctg & Service	901-919	0		0	0	0	0	0	0	0
172	Admin & General	920-932	8,354		3,676	740	1,446	1,963	426	71	33
173	Total Operating Expenses		13,751		6,039	1,217	2,381	3,240	703	116	55
174											
175	Depreciation Expense	403	2,305		1,115	223	376	458	101	18	13
176	Taxes Other Than Inc / Other	408	1,979		932	186	329	414	91	16	10
177	Income before Income tax		1,736		2,444	469	55	(1,247)	(409)	450	(27)
178	Income Taxes	409-411	361		509	98	11	(260)	(85)	94	(6)
179	NET INCOME		1,374		1,935	371	44	(987)	(324)	356	(22)
180											
181	RATE BASE		38,516		18,417	3,680	6,336	7,836	1,728	308	210
182	Return on Rate Base		3,57%								
183											
184	REVENUE REQUIREMENTS										
185	Target Rate of Return		7.4300%		7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%
186	Rate Base		38,516		18,417	3,680	6,336	7,836	1,728	308	210
187											
188	Operating expenses		13,751		6,039	1,217	2,381	3,240	703	116	55
189	Uncollectibles- Delivery		335	Total_RevReq	189	36	50	42	9	9	0
190	Depreciation expense		2,305		1,115	223	376	458	101	18	13
191	General taxes / Other		1,979		932	186	329	414	91	16	10
192	Subtotal- Operating Costs to rec		18,370		8,276	1,662	3,136	4,154	905	159	78
193											
194	Target Return on Rate Base- Aft		2,862		1,368	273	471	582	128	23	16
195	Income taxes to recover		1,123	SubT-RB	537	107	185	229	50	9	6
196											
197	Subtotal- Rev Req before GRT		22,355		10,181	2,043	3,792	4,965	1,083	190	100
198	GRT needed		0	0.00%	0	0	0	0	0	0	0
199	TOTAL REVENUE REQ.		22,355		10,181	2,043	3,792	4,965	1,083	190	100

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Primary Demand

PrimDem
Sch. HSG-1F-2
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	I. ELECTRIC PLANT IN SERVICE										
2	A. HYDRO PRODUCTION PLANT										
3	Production Plant	302	-	None	-	-	-	-	-	-	-
4	Hydro Production Plant		-		-	-	-	-	-	-	-
5											
6	C. TRANSMISSION PLANT										
7	Transmission Plant	361	-	None	-	-	-	-	-	-	-
8	Transmission Plant	350-359	-		-	-	-	-	-	-	-
9											
10	D. DISTRIBUTION PLANT										
11	Land and Land Rights	360	12,970	NCP_at_Pri	6,331	1,264	2,135	2,561	575	103	-
12	Structures and Improvements	361	10,145	NCP_at_Pri	4,952	989	1,670	2,003	450	81	-
13	Station Equipment	362	254,614	NCP_at_Pri	124,278	24,818	41,915	50,275	11,297	2,030	-
14	Poles, Towers and Fixtures	364	112,861	NCP_at_Pri	55,088	11,001	18,579	22,285	5,008	900	-
15	OH Conductors and Devices	365	183,175	NCP_at_Pri	89,409	17,855	30,154	36,169	8,128	1,461	-
16	UG Conduit	366	51,844	NCP_at_Pri	25,306	5,054	8,535	10,237	2,300	413	-
17	UG Conductors & Devices	367	122,866	NCP_at_Pri	59,972	11,976	20,226	24,260	5,452	980	-
18	Line Transformers	368	-	None	-	-	-	-	-	-	-
19	Services	369	-	None	-	-	-	-	-	-	-
20	Meters	370	-	None	-	-	-	-	-	-	-
21	Install on Cust Premises	371	-	None	-	-	-	-	-	-	-
22	Street Light & Signal	373	-	None	-	-	-	-	-	-	-
23	Electric Plant ARO	374	-	None	-	-	-	-	-	-	-
24	Distribution Plant	360-373	748,476		365,335	72,957	123,215	147,790	33,210	5,969	-
25											
26	E. GENERAL PLANT										
27	Land and Land Rights	389	-	None	-	-	-	-	-	-	-
28	General Plant	390	19,609	PriD-Lab	9,564	1,910	3,229	3,878	871	156	0
29	General Plant	389-399	19,609		9,564	1,910	3,229	3,878	871	156	0
30											
31	TOTAL UTILITY PLANT		768,085		374,899	74,867	126,444	151,668	34,081	6,125	0
32											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Primary Demand

PrimDem
Sch. HSG-1F-2
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
II. DEPRECIATION RESERVE												
33	Production Plant	108.3	-	None	-	-	-	-	-	-	-	
34	Structures and Improvements	108.5	5,100	NCP_at_Pri	2,489	497	840	1,007	226	41	-	
35	Station Equipment	108.5	51,252	NCP_at_Pri	25,016	4,996	8,437	10,120	2,274	409	-	
36	Poles, Towers and Fixtures	108.5	51,007	NCP_at_Pri	24,897	4,972	8,397	10,071	2,263	407	-	
37	OH Conductors and Devices	108.5	75,821	NCP_at_Pri	37,008	7,391	12,482	14,971	3,364	605	-	
38	UG Conduit	108.5	24,436	NCP_at_Pri	11,928	2,382	4,023	4,825	1,084	195	-	
39	UG Conductors & Devices	108.5	47,656	NCP_at_Pri	23,261	4,645	7,845	9,410	2,115	380	-	
40	Line Transformers	108.5	-	None	-	-	-	-	-	-	-	
41	Services	108.5	-	None	-	-	-	-	-	-	-	
42	Meters	108.5	-	None	-	-	-	-	-	-	-	
43	Install on Cust Premises	108.5	-	None	-	-	-	-	-	-	-	
44	Street Light & Signal	108.5	-	None	-	-	-	-	-	-	-	
45	General Plant	108.5	6,030	PriD-Lab	2,941	587	993	1,193	268	48	0	
46	Net Additions / Retirements	108.6	18,436	PriD-PT	8,999	1,797	3,035	3,640	818	147	0	
47	Depreciation Reserve	108	279,738		136,539	27,267	46,051	55,237	12,412	2,231	0	
48												
49												
III. OTHER RATE BASE ITEMS												
50	Property Held for Future Use		1,265	PriD-PT	618	123	208	250	56	10	0	
51	Unamortized Debt costs		3,060	RateBase	1,694	314	491	434	92	35	1	
52	Materials and Supp / Prepay		1,369	PriD-OpExp	672	134	225	267	60	11	0	
53	Injuries & Damages Reserve		-	PriD-PT	-	-	-	-	-	-	-	
54	Cash Working Capital		7,484	PriD-OpExp	3,672	731	1,231	1,462	328	61	0	
55	Accumulated Deferred FIT		(104,122)	PriD-NetPT	(50,822)	(10,149)	(17,141)	(20,560)	(4,620)	(830)	(0)	
56	Customer Deposits		-	None	-	-	-	-	-	-	-	
57	Net Additions / Retirements	131-283	51,877	PriD-NetPT	25,321	5,057	8,540	10,244	2,302	414	0	
58	Other Rate Base		(39,067)		(18,846)	(3,790)	(6,446)	(7,903)	(1,783)	(300)	1	
59												
60												
61	TOTAL RATE BASE		449,280		219,514	43,810	73,947	88,527	19,886	3,594	1	
62												

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Primary Demand

PrimDem
Sch. HSG-1F-2
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
63	I. OPERATING AND MAINTENANCE EXPENSES										
64	B. TRANSMISSION EXPENSE										
65	Transmission Expense			None							
66	Transmission Expense										
67											
68	C. DISTRIBUTION EXPENSE										
69	Purchased Power- Borderline	555		None							
70	Dist Oper-Supervision & Eng	580	1,164	PriD-Lab	568	113	192	230	52	9	0
71	Dist Oper-Load Dispatching	581		None							
72	Dist Oper-Substations	582	1,316	NCP_at Pri	642	128	217	260	58	10	
73	Dist Oper-Overhead Lines	583	1,452	NCP_at Pri	709	142	239	287	64	12	
74	Dist Oper-Underground Lines	584	262	NCP_at Pri	128	25	43	52	12	2	
75	Dist Oper-Outdoor Lighting	585		None							
76	Dist Oper-Electric Meters	586		None							
77	Dist Oper-Cust Install	587	48	MWh-Meter	20	4	9	13	3	0	0
78	Dist Oper-Misc Expenses	588	3,612	PriD-Lab	1,762	352	595	714	160	29	0
79	Dist Oper-Rents	589	150	PriD-PT	73	15	25	30	7	1	0
80	Dist Maint-Supervision & Eng	590	507	PriD-Lab	248	49	84	100	23	4	0
81	Dist Maint-Structures	591	81	NCP_at Pri	40	8	13	16	4	1	
82	Dist Maint-Substations	592	1,670	NCP_at Pri	815	163	275	330	74	13	
83	Dist Maint-Overhead Lines	593	10,767	NCP_at Pri	5,256	1,050	1,773	2,126	478	86	
84	Dist Maint-Underground Lines	594	1,675	NCP_at Pri	817	163	276	331	74	13	
85	Dist Maint-Line Transformers	595		None							
86	Dist Maint-Outdoor Lighting	596		None							
87	Dist Maint-Electric Meters	597		None							
88	Oper. & Maint. Exp.	500-599	22,704		11,076	2,212	3,738	4,488	1,008	181	0
89			22,704		11,076	2,212	3,738	4,488	1,008	181	0
90	D. CUSTOMER ACCOUNTS AND SERVICE										
91	Supervision	901		None							
92	Meter Reading Exp- Comp	902		None							
93	Cust Rees & Coll	903		None							
94	Uncollectible- Delivery	904		None							
95	Misc Cust Acct	905		None							
96	Customer Accts. Exp.	901-905									
97											
98	Cust Service-Supervision	907		None							
99	Cust Assistance Expenses	908		None							
100	Info&Instruct Advertising Exp	9090		None							
101	Cust Service-Misc Expenses	910		None							
102	Demo & Selling Expenses	912		None							
103	Sales-Misc Expenses	916		None							
104	Customer Serv. Exp.										
105	Customer Accts. & Serv. Exp.	901-919									

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Primary Demand

PrimDem
Sch. HSG-1F-2
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
106											
	E. ADMINISTRATIVE AND GENERAL										
107	A&G-Salaries	920	7,724	PriD-Lab	3,767	752	1,272	1,528	343	62	0
108	A&G-Office Supplies	921	2,628	PriD-Lab	1,282	256	433	520	117	21	0
109	A&G-Outside Services	923	2,245	PriD-Lab	1,095	219	370	444	100	18	0
110	Property Insurance	924	4,165	PriD-PT	2,033	406	686	823	185	33	0
111	Injuries & Damages Insurance	925	1,755	PriD-PT	857	171	289	347	78	14	0
112	Employee Pensions & Benefits	926	10,153	PriD-Lab	4,952	989	1,672	2,008	451	81	0
113	Regulatory Comm Expenses	928	2,542	RateBase	1,407	261	408	360	76	29	1
114	A&G-Misc Expenses	930200	1	MWh-Gen	0	0	0	0	0	0	0
115	A&G-Rents	931	6,698	PriD-Lab	3,267	652	1,103	1,325	298	53	0
116	A&G Maint-Gen Plant-Elec	935	83	PriD-Lab	40	8	14	16	4	1	0
117	Admin & Genl. Exp.	920-932	37,995		18,701	3,715	6,245	7,370	1,651	312	1
118	Total Operating Expenses		60,699		29,777	5,927	9,984	11,858	2,659	493	1
120											
	II. DEPRECIATION EXPENSE										
121	Structures and Improvements	403	-	NCP_at_Pri	-	-	-	-	-	-	-
122	Station Equipment	403	5,698	NCP_at_Pri	2,781	555	938	1,125	253	45	-
123	Poles, Towers and Fixtures	403	1	NCP_at_Pri	0	0	0	0	0	0	-
124	OH Conductors and Devices	403	26	NCP_at_Pri	13	3	4	5	1	0	-
125	UG Conduit	403	13,215	NCP_at_Pri	6,450	1,288	2,175	2,609	586	105	-
126	UG Conductors & Devices	403	220	NCP_at_Pri	107	21	36	43	10	2	-
127	Line Transformers	403	-	None	-	-	-	-	-	-	-
128	Services	403	-	None	-	-	-	-	-	-	-
129	Meters	403	-	None	-	-	-	-	-	-	-
130	Install on Cust Premises	403	-	None	-	-	-	-	-	-	-
131	Street Light & Signal	403	-	None	-	-	-	-	-	-	-
132	General Plant	403	-	None	-	-	-	-	-	-	-
133	Net Additions / Retirements	407300	2,323	PriD-Lab	-	-	-	-	-	-	-
134	Depreciation Expense	403	21,483	PriD-PT	1,134	226	382	459	103	19	0
135					10,486	2,094	3,537	4,242	953	171	0
136											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Primary Demand

PrimDem
Sch. HSG-1F-2
CAI
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Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
137	III. TAXES and OTHER										
138	A. GENERAL TAXES										
139	Municipal property tax	408140	18,068	PriD-NetPt	8,819	1,761	2,974	3,568	802	144	0
140	Payroll related	408110	1,727	PriD-Lab	842	168	284	342	77	14	0
141	Other tax, Reg deferrals	408170	466	RateBase	258	48	75	66	14	5	0
142	General Taxes		20,261		9,919	1,977	3,334	3,975	892	163	0
143											
144	B. FEDERAL / STATE INCOME TAXES										
145	Income Tax Exp		4,969	PriD-Pretax	3,567	706	668	(372)	(289)	623	66
146	Income Taxes	409-411	4,969		3,567	706	668	(372)	(289)	623	66
147	Total Taxes	408-411	25,230		13,487	2,683	4,002	3,603	603	787	66
148											
149	Interest on Customer deposits		-	None	-	-	-	-	-	-	-
150	TOTAL EXPENSES		107,412		53,749	10,704	17,522	19,703	4,215	1,451	67
151											
152	IV. OPERATING REVENUES at Present Rates										
153	Distribution charge revenue		123,868	Total_Del_Rev	66,108	13,148	19,663	17,825	3,013	3,794	317
154	Forfeited discounts		-	None	-	-	-	-	-	-	-
155	Rent from Utility Property		1,369	NCP_at_Pri	668	133	225	270	61	11	-
156	Misc Service Revenue		-	Total_Del_Rev	-	-	-	-	-	-	-
157	Other revenue		272	Total_Del_Rev	145	29	43	39	7	8	1
158	CIAC / Cost Recovery		738	PriD-OpExp	362	72	121	144	32	6	0
159	MI Revenue		65	Total_Del_Rev	35	7	10	9	2	2	0
160	Operating Revenues		126,312		67,318	13,389	20,063	18,288	3,114	3,821	318
161											
162	TOTAL EXPENSES		107,412		53,749	10,704	17,522	19,703	4,215	1,451	67
163	V. NET INCOME at Present Rat		18,900		13,568	2,685	2,541	(1,415)	(1,101)	2,371	250
164											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Primary Demand

PrimDem
Sch. HSG-1F-2
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
165	SUMMARY REPORT										
166	Utility Revenues	440-446	123,868		66,108	13,148	19,663	17,825	3,013	3,794	317
167	Other Operating Revenues	450-456	2,444		1,210	241	400	463	101	27	1
168	Total Operating Revenues		126,312		67,318	13,389	20,063	18,288	3,114	3,821	318
169											
170	Distribution / Transmission	580-599	22,704		11,076	2,212	3,738	4,488	1,008	181	0
171	Customer Acctg & Service	901-919	0		0	0	0	0	0	0	0
172	Admin & General	920-932	37,995		18,701	3,715	6,245	7,370	1,651	312	1
173	Total Operating Expenses		60,699		29,777	5,927	9,984	11,858	2,659	493	1
174											
175	Depreciation Expense	403	21,483		10,486	2,094	3,537	4,242	953	171	0
176	Taxes Other Than Inc / Other	408	20,261		9,919	1,977	3,334	3,975	892	163	0
177	Income before Income tax		23,869		17,136	3,391	3,209	(1,787)	(1,390)	2,994	316
178	Income Taxes	409-411	4,969		3,567	706	668	(372)	(289)	623	66
179	NET INCOME		18,900		13,568	2,685	2,541	(1,415)	(1,101)	2,371	250
180											
181	RATE BASE		449,280		219,514	43,810	73,947	88,527	19,886	3,594	1
182	Return on Rate Base		4.21%								
183											
184	REVENUE REQUIREMENTS										
185	Target Rate of Return		7.4300%		7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%
186	Rate Base		449,280		219,514	43,810	73,947	88,527	19,886	3,594	1
187											
188	Operating expenses		60,699		29,777	5,927	9,984	11,858	2,659	493	1
189	Uncollectibles- Delivery		2,133	Total_RevReq	1,204	231	319	267	56	55	1
190	Depreciation expense		21,483		10,486	2,094	3,537	4,242	953	171	0
191	General taxes / Other		20,261		9,919	1,977	3,334	3,975	892	163	0
192	Subtotal- Operating Costs to recv		104,576		51,386	10,229	17,173	20,342	4,561	882	2
193											
194	Target Return on Rate Base- Aftu		33,382		16,310	3,255	5,494	6,578	1,478	267	0
195	Income taxes to recover		13,102	PrID-RB 39.25%	6,401	1,278	2,156	2,582	580	105	0
196											
197	Subtotal- Rev Req before GRT		151,059		74,097	14,762	24,824	29,501	6,618	1,254	2
198	GRT needed		0	0.00%	0	0	0	0	0	0	0
199	TOTAL REVENUE REQ.		151,059		74,097	14,762	24,824	29,501	6,618	1,254	2

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Demand

ScenDem
Sch. HSG-1F-3
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	I. ELECTRIC PLANT IN SERVICE										
2	A. HYDRO PRODUCTION PLANT										
3	Production Plant	302		None							
4	Hydro Production Plant										
5											
6	C. TRANSMISSION PLANT										
7	Transmission Plant	361		None							
8	Transmission Plant	350-359									
9											
10	D. DISTRIBUTION PLANT										
11	Land and Land Rights	360		None							
12	Structures and Improvements	361		None							
13	Station Equipment	362		None							
14	Poles, Towers and Fixtures	364	117,522	NCP_at_Sec	75,976	15,172	25,133			1,241	
15	OH Conductors and Devices	365	105,627	NCP_at_Sec	68,285	13,637	22,589			1,116	
16	UG Conduit	366	12,103	NCP_at_Sec	7,825	1,563	2,588			128	
17	UG Conductors & Devices	367	19,668	NCP_at_Sec	12,715	2,539	4,206			208	
18	Line Transformers	368	189,828	Xfmr_Cost	90,559	19,824	41,822	34,688	2,935		
19	Services	369		None							
20	Meters	370		None							
21	Install on Cust Premises	371		None							
22	Street Light & Signal	373		None							
23	Electric Plant ARO	374		None							
24	Distribution Plant	360-373	444,749		255,360	52,735	96,339	34,688	2,935	2,693	
25											
26	E. GENERAL PLANT										
27	Land and Land Rights	389		None							
28	General Plant	390	10,986	SecD-Lab	7,016	1,405	2,349	94	11	112	0
29	General Plant	389-399	10,986		7,016	1,405	2,349	94	11	112	0
30											
31	TOTAL UTILITY PLANT		455,735		262,375	54,140	98,687	34,782	2,946	2,804	0
32											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Demand

SecnDem
Sch. HSG-1F-3
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
II. DEPRECIATION RESERVE											
33	Production Plant	108.3	-	None	-	-	-	-	-	-	-
34	Structures and Improvements	108.5	-	None	-	-	-	-	-	-	-
36	Station Equipment	108.5	-	None	-	-	-	-	-	-	-
37	Poles, Towers and Fixtures	108.5	53,113	NCP_at_Sec	34,337	6,857	11,359	-	-	561	-
38	OH Conductors and Devices	108.5	43,722	NCP_at_Sec	28,265	5,645	9,350	-	-	462	-
39	UG Conduit	108.5	5,705	NCP_at_Sec	3,688	737	1,220	-	-	60	-
40	UG Conductors & Devices	108.5	7,629	NCP_at_Sec	4,932	985	1,631	-	-	81	-
41	Line Transformers	108.5	117,426	Xfmr_Cost	56,019	12,263	25,870	21,458	1,816	-	-
42	Services	108.5	-	None	-	-	-	-	-	-	-
43	Meters	108.5	-	None	-	-	-	-	-	-	-
44	Install on Cust Premises	108.5	-	None	-	-	-	-	-	-	-
45	Street Light & Signal	108.5	-	None	-	-	-	-	-	-	-
46	General Plant	108.5	3,378	SecD-Lab	2,157	432	722	29	3	34	0
47	Net Additions / Retirements	108.6	10,939	SecD-PT	6,298	1,299	2,369	835	71	67	0
48	Depreciation Reserve	108	241,912		135,696	28,217	52,522	22,321	1,890	1,265	0
49											
III. OTHER RATE BASE ITEMS											
50	Property Held for Future Use		751	SecD-PT	432	89	163	57	5	5	0
52	Unamortized Debt costs		1,349	RateBase	747	139	216	191	40	15	0
53	Materials and Supp / Prepay		771	SecD-OpExp	485	97	164	15	2	8	0
54	Injuries & Damages Reserve		-	SecD-PT	-	-	-	-	-	-	-
55	Cash Working Capital		4,216	SecD-OpExp	2,653	532	895	85	11	41	0
56	Accumulated Deferred FIT		(45,590)	SecD-NetPT	(27,010)	(5,527)	(9,843)	(2,657)	(225)	(328)	(0)
57	Customer Deposits		-	None	-	-	-	-	-	-	-
58	Net Additions / Retirements	131-283	22,714	SecD-NetPT	13,457	2,754	4,904	1,324	112	163	0
59	Other Rate Base		(15,789)		(9,236)	(1,917)	(3,501)	(985)	(55)	(96)	1
60											
61	TOTAL RATE BASE		198,034		117,444	24,005	42,664	11,476	1,001	1,443	1
62											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Demand

SecDem
Sch. HSG-1F-3
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
I. OPERATING AND MAINTENANCE EXPENSES											
B. TRANSMISSION EXPENSE											
63	Transmission Expense		-	None	-	-	-	-	-	-	-
64	Transmission Expense		-		-	-	-	-	-	-	-
C. DISTRIBUTION EXPENSE											
65	Purchased Power- Borderline	555	-	None	-	-	-	-	-	-	-
66	Dist Oper-Supervision & Eng	580	652	SecD-Lab	416	83	139	6	1	7	0
67	Dist Oper-Load Dispatching	581	-	None	-	-	-	-	-	-	-
68	Dist Oper-Substations	582	-	None	-	-	-	-	-	-	-
69	Dist Oper-Overhead Lines	583	1,095	NCP_at_Sec	708	141	234	-	-	12	-
70	Dist Oper-Underground Lines	584	42	NCP_at_Sec	27	5	9	-	-	0	-
71	Dist Oper-Outdoor Lighting	585	-	None	-	-	-	-	-	-	-
72	Dist Oper-Electric Meters	586	-	None	-	-	-	-	-	-	-
73	Dist Oper-Cust Install	587	50	MWh-Meter	20	4	9	13	3	0	0
74	Dist Oper-Misc Expenses	588	2,024	SecD-Lab	1,292	259	433	17	2	21	0
75	Dist Oper-Rents	589	89	SecD-PT	51	11	19	7	1	1	0
76	Dist Maint-Supervision & Eng	590	284	SecD-Lab	182	36	61	2	0	3	0
77	Dist Maint-Structures	591	-	None	-	-	-	-	-	-	-
78	Dist Maint-Substations	592	-	None	-	-	-	-	-	-	-
79	Dist Maint-Overhead Lines	593	8,116	NCP_at_Sec	5,247	1,048	1,736	-	-	86	-
80	Dist Maint-Underground Lines	594	268	NCP_at_Sec	173	35	57	-	-	3	-
81	Dist Maint-Line Transformers	595	392	Xfmr_Cost	187	41	86	72	6	-	-
82	Dist Maint-Outdoor Lighting	596	-	None	-	-	-	-	-	-	-
83	Dist Maint-Electric Meters	597	-	None	-	-	-	-	-	-	-
84	Oper. & Maint. Exp.	500-599	13,012		8,304	1,663	2,783	117	13	132	0
85			13,012		8,304	1,663	2,783	117	13	132	0
D. CUSTOMER ACCOUNTS AND SERVICE											
86	Supervision	901	-	None	-	-	-	-	-	-	-
87	Meter Reading Exp- Comp	902	-	None	-	-	-	-	-	-	-
88	Cust Rees & Coll	903	-	None	-	-	-	-	-	-	-
89	Uncollectible- Delivery	904	-	None	-	-	-	-	-	-	-
90	Misc Cust Acct	905	-	None	-	-	-	-	-	-	-
91	Customer Accts. Exp.	901-905	-		-	-	-	-	-	-	-
92	Cust Service-Supervision	907	-	None	-	-	-	-	-	-	-
93	Cust Assistance Expenses	908	-	None	-	-	-	-	-	-	-
94	Info&Instruct Advertising Exp	9090	-	None	-	-	-	-	-	-	-
95	Cust Service-Misc Expenses	910	-	None	-	-	-	-	-	-	-
96	Demo & Selling Expenses	912	-	None	-	-	-	-	-	-	-
97	Sales-Misc Expenses	916	-	None	-	-	-	-	-	-	-
98	Customer Serv. Exp.		-		-	-	-	-	-	-	-
99	Customer Accts. & Serv. Exp.	901-919	-		-	-	-	-	-	-	-

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Demand

SecnDem
Sch. HSG-1F-3
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
106	E. ADMINISTRATIVE AND GENERAL											
107	A&G-Salaries	920	4,328	SecD-Lab	2,764	553	925	37	4	44	0	
108	A&G-Office Supplies	921	1,472	SecD-Lab	940	188	315	13	1	15	0	
109	A&G-Outside Services	923	1,258	SecD-Lab	803	161	269	11	1	13	0	
110	Property Insurance	924	2,471	SecD-PT	1,423	294	535	189	16	15	0	
111	Injuries & Damages Insurance	925	1,041	SecD-PT	599	124	225	79	7	6	0	
112	Employee Pensions & Benefits	926	5,688	SecD-Lab	3,632	727	1,216	49	6	58	0	
113	Regulatory Comm Expenses	928	1,120	RateBase	620	115	180	159	34	13	0	
114	A&G-Misc Expenses	930200	1	MW/h-Gen	0	0	0	0	0	0	0	
115	A&G-Rents	931	3,753	SecD-Lab	2,397	480	802	32	4	38	0	
116	A&G Maint-Gen Plant-Elec	935	46	SecD-Lab	30	6	10	0	0	0	0	
117	Admin & Genl. Exp.	920-932	21,179		13,209	2,648	4,477	568	73	203	1	
118	Total Operating Expenses		34,191		21,512	4,311	7,261	686	86	334	1	
120	II. DEPRECIATION EXPENSE											
121	Structures and Improvements	403	-	None	-	-	-	-	-	-	-	
122	Station Equipment	403	-	None	-	-	-	-	-	-	-	
123	Poles, Towers and Fixtures	403	1	NCP_at_Sec	1	0	0	-	-	0	-	
124	OH Conductors and Devices	403	15	NCP_at_Sec	10	2	3	-	-	0	-	
125	UG Conduit	403	3,085	NCP_at_Sec	1,994	398	660	-	-	33	-	
126	UG Conductors & Devices	403	35	NCP_at_Sec	23	5	8	-	-	0	-	
127	Line Transformers	403	7,052	Xfmr_Cost	3,364	736	1,554	1,289	109	-	-	
128	Services	403	-	None	-	-	-	-	-	-	-	
129	Meters	403	-	None	-	-	-	-	-	-	-	
130	Install on Cust Premises	403	-	None	-	-	-	-	-	-	-	
131	Street Light & Signal	403	-	None	-	-	-	-	-	-	-	
132	General Plant	403	-	SecD-Lab	-	-	-	-	-	-	-	
133	Net Additions / Retirements	407300	1,378	SecD-PT	794	164	298	105	9	8	0	
134	Depreciation Expense	403	11,567		6,185	1,305	2,523	1,394	118	42	0	
135												
136												

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Demand

SecmDem
Sch. HSG-1F-3
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
III. TAXES and OTHER											
A. GENERAL TAXES											
137	Municipal property tax	408140	7,911	SecD-NetPt	4,687	959	1,708	461	39	57	0
140	Payroll related	408110	967	SecD-Lab	618	124	207	8	1	10	0
141	Other tax, Reg deferrals	408170	206	RateBase	114	21	33	29	6	2	0
142	General Taxes		9,084		5,419	1,104	1,948	498	46	69	0
143											
B. FEDERAL / STATE INCOME TAXES											
144	Income Tax Exp		2,581	SecD-Pretax	618	95	(199)	1,424	279	328	35
145	Income Taxes	409-411	2,581		618	95	(199)	1,424	279	328	35
146	Total Taxes	408-411	11,666		6,037	1,199	1,749	1,923	326	397	35
147											
148											
149	Interest on Customer deposits		-	None	-	-	-	-	-	-	-
150	TOTAL EXPENSES		57,423		33,735	6,815	11,532	4,002	529	774	36
151											
IV. OPERATING REVENUES at Present Rates											
152	Distribution charge revenue		65,223	Total_Del_Rev	34,809	6,923	10,354	9,386	1,587	1,998	167
153	Forfeited discounts		-	None	-	-	-	-	-	-	-
154	Rent from Utility Property		1,425	NCP_at_Sec	921	184	305	-	-	15	-
155	Misc Service Revenue		-	Total_Del_Rev	-	-	-	-	-	-	-
156	Other revenue		143	Total_Del_Rev	76	15	23	21	3	4	0
157	CIAC / Cost Recovery		416	SecD-OpExp	261	52	88	8	1	4	0
158	MI Revenue		35	Total_Del_Rev	19	4	6	5	1	1	0
159	Operating Revenues		67,242		36,087	7,178	10,775	9,420	1,592	2,022	167
160											
161											
162	TOTAL EXPENSES		57,423		33,735	6,815	11,532	4,002	529	774	36
163	V. NET INCOME at Present Rat		9,818		2,352	363	(757)	5,418	1,063	1,249	132
164											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Demand

ScenDem
Sch. HSG-1F-3
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
165	SUMMARY REPORT											
166	Utility Revenues	440-446	65,223		34,809	6,923	10,354	9,386	1,587	1,998	167	
167	Other Operating Revenues	450-456	2,019		1,278	255	421	34	5	25	0	
168	Total Operating Revenues		67,242		36,087	7,178	10,775	9,420	1,592	2,022	167	
169												
170	Distribution / Transmission	580-599	13,012		8,304	1,663	2,783	117	13	132	0	
171	Customer Acctg & Service	901-919	0		0	0	0	0	0	0	0	
172	Admin & General	920-932	21,179		13,209	2,648	4,477	568	73	203	1	
173	Total Operating Expenses		34,191		21,512	4,311	7,261	686	86	334	1	
174												
175	Depreciation Expense	403	11,567		6,185	1,305	2,523	1,394	118	42	0	
176	Taxes Other Than Inc / Other	408	9,084		5,419	1,104	1,948	498	46	69	0	
177	Income before Income tax		12,400		2,971	458	(957)	6,842	1,342	1,577	166	
178	Income Taxes	409-411	2,581		618	95	(199)	1,424	279	328	35	
179	NET INCOME		9,818		2,352	363	(757)	5,418	1,063	1,249	132	
180												
181	RATE BASE		198,034		117,444	24,005	42,664	11,476	1,001	1,443	1	
182	Return on Rate Base		4.96%									
183												
184	REVENUE REQUIREMENTS											
185	Target Rate of Return		7.4300%		7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	
186	Rate Base		198,034		117,444	24,005	42,664	11,476	1,001	1,443	1	
187												
188	Operating expenses		34,191		21,512	4,311	7,261	686	86	334	1	
189	Uncollectibles- Delivery		1,141		644	124	171	143	30	29	0	
190	Depreciation expense		11,567		6,185	1,305	2,523	1,394	118	42	0	
191	General taxes / Other		9,084		5,419	1,104	1,948	498	46	69	0	
192	Subtotal- Operating Costs to recv		55,983		33,761	6,844	11,902	2,721	280	474	2	
193												
194	Target Return on Rate Base- Aftu		14,714		8,726	1,784	3,170	853	74	107	0	
195	Income taxes to recover		5,775	SecD-RB	3,425	700	1,244	335	29	42	0	
196				39.25%								
197	Subtotal- Rev Req before GRT		76,472		45,912	9,328	16,316	3,908	383	624	2	
198	GRT needed		-	0.00%	0	0	0	0	0	0	0	
199	TOTAL REVENUE REQ.		76,472		45,912	9,328	16,316	3,908	383	624	2	

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Customer

SeenCus
Sch. HSG-1F-4
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	I. ELECTRIC PLANT IN SERVICE										
2	A. HYDRO PRODUCTION PLANT										
3	Production Plant	302	-	None	-	-	-	-	-	-	-
4	Hydro Production Plant		-		-	-	-	-	-	-	-
5											
6	C. TRANSMISSION PLANT										
7	Transmission Plant	361	-	None	-	-	-	-	-	-	-
8	Transmission Plant	350-359	-		-	-	-	-	-	-	-
9											
10	D. DISTRIBUTION PLANT										
11	Land and Land Rights	360	-	None	-	-	-	-	-	-	-
12	Structures and Improvements	361	-	None	-	-	-	-	-	-	-
13	Station Equipment	362	-	None	-	-	-	-	-	-	-
14	Poles, Towers and Fixtures	364	-	None	-	-	-	-	-	-	-
15	OH Conductors and Devices	365	-	None	-	-	-	-	-	-	-
16	UG Conduit	366	-	None	-	-	-	-	-	-	-
17	UG Conductors & Devices	367	-	None	-	-	-	-	-	-	-
18	Line Transformers	368	-	Xfmr_Cost	-	-	-	-	-	-	-
19	Services	369	107,009	Services_Cost	95,006	10,647	1,328	27	0	-	-
20	Meters	370	-	None	-	-	-	-	-	-	-
21	Install on Cust Premises	371	-	None	-	-	-	-	-	-	-
22	Street Light & Signal	373	39,684	Lighting	-	-	-	-	-	39,684	-
23	Electric Plant ARO	374	-	None	-	-	-	-	-	-	-
24	Distribution Plant	360-373	146,693		95,006	10,647	1,328	27	0	39,684	-
25											
26	E. GENERAL PLANT										
27	Land and Land Rights	389	-	Sec-C-Lab	-	-	-	-	-	-	-
28	General Plant	390	1,757	Sec-C-Lab	0	0	0	0	0	1,757	0
29	General Plant	389-399	1,757		0	0	0	0	0	1,757	0
30											
31	TOTAL UTILITY PLANT		148,450		95,006	10,647	1,328	27	0	41,441	0
32											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Customer

SecnCus
Sch. HSG-1F-4
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
II. DEPRECIATION RESERVE												
33	Production Plant	108.3	-	None	-	-	-	-	-	-	-	
34	Structures and Improvements	108.5	-	None	-	-	-	-	-	-	-	
35	Station Equipment	108.5	-	None	-	-	-	-	-	-	-	
36	Poles, Towers and Fixtures	108.5	-	None	-	-	-	-	-	-	-	
37	OH Conductors and Devices	108.5	-	None	-	-	-	-	-	-	-	
38	UG Conduit	108.5	-	None	-	-	-	-	-	-	-	
39	UG Conductors & Devices	108.5	-	None	-	-	-	-	-	-	-	
40	Line Transformers	108.5	-	Xfmr_Cost	-	-	-	-	-	-	-	
41	Services	108.5	41,311	Services_Cost	36,677	4,110	513	11	0	0	-	
42	Meters	108.5	-	None	-	-	-	-	-	-	-	
43	Install on Cust Premises	108.5	-	None	-	-	-	-	-	-	-	
44	Street Light & Signal	108.5	37,190	Lighting	-	-	-	-	-	37,190	-	
45	General Plant	108.5	540	SecC-Lab	0	0	0	0	0	540	0	
46	Net Additions / Retirements	108.6	3,563	SecC-PT	2,280	256	32	1	0	995	0	
47	Depreciation Reserve	108	82,604		38,958	4,366	545	11	0	38,725	0	
48												
49												
III. OTHER RATE BASE ITEMS												
50	Property Held for Future Use		245	SecC-PT	157	18	2	0	0	68	0	
51	Unamortized Debt costs		411	RateBase	227	42	66	58	12	5	0	
52	Materials and Supp / Prepay		132	SecC-OpExp	21	3	1	1	0	106	0	
53	Injuries & Damages Reserve		-	SecC-PT	-	-	-	-	-	-	-	
54	Cash Working Capital		723	SecC-OpExp	116	15	8	6	1	578	0	
55	Accumulated Deferred FIT		(14,039)	SecC-NetPT	(11,950)	(1,339)	(167)	(3)	(0)	(579)	(0)	
56	Customer Deposits		-	None	-	-	-	-	-	-	-	
57	Net Additions / Retirements	131-283	6,995	SecC-NetPT	5,954	667	83	2	0	288	0	
58	Other Rate Base		(5,533)		(5,475)	(595)	(6)	64	14	466	0	
59												
60												
61	TOTAL RATE BASE		60,312		50,573	5,686	777	80	14	3,181	0	
62												

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Customer

ScenCus
Sch. HSG-1F-4
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
63	I. OPERATING AND MAINTENANCE EXPENSES										
64	B. TRANSMISSION EXPENSE										
65	Transmission Expense		-	None	-	-	-	-	-	-	-
66	Transmission Expense		-		-	-	-	-	-	-	-
67											
68	C. DISTRIBUTION EXPENSE										
69	Purchased Power- Borderline	555	-	None	-	-	-	-	-	-	-
70	Dist Oper-Supervision & Eng	580	104	SecC-Lab	0	0	0	0	0	104	0
71	Dist Oper-Load Dispatching	581	-	None	-	-	-	-	-	-	-
72	Dist Oper-Substations	582	-	None	-	-	-	-	-	-	-
73	Dist Oper-Overhead Lines	583	-	None	-	-	-	-	-	-	-
74	Dist Oper-Underground Lines	584	-	None	-	-	-	-	-	-	-
75	Dist Oper-Outdoor Lighting	585	318	Lighting	-	-	-	-	-	318	-
76	Dist Oper-Electric Meters	586	-	None	-	-	-	-	-	-	-
77	Dist Oper-Cust Install	587	-	None	-	-	-	-	-	-	-
78	Dist Oper-Misc Expenses	588	324	SecC-Lab	0	0	0	0	0	324	0
79	Dist Oper-Rents	589	29	SecC-PT	19	2	0	0	0	8	0
80	Dist Maint-Supervision & Eng	590	45	SecC-Lab	0	0	0	0	0	45	0
81	Dist Maint-Structures	591	-	None	-	-	-	-	-	-	-
82	Dist Maint-Substations	592	-	None	-	-	-	-	-	-	-
83	Dist Maint-Overhead Lines	593	-	None	-	-	-	-	-	-	-
84	Dist Maint-Underground Lines	594	-	None	-	-	-	-	-	-	-
85	Dist Maint-Line Transformers	595	-	Xfmr_Cost	-	-	-	-	-	-	-
86	Dist Maint-Outdoor Lighting	596	916	Lighting	-	-	-	-	-	916	-
87	Dist Maint-Electric Meters	597	-	None	-	-	-	-	-	-	-
88	Oper. & Maint. Exp.	500-599	1,736		19	2	0	0	0	1,715	0
89			1,736		19	2	0	0	0	1,715	0
90	D. CUSTOMER ACCOUNTS AND SERVICE										
91	Supervision	901	-	None	-	-	-	-	-	-	-
92	Meter Reading Exp- Comp	902	-	None	-	-	-	-	-	-	-
93	Cust Rees & Coll	903	-	None	-	-	-	-	-	-	-
94	Uncollectible- Delivery	904	-	None	-	-	-	-	-	-	-
95	Misc Cust Acct	905	-	None	-	-	-	-	-	-	-
96	Customer Accts. Exp.	901-905	-		-	-	-	-	-	-	-
97											
98	Cust Service-Supervision	907	-	None	-	-	-	-	-	-	-
99	Cust Assistance Expenses	908	-	None	-	-	-	-	-	-	-
100	Info&Instruct Advertising Exp	9090	-	None	-	-	-	-	-	-	-
101	Cust Service-Misc Expenses	910	-	None	-	-	-	-	-	-	-
102	Demo & Selling Expenses	912	-	None	-	-	-	-	-	-	-
103	Sales-Misc Expenses	916	-	None	-	-	-	-	-	-	-
104	Customer Serv. Exp.		-		-	-	-	-	-	-	-
105	Customer Accts. & Serv. Exp.	901-919	-		-	-	-	-	-	-	-

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Customer

SecnCus
Sch. HSG-1F-4
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
106	E. ADMINISTRATIVE AND GENERAL											
107	A&G-Salaries	920	692	SecC-Lab	0	0	0	0	0	692	0	
108	A&G-Office Supplies	921	235	SecC-Lab	0	0	0	0	0	235	0	
109	A&G-Outside Services	923	201	SecC-Lab	0	0	0	0	0	201	0	
110	Property Insurance	924	805	SecC-PT	515	58	7	0	0	225	0	
111	Injuries & Damages Insurance	925	339	SecC-PT	217	24	3	0	0	95	0	
112	Employee Pensions & Benefits	926	910	SecC-Lab	0	0	0	0	0	910	0	
113	Regulatory Comm Expenses	928	341	RateBase	189	35	55	48	10	4	0	
114	A&G-Misc Expenses	930200	0	MWh-Gen	0	0	0	0	0	0	0	
115	A&G-Rents	931	600	SecC-Lab	0	0	0	0	0	600	0	
116	A&G Maint-Gen Plant-Elec	935	7	SecC-Lab	0	0	0	0	0	7	0	
117	Admin & Genl. Exp.	920-932	4,131		921	117	65	49	10	2,969	0	
118	Total Operating Expenses		5,867		940	119	65	49	10	4,684	0	
120	II. DEPRECIATION EXPENSE											
121	Structures and Improvements	403	-	None	-	-	-	-	-	-	-	
122	Station Equipment	403	-	None	-	-	-	-	-	-	-	
123	Poles, Towers and Fixtures	403	-	None	-	-	-	-	-	-	-	
124	OH Conductors and Devices	403	-	None	-	-	-	-	-	-	-	
125	UG Conduit	403	-	None	-	-	-	-	-	-	-	
126	UG Conductors & Devices	403	-	None	-	-	-	-	-	-	-	
127	Line Transformers	403	-	Xfmr_Cost	-	-	-	-	-	-	-	
128	Services	403	10,572	Services_Cost	9,386	1,052	131	3	0	-	-	
129	Meters	403	-	None	-	-	-	-	-	-	-	
130	Install on Cust Premises	403	-	None	-	-	-	-	-	-	-	
131	Street Light & Signal	403	476	Lighting	-	-	-	-	-	476	-	
132	General Plant	403	-	SecC-Lab	-	-	-	-	-	-	-	
133	Net Additions / Retirements	407300	449	SecC-PT	287	32	4	0	0	125	0	
134	Depreciation Expense	403	11,497		9,673	1,084	135	3	0	601	0	
135												

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Customer

SecnCus
Sch. HSG-1F-4
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
III. TAXES and OTHER											
A. GENERAL TAXES											
137	Municipal property tax	408140	2,436	SecC-NetPt	2,074	232	29	1	0	0	0
140	Payroll related	408110	155	SecC-Lab	0	0	0	0	0	0	0
141	Other tax, Reg deferrals	408170	63	RateBase	35	6	10	9	2	1	0
142	General Taxes		2,653		2,108	239	39	9	2	256	0
143											
B. FEDERAL / STATE INCOME TAXES											
144	Income Tax Exp		282	SecC-Pretax	(279)	171	654	626	105	(1,006)	11
145	Income Taxes	409-411	282		(279)	171	654	626	105	(1,006)	11
146	Total Taxes	408-411	2,936		1,829	410	693	635	107	(750)	11
147											
148											
149	Interest on Customer deposits		-	None	-	-	-	-	-	-	-
150	TOTAL EXPENSES		20,300		12,442	1,613	894	687	118	4,535	11
151											
IV. OPERATING REVENUES at Present Rates											
152	Distribution charge revenue		21,245	Total_Del_Rev	11,339	2,255	3,373	3,057	517	651	54
153	Forfeited discounts		-	None	-	-	-	-	-	-	-
154	Rent from Utility Property		-	None	-	-	-	-	-	-	-
155	Misc Service Revenue		-	Total_Del_Rev	-	-	-	-	-	-	-
156	Other revenue		47	Total_Del_Rev	25	5	7	7	1	1	0
157	CIAC / Cost Recovery		71	SecC-OpExp	11	1	1	1	0	57	0
158	MI Revenue		11	Total_Del_Rev	6	1	2	2	0	0	0
159	Operating Revenues		21,374		11,381	2,263	3,382	3,066	518	709	54
160											
161											
162	TOTAL EXPENSES		20,300		12,442	1,613	894	687	118	4,535	11
163	V. NET INCOME at Present Rat		1,074		(1,062)	650	2,489	2,380	401	(3,826)	43
164											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Secondary Customer

SeenCus
Sch. HSG-1F-4
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
165	SUMMARY REPORT										
166	Utility Revenues	440-446	21,245		11,339	2,255	3,373	3,057	517	651	54
167	Other Operating Revenues	450-456	129		42	8	10	9	2	59	0
168	Total Operating Revenues		21,374		11,381	2,263	3,382	3,066	518	709	54
169											
170	Distribution / Transmission	580-599	1,736		19	2	0	0	0	1,715	0
171	Customer Acctg & Service	901-919	0		0	0	0	0	0	0	0
172	Admin & General	920-932	4,131		921	117	65	49	10	2,969	0
173	Total Operating Expenses		5,867		940	119	65	49	10	4,684	0
174											
175	Depreciation Expense	403	11,497		9,673	1,084	135	3	0	601	0
176	Taxes Other Than Inc / Other	408	2,653		2,108	239	39	9	2	256	0
177	Income before Income tax		1,356		(1,341)	820	3,143	3,005	506	(4,832)	54
178	Income Taxes	409-411	282		(279)	171	654	626	105	(1,006)	11
179	NET INCOME		1,074		(1,062)	650	2,489	2,380	401	(3,826)	43
180											
181	RATE BASE		60,312		50,573	5,686	777	80	14	3,181	0
182	Return on Rate Base		1.78%								
183											
184	REVENUE REQUIREMENTS										
185	Target Rate of Return		7.4300%		7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%
186	Rate Base		60,312		50,573	5,686	777	80	14	3,181	0
187											
188	Operating expenses		5,867		940	119	65	49	10	4,684	0
189	Uncollectibles- Delivery		348		196	38	52	43	9	9	0
190	Depreciation expense		11,497		9,673	1,084	135	3	0	601	0
191	General taxes / Other		2,653		2,108	239	39	9	2	256	0
192	Subtotal- Operating Costs to recv		20,365		12,918	1,480	291	104	21	5,550	0
193											
194	Target Return on Rate Base- Aft		4,481		3,758	422	58	6	1	236	0
195	Income taxes to recover		1,759		1,475	166	23	2	0	93	0
196											
197	Subtotal- Rev Req before GRT		26,605		18,150	2,068	372	113	23	5,879	0
198	GRT needed		-		0	0	0	0	0	0	0
199	TOTAL REVENUE REQ.		26,605		18,150	2,068	372	113	23	5,879	0

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Billing Customer

BillCus
Sch. HSG-1F-5
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	I. ELECTRIC PLANT IN SERVICE										
2	A. HYDRO PRODUCTION PLANT										
3	Production Plant	302	-	None	-	-	-	-	-	-	-
4	Hydro Production Plant		-		-	-	-	-	-	-	-
5											
6	C. TRANSMISSION PLANT										
7	Transmission Plant	361	-	None	-	-	-	-	-	-	-
8	Transmission Plant	350-359	-		-	-	-	-	-	-	-
9											
10	D. DISTRIBUTION PLANT										
11	Land and Land Rights	360	-	None	-	-	-	-	-	-	-
12	Structures and Improvements	361	-	None	-	-	-	-	-	-	-
13	Station Equipment	362	-	None	-	-	-	-	-	-	-
14	Poles, Towers and Fixtures	364	-	None	-	-	-	-	-	-	-
15	OH Conductors and Devices	365	-	None	-	-	-	-	-	-	-
16	UG Conduit	366	-	None	-	-	-	-	-	-	-
17	UG Conductors & Devices	367	-	None	-	-	-	-	-	-	-
18	Line Transformers	368	-	None	-	-	-	-	-	-	-
19	Services	369	-	None	-	-	-	-	-	-	-
20	Meters	370	57,072	Meter Cost	32,234	16,965	6,034	1,825	7	-	7
21	Install on Cust Premises	371	120	Customers	104	12	2	0	0	1	0
22	Street Light & Signal	373	-	None	-	-	-	-	-	-	-
23	Electric Plant ARO	374	-	None	-	-	-	-	-	-	-
24	Distribution Plant	360-373	57,192		32,339	16,977	6,036	1,825	7	1	7
25											
26	E. GENERAL PLANT										
27	Land and Land Rights	389	-	Bill-Lab	-	-	-	-	-	-	-
28	General Plant	390	10,307	Bill-Lab	7,951	1,607	530	137	18	65	0
29	General Plant	389-399	10,307		7,951	1,607	530	137	18	65	0
30											
31	TOTAL UTILITY PLANT		67,499		40,289	18,585	6,566	1,962	25	66	7
32											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Billing Customer

BillCus
Sch. HSG-1F-5
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
II. DEPRECIATION RESERVE												
33	Production Plant	108.3	-	None	-	-	-	-	-	-	-	
34	Structures and Improvements	108.5	-	None	-	-	-	-	-	-	-	
35	Station Equipment	108.5	-	None	-	-	-	-	-	-	-	
36	Poles, Towers and Fixtures	108.5	-	None	-	-	-	-	-	-	-	
37	OH Conductors and Devices	108.5	-	None	-	-	-	-	-	-	-	
38	UG Conduit	108.5	-	None	-	-	-	-	-	-	-	
39	UG Conductors & Devices	108.5	-	None	-	-	-	-	-	-	-	
40	Line Transformers	108.5	-	None	-	-	-	-	-	-	-	
41	Services	108.5	-	None	-	-	-	-	-	-	-	
42	Meters	108.5	46,003	Meter_Cost	25,983	13,675	4,864	1,471	6	-	5	
43	Install on Cust Premises	108.5	10	Customers	9	1	0	0	0	0	0	
44	Street Light & Signal	108.5	-	None	-	-	-	-	-	-	-	
45	General Plant	108.5	3,170	Bill-Lab	2,445	494	163	42	6	20	0	
46	Net Additions / Retirements	108.6	1,620	Bill-PT	967	446	158	47	1	2	0	
47	Depreciation Reserve	108	50,803		29,403	14,616	5,184	1,560	12	22	6	
48												
49												
III. OTHER RATE BASE ITEMS												
50	Property Held for Future Use		111	Bill-DiPt	63	33	12	4	0	0	0	
51	Unamortized Debt costs		82	RateBase	46	8	13	12	2	1	0	
52	Materials and Supp / Prepay		911	Bill-OpExp	682	125	55	35	7	6	0	
53	Injuries & Damages Reserve		-	Bill-PT	-	-	-	-	-	-	-	
54	Cash Working Capital		4,983	Bill-OpExp	3,731	685	303	190	38	35	2	
55	Accumulated Deferred FIT		(3,560)	Bill-NetPT	(2,321)	(846)	(295)	(86)	(3)	(9)	(0)	
56	Customer Deposits		(8,889)	CustDep	(400)	(3,692)	(3,778)	(1,017)	-	(2)	-	
57	Net Additions / Retirements		1,774	Bill-NetPT	1,156	422	147	43	1	5	0	
58	Other Rate Base	131+283	(4,587)		2,957	(3,265)	(3,543)	(820)	46	35	2	
59												
60												
61	TOTAL RATE BASE		12,109		13,843	704	(2,161)	(418)	60	79	3	
62												

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Billing Customer

BillCus
Sch. HSG-1F-5
CAI
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Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
I. OPERATING AND MAINTENANCE EXPENSES												
63	B. TRANSMISSION EXPENSE											
64	Transmission Expense			None								
65	Transmission Expense											
66	Transmission Expense											
67	Transmission Expense											
C. DISTRIBUTION EXPENSE												
68	Purchased Power- Borderline	555		None								
69	Dist Oper-Supervision & Eng	580	151	Bill-DxLab	85	45	16	5	0		0	
70	Dist Oper-Load Dispatching	581		None								
71	Dist Oper-Substations	582		None								
72	Dist Oper-Substations	583		None								
73	Dist Oper-Overhead Lines	584		None								
74	Dist Oper-Underground Lines	585		None								
75	Dist Oper-Outdoor Lighting	586		None								
76	Dist Oper-Electric Meters	587	1,420	Meter_Cost	802	422	150	45	0		0	
77	Dist Oper-Cust Install	588		None								
78	Dist Oper-Misc Expenses	589	468	Bill-DxLab	264	139	50	15	0		0	
79	Dist Oper-Rents	590	13	Bill-PT	8	4	1	0	0	0	0	
80	Dist Maint-Supervision & Eng	591	66	Bill-DxLab	37	20	7	2	0		0	
81	Dist Maint-Structures	592		None								
82	Dist Maint-Substations	593		None								
83	Dist Maint-Overhead Lines	594		None								
84	Dist Maint-Underground Lines	595		None								
85	Dist Maint-Line Transformers	596		None								
86	Dist Maint-Outdoor Lighting	597		None								
87	Dist Maint-Electric Meters	598	57	Meter_Cost	32	17	6	2	0		0	
88	Oper. & Maint. Exp.	500-599	2,175		1,229	646	230	70	0	0	0	
89	Oper. & Maint. Exp.	500-599	2,175		1,229	646	230	70	0	0	0	
D. CUSTOMER ACCOUNTS AND SERVICE												
90	Supervision	901	707	Acc903	604	69	22	4	2	6	0	
91	Meter Reading Exp- Comp	902	383	Meter_Cost	216	114	40	12	0		0	
92	Cust Rees & Coll	903	12,306	Acc903	10,511	1,192	385	76	35	107	0	
93	Uncollectible- Delivery	904	4,122	Total_DeL_Rev	2,200	438	654	593	100	126	11	
94	Misc Cust Acct	905	920	Customers	798	95	16	2	0	9	0	
95	Customer Accts. Exp.	901-905	18,438		14,329	1,907	1,118	688	137	248	11	
96	Customer Accts. Exp.	901-905	18,438		14,329	1,907	1,118	688	137	248	11	
97	Customer Accts. Exp.	901-905	18,438		14,329	1,907	1,118	688	137	248	11	
98	Cust Service-Supervision	907	62	MWh-Meter	25	5	11	17	4	1	0	
99	Cust Assistance Expenses	908	1,138	MWh-Meter	460	93	201	305	66	10	4	
100	Info&Instrct Advertising Exp	9090	518	MWh-Meter	209	43	92	139	30	4	2	
101	Cust Service-Misc Expenses	910	1,102	MWh-Meter	445	90	195	295	63	9	4	
102	Demo & Selling Expenses	912	287	MWh-Meter	116	24	51	77	17	2	1	
103	Sales-Misc Expenses	916	579	MWh-Meter	234	48	102	155	33	5	2	
104	Customer Serv. Exp.	901-919	3,686		1,489	303	652	987	212	31	12	
105	Customer Accts. & Serv. Exp.	901-919	22,124		15,818	2,210	1,770	1,675	350	280	23	

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Billing Customer

BillCus
Sch. HSG-1F-5
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion	
106	E. ADMINISTRATIVE AND GENERAL											
107	A&G-Salaries	920	4,060	Bill-Lab	3,132	633	209	54	7	26	0	
108	A&G-Office Supplies	921	1,382	Bill-Lab	1,066	215	71	18	2	9	0	
109	A&G-Outside Services	923	1,180	Bill-Lab	910	184	61	16	2	7	0	
110	Property Insurance	924	366	Bill-PT	218	101	36	11	0	0	0	
111	Injuries & Damages Insurance	925	154	Bill-PT	92	42	15	4	0	0	0	
112	Employee Pensions & Benefits	926	5,337	Bill-Lab	4,117	832	274	71	9	34	0	
113	Regulatory Comm Expenses	928	69	RateBase	38	7	11	10	2	1	0	
114	A&G-Misc Expenses	930200	0	MWh-Gen	0	0	0	0	0	0	0	
115	A&G-Rents	931	3,521	Bill-Lab	2,716	549	181	47	6	22	0	
116	A&G Maint-Gen Plant-Elec	935	43	Bill-Lab	34	7	2	1	0	0	0	
117	Admin & Genl. Exp.	920-932	16,112		12,322	2,571	859	231	29	99	1	
118	Total Operating Expenses		40,411		29,369	5,427	2,859	1,975	379	379	24	
119												
120												
121	II. DEPRECIATION EXPENSE											
122	Structures and Improvements	403	-	Bill-PT	-	-	-	-	-	-	-	
123	Station Equipment	403	-	None	-	-	-	-	-	-	-	
124	Poles, Towers and Fixtures	403	-	None	-	-	-	-	-	-	-	
125	OH Conductors and Devices	403	-	None	-	-	-	-	-	-	-	
126	UG Conduit	403	-	None	-	-	-	-	-	-	-	
127	UG Conductors & Devices	403	-	None	-	-	-	-	-	-	-	
128	Line Transformers	403	-	None	-	-	-	-	-	-	-	
129	Services	403	-	None	-	-	-	-	-	-	-	
130	Meters	403	3,223	Meter Cost	1,820	958	341	103	0	-	0	
131	Install on Cust Premises	403	654	Customers	568	67	11	1	0	6	0	
132	Street Light & Signal	403	-	None	-	-	-	-	-	-	-	
133	General Plant	403	-	Bill-Lab	-	-	-	-	-	-	-	
134	Net Additions / Retirements	407300	204	Bill-PT	122	56	20	6	0	0	0	
135	Depreciation Expense	403	4,081		2,510	1,082	372	110	1	7	0	

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Billing Customer

BillCus
Sch. HSG-1F-5
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
137	III. TAXES and OTHER										
138	A. GENERAL TAXES										
139	Municipal property tax	408140	618	Bill-NetPT	403	147	51	15	0	2	0
140	Payroll related	408110	908	Bill-Lab	700	142	47	12	2	6	0
141	Other tax, Reg deferrals	408170	13	RateBase	7	1	2	2	0	0	0
142	General Taxes		1,538		1,110	290	100	29	2	7	0
143											
144	B. FEDERAL / STATE INCOME TAXES										
145	Income Tax Exp		(347)	Bill-Pretax	(1,903)	(440)	755	879	144	200	18
146	Income Taxes	409-411	(347)		(1,903)	(440)	755	879	144	200	18
147	Total Taxes	408-411	1,191		(794)	(151)	855	908	147	207	19
148											
149	Interest on Customer deposits		132	CustDep	6	55	56	15	-	0	-
150	TOTAL EXPENSES		45,815		31,091	6,413	4,142	3,008	526	592	43
151											
152	IV. OPERATING REVENUES at Present Rates										
153	Distribution charge revenue		40,866	Total_Del_Rev	21,810	4,338	6,487	5,881	994	1,252	105
154	Forfeited discounts		1,657	Total_Del_Rev	884	176	263	238	40	51	4
155	Rent from Utility Property		-	None	-	-	-	-	-	-	-
156	Misc Service Revenue		1,368	Total_Del_Rev	730	145	217	197	33	42	3
157	Other revenue		90	Total_Del_Rev	48	10	14	13	2	3	0
158	CIAC / Cost Recovery		491	Bill-OpExp	368	68	30	19	4	3	0
159	MI Revenue		22	Total_Del_Rev	12	2	3	3	1	1	0
160	Operating Revenues		44,494		23,852	4,738	7,015	6,351	1,074	1,351	113
161											
162	TOTAL EXPENSES		45,815		31,091	6,413	4,142	3,008	526	592	43
163	V. NET INCOME at Present Rat		(1,321)		(7,239)	(1,675)	2,873	3,343	548	759	70
164											

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation- Billing Customer

BillCus
Sch. HSG-1F-5
CAI
Class All

Line	Account	No.	Balance	Allocator	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
165	SUMMARY REPORT										
166	Utility Revenues	440-446	40,866		21,810	4,338	6,487	5,881	994	1,252	105
167	Other Operating Revenues	450-456	3,627		2,042	400	528	470	80	99	8
168	Total Operating Revenues		44,494		23,852	4,738	7,015	6,351	1,074	1,351	113
169											
170	Distribution / Transmission	580-599	2,175		1,229	646	230	70	0	0	0
171	Customer Acctg & Service	901-919	22,124		15,818	2,210	1,770	1,675	350	280	23
172	Admin & General	920-932	16,112		12,322	2,571	859	231	29	99	1
173	Total Operating Expenses		40,411		29,369	5,427	2,859	1,975	379	379	24
174											
175	Depreciation Expense	403	4,081		2,510	1,082	372	110	1	7	0
176	Taxes Other Than Inc / Other	408	1,670		1,116	345	156	44	2	8	0
177	Income before Income tax		(1,668)		(9,143)	(2,115)	3,628	4,222	692	959	89
178	Income Taxes	409-411	(347)		(1,903)	(440)	755	879	144	200	18
179	NET INCOME		(1,321)		(7,239)	(1,675)	2,873	3,343	548	759	70
180											
181	RATE BASE		12,109		13,843	704	(2,161)	(418)	60	79	3
182	Return on Rate Base		-10.91%								
183											
184	REVENUE REQUIREMENTS										
185	Target Rate of Return		7.4300%		7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%	7.4300%
186	Rate Base		12,109		13,843	704	(2,161)	(418)	60	79	3
187											
188	Operating expenses		36,289		27,169	4,990	2,205	1,382	279	252	13
189	Uncollectibles- Delivery		704	Total_RevReq	397	76	105	88	18	18	0
190	Depreciation expense		4,081		2,510	1,082	372	110	1	7	0
191	General taxes / Other		1,670		1,116	345	156	44	2	8	0
192	Subtotal- Operating Costs to recv		42,744		31,192	6,492	2,838	1,624	300	285	14
193											
194	Target Return on Rate Base- Aftu		900		1,029	52	(161)	(31)	4	6	0
195	Income taxes to recover		353	Bill-RB	404	21	(63)	(12)	2	2	0
196				39.25%							
197	Subtotal- Rev Req before GRT		43,997		32,624	6,565	2,614	1,580	306	293	14
198	GRT needed		-	0.00%	0	0	0	0	0	0	0
199	TOTAL REVENUE REQ.		43,997		32,624	6,565	2,614	1,580	306	293	14

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Assigned
Sch. HSG-1G-4
Fac

Allocator Assignments

Allocator Assignments

Line	Account	No.	Balance	Functional	Classification		Class Allocation								
					Primary Dist	Secondary Dist	SubTDem	PrimDem	SecnDem	SecnCus	BillCus				
1	I. ELECTRIC PLANT IN SERVICE														
2	A. HYDRO PRODUCTION PLANT														
3	Production Plant	302	3,126	SubT	-	-	MWh-Gen	-	-	-	-	-	-	-	-
4	Hydro Production Plant		<u>3,126</u>												
5															
6	C. TRANSMISSION PLANT														
7	Transmission Plant	361	0	-	-	-	-	-	-	-	-	-	-	-	-
8	Transmission Plant	350-359	<u>0</u>												
9															
10	D. DISTRIBUTION PLANT														
11	Land and Land Rights	360	12,970	Stations	Demand	-	-	-	NCP_at_Pri	-	-	-	-	-	-
12	Structures and Improvements	361	10,145	Stations	Demand	-	-	-	NCP_at_Pri	-	-	-	-	-	-
13	Station Equipment	362	254,614	Stations	Demand	-	-	-	NCP_at_Pri	-	-	-	-	-	-
14	Poles, Towers and Fixtures	364	237,915	Func-364	Demand	Demand	-	NCP_at_115	NCP_at_Pri	NCP_at_Sec	-	-	-	-	-
15	OH Conductors and Devices	365	308,051	Func-365	Demand	Demand	-	NCP_at_115	NCP_at_Pri	NCP_at_Sec	-	-	-	-	-
16	UG Conduit	366	71,882	Func-366	Demand	Demand	-	NCP_at_115	NCP_at_Pri	NCP_at_Sec	-	-	-	-	-
17	UG Conductors & Devices	367	173,809	Func-367	Demand	Demand	-	NCP_at_115	NCP_at_Pri	NCP_at_Sec	-	-	-	-	-
18	Line Transformers	368	189,828	Sec	-	Demand	-	-	-	Xfmr_Cost	-	-	-	-	-
19	Services	369	107,009	Sec	-	Customer	-	-	-	Services_Cost	-	-	-	-	-
20	Meters	370	57,072	Bill	-	-	-	-	-	-	-	-	-	-	Meter_Cost
21	Install on Cust Premises	371	120	Bill	-	-	-	-	-	-	-	-	-	-	Customers
22	Street Light & Signal	373	39,684	Sec	-	Customer	-	-	-	-	-	-	-	-	Lighting
23	Electric Plant ARO	374	0	-	-	-	-	-	-	-	-	-	-	-	-
24	Distribution Plant	360-373	<u>1,463,099</u>												
25															
26	E. GENERAL PLANT														
27	Land and Land Rights	389	0	-	-	-	-	-	-	-	-	-	-	-	-
28	General Plant	390	47,682	Labor	Demand	-	-	-	-	-	-	-	-	-	-
29	General Plant	389-399	<u>47,682</u>												
30															
31	TOTAL UTILITY PLANT		<u>1,513,907</u>												
32															

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Assigned
Sch. HSG-1G-4
Fac
Allocator Assignments

Allocator Assignments

Line	Account	No.	Balance	Classification			Class Allocation													
				Functional	Primary Dist	Secondary Dist	SubTDem	PrimDem	SecnDem	SecnCus	BillCus									
33	II. DEPRECIATION RESERVE																			
34	Production Plant	108.3	3,119	SubT	-	-	MWh-Gen	-	-	-	-	-	-	-	-	-	-	-	-	-
35	Structures and Improvements	108.5	5,100	Stations	Demand	-	-	NCP_at_Pri	-	-	-	-	-	-	-	-	-	-	-	-
36	Station Equipment	108.5	51,252	Stations	Demand	-	-	NCP_at_Pri	-	-	-	-	-	-	-	-	-	-	-	-
37	Poles, Towers and Fixtures	108.5	107,524	Func-364	Demand	Demand	-	NCP_at_Pri	NCP_at_Sec	-	-	-	-	-	-	-	-	-	-	-
38	OH Conductors and Devices	108.5	127,510	Func-365	Demand	Demand	-	NCP_at_Pri	NCP_at_Sec	-	-	-	-	-	-	-	-	-	-	-
39	UG Conduit	108.5	33,881	Func-366	Demand	Demand	-	NCP_at_Pri	NCP_at_Sec	-	-	-	-	-	-	-	-	-	-	-
40	UG Conductors & Devices	108.5	67,415	Func-367	Demand	Demand	-	NCP_at_Pri	NCP_at_Sec	-	-	-	-	-	-	-	-	-	-	-
41	Line Transformers	108.5	117,426	Sec	-	-	-	Xfmr_Cost	-	-	-	-	-	-	-	-	-	-	-	-
42	Services	108.5	41,311	Sec	-	-	-	Customer	-	-	-	-	-	-	-	-	-	-	-	-
43	Meters	108.5	46,003	Bill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	Install on Cust Premises	108.5	10	Bill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
45	Street Light & Signal	108.5	37,190	Sec	-	-	-	Customer	-	-	-	-	-	-	-	-	-	-	-	-
46	General Plant	108.5	14,663	Labor	Demand	Sec Labor	-	Sec Labor	SecD-Lab	-	-	-	-	-	-	-	-	-	-	-
47	Net Additions / Retirements	108.6	36,338	Plant	Demand	SecPlant	-	SecPlant	SecD-PT	-	-	-	-	-	-	-	-	-	-	-
48	Depreciation Reserve	108	688,742																	
49																				
50	III. OTHER RATE BASE ITEMS																			
51	Property Held for Future Use		2,494	Plant	Demand	SecPlant	-	SecPlant	SecD-PT	-	-	-	-	-	-	-	-	-	-	-
52	Unamortized Debt costs		5,165	RateBase	Demand	Sec_RB	-	Sec_RB	RateBase	-	-	-	-	-	-	-	-	-	-	-
53	Materials and Supp / Prepay		3,494	OpExp	Demand	SecOpExp	-	SecOpExp	RateBase	-	-	-	-	-	-	-	-	-	-	-
54	Injuries & Damages Reserve		0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	Cash Working Capital		19,102	OpExp	Demand	SecOpExp	-	SecOpExp	RateBase	-	-	-	-	-	-	-	-	-	-	-
56	Accumulated Deferred FIT		(175,937)	NetPlant	Demand	SecNetPlant	-	SecNetPlant	RateBase	-	-	-	-	-	-	-	-	-	-	-
57	Customer Deposits		(8,889)	Bill	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58	Net Additions / Retirements		87,657	NetPlant	Demand	SecNetPlant	-	SecNetPlant	RateBase	-	-	-	-	-	-	-	-	-	-	-
59	Other Rate Base	131-283	(66,914)	NetPlant	Demand	SecNetPlant	-	SecNetPlant	RateBase	-	-	-	-	-	-	-	-	-	-	-
60																				
61	TOTAL RATE BASE		758,251																	
62																				

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Assigned
Sch. HSG-1G-4
Fac
Allocator Assignments

Allocator Assignments

Line	Account	No.	Balance	Classification			Class Allocation												
				Functional	Primary	Secondary	SubTDem	PrimDem	SecnDem	SecnCus	BillCus								
					Dist	Dist						Dist							
63	I. OPERATING AND MAINTENANCE EXPENSES																		
64	B. TRANSMISSION EXPENSE																		
65	Transmission Expense																		
66	Transmission Expense																		
67																			
68	C. DISTRIBUTION EXPENSE		0																
69	Purchased Power- Borderline	555																	
70	Dist Oper-Supervision & Eng	580	2,369	Dist-Lab	Demand	SecDxLabor	SubT-Lab	PrID-Lab	SecD-Lab	SecC-Lab	Bill-DxLab								
71	Dist Oper-Load Dispatching	581	2,427	SubT			MWh-Gen												
72	Dist Oper-Substations	582	1,316	Stations	Demand			NCP_at_Pri											
73	Dist Oper-Overhead Lines	583	2,678	OH_Total	Demand	Sec_OH	NCP_at_115	NCP_at_Pri	NCP_at_Sec										
74	Dist Oper-Underground Lines	584	370	Func-367	Demand	Sec_UG	NCP_at_115	NCP_at_Pri	NCP_at_Sec										
75	Dist Oper-Outdoor Lighting	585	318	Sec		Customer				Lighting									Meter_Cost
76	Dist Oper-Electric Meters	586	1,420	Bill															
77	Dist Oper-Cust Install	587	102	Func-364	Demand		MWh-Meter	MWh-Meter											
78	Dist Oper-Misc Expenses	588	7,353	Dist-Lab	Demand	SecDxLabor	SubT-Lab	PrID-Lab	SecD-Lab	SecC-Lab	Bill-DxLab								
79	Dist Oper-Rents	589	295	Plant	Demand	SecPlant	SubT-Pt	PrID-PT	SecD-PT	SecC-PT	Bill-PT								
80	Dist Maint-Supervision & Eng	590	1,033	Dist-Lab	Demand	SecLabor	SubT-Lab	PrID-Lab	SecD-Lab	SecC-Lab	Bill-DxLab								
81	Dist Maint-Structures	591	81	Stations	Demand			NCP_at_Pri											
82	Dist Maint-Substations	592	1,670	Stations	Demand			NCP_at_Pri											
83	Dist Maint-Overhead Lines	593	19,858	OH_Total	Demand		NCP_at_115	NCP_at_Pri	NCP_at_Sec										
84	Dist Maint-Underground Lines	594	2,369	Func-367	Demand		NCP_at_115	NCP_at_Pri	NCP_at_Sec										
85	Dist Maint-Line Transformers	595	392	Sec					Xfmr_Cost										
86	Dist Maint-Outdoor Lighting	596	916	Sec		Customer				Lighting									
87	Dist Maint-Electric Meters	597	57	Bill															
88	Oper. & Maint. Exp.	500-599	45,024																

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Assigned
Sch. HSG-1G-4
Fac
Allocator Assignments

Allocator Assignments

Line	Account	No.	Balance	Functional	Classification		Class Allocation						
					Primary Dist	Secondary Dist	SubTDem	PrimDem	SecnDem	SecnCus	BillCus		
90	D. CUSTOMER ACCOUNTS AND SERVICE												
91	Supervision	901	707	Bill	-	-	-	-	-	-	-	-	Accr903
92	Meter Reading Exp- Comp	902	383	Bill	-	-	-	-	-	-	-	-	Meter_Cost
93	Cust Recs & Coll	903	12,306	Bill	-	-	-	-	-	-	-	-	Accr903
94	Uncollectible- Delivery	904	4,122	Bill	-	-	-	-	-	-	-	-	Total_Del_Rev
95	Misc Cust Acct	905	920	Bill	-	-	-	-	-	-	-	-	Customers
96	Customer Accts. Exp.	901-905	18,438										
97													
98	Cust Service-Supervision	907	62	Bill	-	-	-	-	-	-	-	-	MW/h-Meter
99	Cust Assistance Expenses	908	1,138	Bill	-	-	-	-	-	-	-	-	MW/h-Meter
100	Info&Instruct Advertising Exp	9,090	518	Bill	-	-	-	-	-	-	-	-	MW/h-Meter
101	Cust Service-Misc Expenses	910	1,102	Bill	-	-	-	-	-	-	-	-	MW/h-Meter
102	Demo & Selling Expenses	912	287	Bill	-	-	-	-	-	-	-	-	MW/h-Meter
103	Sales-Misc Expenses	916	579	Bill	-	-	-	-	-	-	-	-	MW/h-Meter
104			3,686										
105	Customer Accts. & Serv. Exp.	901-919	22,124										
106													

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Assigned
Sch. HSG-1G-4
Fac
Allocator Assignments

Line	Account	No.	Balance	Classification			Class Allocation					
				Functional	Primary		SubTDem	PrimDem	SecnDem	SecnCus	BillCus	
					Dist	Secondary						Dist
E. ADMINISTRATIVE AND GENERAL												
107	A&G-Salaries	920	18,783	Labor	Demand	Sec Labor	SubT-Lab	PrID-Lab	SecD-Lab	SecC-Lab	Bill-Lab	
108	A&G-Office Supplies	921	6,391	Labor	Demand	Sec Labor	SubT-Lab	PrID-Lab	SecD-Lab	SecC-Lab	Bill-Lab	
109	A&G-Outside Services	923	5,459	Labor	Demand	Sec Labor	SubT-Lab	PrID-Lab	SecD-Lab	SecC-Lab	Bill-Lab	
110	Property Insurance	924	8,210	Plant	Demand	Sec Plant	SubT-Pt	PrID-PT	SecD-PT	SecC-PT	Bill-PT	
111	Injuries & Damages Insurance	925	3,459	Plant	Demand	Sec Plant	SubT-Pt	PrID-PT	SecD-PT	SecC-PT	Bill-PT	
112	Employee Pensions & Benefits	926	24,688	Labor	Demand	Sec Labor	SubT-Lab	PrID-Lab	SecD-Lab	SecC-Lab	RateBase	
113	Regulatory Comm Expenses	928	4,290	RateBase	Demand	Sec_RB	RateBase	RateBase	RateBase	RateBase	RateBase	
114	A&G-Misc Expenses	930200	2	Plant	Demand	Sec Plant	-	MWh-Gen	MWh-Gen	MWh-Gen	-	
115	A&G-Rents	931	16,288	Labor	Demand	Sec Labor	SubT-Lab	PrID-Lab	SecD-Lab	SecC-Lab	Bill-Lab	
116	A&G Maint-Gen Plant-Elec	935	201	Labor	Demand	Sec Labor	SubT-Lab	PrID-Lab	SecD-Lab	SecC-Lab	Bill-Lab	
117	Admin & Genl. Exp.	920-932	87,771									
118	Total Operating Expenses		154,919									
II. DEPRECIATION EXPENSE												
121	Structures and Improvements	403	0	Stations	Demand	-	-	NCP_at_Pri	-	-	-	
122	Station Equipment	403	5,698	Func-364	Demand	-	-	NCP_at_Pri	NCP_at_Sec	-	-	
123	Poles, Towers and Fixtures	403	2	Func-365	Demand	-	-	NCP_at_Pri	NCP_at_Sec	-	-	
124	OH Conductors and Devices	403	44	Func-366	Demand	-	NCP_at_115	NCP_at_Pri	NCP_at_Sec	-	-	
125	UG Conduit	403	18,322	Func-367	Demand	-	NCP_at_115	NCP_at_Pri	NCP_at_Sec	-	-	
126	UG Conductors & Devices	403	311	Sec	Demand	-	NCP_at_115	NCP_at_Pri	NCP_at_Sec	-	-	
127	Line Transformers	403	7,052	Sec	Demand	-	-	-	Xfmr_Cost	-	-	
128	Services	403	10,572	Sec	-	Customer	-	-	-	Services_Cost	-	
129	Meters	403	3,223	Bill	-	-	-	-	-	-	Meter_Cost	
130	Install on Cust Premises	403	654	Bill	-	-	-	-	-	-	Customers	
131	Street Light & Signal	403	476	Sec	-	Customer	-	-	-	Lighting	-	
132	General Plant	403	0	-	-	-	-	-	-	-	-	
133	Net Additions / Retirements	407,300	4,579	Plant	Demand	Sec Plant	NCP_at_115	PrID-PT	SecD-PT	SecC-PT	Bill-PT	
134	Depreciation Expense	403	50,933									
135												

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Assigned
Sch. HSG-1G-4
Fac
Allocator Assignments

Line	Account	No.	Balance	Classification		Class Allocation														
				Functional	Primary Dist	Secondary Dist	SubTDem	PrimDem	SecnDem	SecnCus	BillCus									
137	III. TAXES and OTHER																			
138	A. GENERAL TAXES																			
139	Municipal property tax	408,140	30,530	NetPlant	Demand	SecNetPlant	SubT-NetPt	PriD-NetPt	SecD-NetPt	SecC-NetPt	Bill-NetPt									
140	Payroll related	408,110	4,199	Labor	Demand	SecLabor	SubT-Lab	PriD-Lab	SecD-Lab	SecC-Lab	Bill-Lab									
141	Other tax, Reg deferrals	408,170	787	RateBase	Demand	Sec_RB	RateBase	RateBase	RateBase	RateBase	RateBase									
142	General Taxes		35,516																	
143																				
144	B. FEDERAL / STATE INCOME TAXES																			
145	Income Tax Exp		7,847	Pretax	Demand	SecPretax	SubT-Pretax	PriD-Pretax	SecD-Pretax	SecC-Pretax	Bill-Pretax									
146	Income Taxes	409-411	7,847																	
147	Total Taxes	408-411	43,363																	
148																				
149	Interest on Customer deposits		132	Bill	-															CustDep
150	TOTAL EXPENSES		249,347																	
151																				
152	IV. OPERATING REVENUES at Present Rates																			
153	Distribution charge revenue		270,662	RevReqPF	Demand	SecPlant	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev
154	Forfeited discounts		1,657	Bill	-															
155	Rent from Utility Property		2,885	Func-364	Demand	Demand	NCP_at_115	NCP_at_Pri	NCP_at_Sec											
156	Misc Service Revenue		1,368	Bill	-															
157	Other revenue		594	RevReqPF	Demand	SecPlant	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev
158	CIAC / Cost Recovery		1,883	OpExp	Demand	SecOpExp	SubT-OpEx	PriD-OpExp	SecD-OpExp	SecC-OpExp	Bill-OpExp									
159	M1 Revenue		143	RevReqPF	Demand	Sec_RB	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev	Total_Del_Rev
160	Operating Revenues		279,192																	
161																				
162	TOTAL EXPENSES		249,347																	
163	V. NET INCOME at Present Rates		29,845																	

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Functionalization Factors

FuncEctr
Sch. HSG-1G-1
Fac
Functionalization Factors

0	Allocator Name	Total	Supply	SubTransmission	Primary Dist	Secondary Dist	Billing
1	None	0					
2		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3							
4	Supply	1	1				
5		100.00%	100.00%	0.00%	0.00%	0.00%	0.00%
6							
7	SubT	1		1			
8		100.00%	0.00%	100.00%	0.00%	0.00%	0.00%
9							
10	Prim	1			1		
11		100.00%	0.00%	0.00%	100.00%	0.00%	0.00%
12							
13	Sec	1				1	
14		100.00%	0.00%	0.00%	0.00%	100.00%	0.00%
15							
16	Bill	1					1
17		100.00%	0.00%	0.00%	0.00%	0.00%	100.00%
18							
19	Stations	1			1		
20		100.00%	0.00%	0.00%	100.00%	0.00%	0.00%
21							
22	Comp	1					
23		100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
24							
25	Func-364	10,298	-	326	4,885	5,087	-
26		100.00%	0.00%	3.17%	47.44%	49.40%	0.00%
27							
28	Func-365	14,922	-	932	8,873	5,116	-
29		100.00%	0.00%	6.25%	59.46%	34.29%	0.00%
30							
31	Func-366	1,392	-	154	1,004	234	-
32		100.00%	0.00%	11.04%	72.12%	16.84%	0.00%
33							
34	Func-367	2,466	-	444	1,744	279	-
35		100.00%	0.00%	17.99%	70.69%	11.32%	0.00%
36							
37	PTF/OH/UG	791,657	-	65,989	470,747	254,921	-
38		100.00%	0.00%	8.34%	59.46%	32.20%	0.00%
39							
40	DistPt	1,463,099	-	65,989	748,476	591,442	57,192
41		100.00%	0.00%	4.51%	51.16%	40.42%	3.91%
42							

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019

Functionalization Factors

FuncEtr
Sch. HSG-1G-1
Fac
Functionalization Factors

0	Allocator Name	Total	Supply	SubTransmiss ion	Primary Dist	Secondary Dist	Billing
43	Plant	1,513,907	-	74,139	768,085	604,184	67,499
44		100.00%	0.00%	4.90%	50.74%	39.91%	4.46%
45							
46	NetPlant	825,165	-	40,454	488,347	279,668	16,697
47		100.00%	0.00%	4.90%	59.18%	33.89%	2.02%
48							
49	PTF-OH-UG	791,657	-	65,989	470,747	254,921	-
50		100.00%	0.00%	8.34%	59.46%	32.20%	0.00%
51							
52	OH_Total	545,966	-	26,781	296,036	223,149	-
53		100.00%	0.00%	4.91%	54.22%	40.87%	0.00%
54							
55	UG_Total	245,691	-	39,208	174,711	31,772	-
56		100.00%	0.00%	15.96%	71.11%	12.93%	0.00%
57							
58	RateBase	758,251	-	38,516	449,280	258,346	12,109
59		100.00%	0.00%	5.08%	59.25%	34.07%	1.60%
60							
61	Labor	33,255	-	3,503	13,676	8,887	7,189
62		100.00%	0.00%	10.53%	41.12%	26.72%	21.62%
63							
64	Dist-Lab	25,947	-	3,265	12,746	8,283	1,652
65		100.00%	0.00%	12.58%	49.13%	31.92%	6.37%
66							
67	OpExp	154,919	-	13,751	60,699	40,058	40,411
68		100.00%	0.00%	8.88%	39.18%	25.86%	26.09%
69							
70	RevReqPF	283,293	-	20,367	129,649	90,504	42,774
71		100.00%	0.00%	7.19%	45.76%	31.95%	15.10%
72							
73	Pretax	37,692	-	1,736	23,869	13,756	(1,668)
74		100.00%	-	4.60%	63.33%	36.50%	(4.43%)
75							

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Classification Factors

ClassFctr
Sch. HSG-1G-2
Fac
Classification Factors

0	Allocator Name	Total	Demand	Commodity	Customer
1	None	0			
2		0.00%	0.00%	0.00%	0.00%
3					
4	Demand	I	I		
5		100.00%	100.00%	0.00%	0.00%
6					
7	Commodity	I		I	
8		100.00%	0.00%	100.00%	0.00%
9					
10	Customer	I			I
11		100.00%	0.00%	0.00%	100.00%
12					
13	Pri364	I	100.00%	0.00%	0.00%
14		100.00%	100.00%	0.00%	0.00%
15					
16	Pri365	100.00%	100.00%	0.00%	0.00%
17		100.00%	100.00%	0.00%	0.00%
18					
19	Pri366	100.00%	100.00%	0.00%	0.00%
20		100.00%	100.00%	0.00%	0.00%
21					
22	Pri367	100.00%	100.00%	0.00%	0.00%
23		100.00%	100.00%	0.00%	0.00%
24					
25	Pri368	100.00%	100.00%	0.00%	0.00%
26		100.00%	100.00%	0.00%	0.00%
27					
28	Sec364	100.00%	100.00%	0.00%	0.00%
29		100.00%	100.00%	0.00%	0.00%
30					
31	Sec365	100.00%	100.00%	0.00%	0.00%
32		100.00%	100.00%	0.00%	0.00%
33					
34	Sec366	100.00%	100.00%	0.00%	0.00%
35		100.00%	100.00%	0.00%	0.00%
36					

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Classification Factors

ClassFctr
Sch. HSG-1G-2
Fac
Classification Factors

0	Allocator Name	Total	Demand	Commodity	Customer
37	Sec367	100.00%	100.00%	0.00%	0.00%
38		100.00%	100.00%	0.00%	0.00%
39					
40	Sec368	100.00%	100.00%	0.00%	0.00%
41		100.00%	100.00%	0.00%	0.00%
42					
43	Pri_OH	296,036	296,036	-	-
44		100.00%	100.00%	0.00%	0.00%
45					
46	Pri_UG	174,711	174,711	-	-
47		100.00%	100.00%	0.00%	0.00%
48					
49	PriPlant	768,085	768,085	-	-
50		100.00%	100.00%	0.00%	0.00%
51					
52	Pri364-367	470,747	470,747	-	-
53		100.00%	100.00%	0.00%	0.00%
54					
55	Pri_RB	449,280	449,280	-	-
56		100.00%	100.00%	0.00%	0.00%
57					
58	PriLabor	13,676	13,676	-	-
59		100.00%	100.00%	0.00%	0.00%
60					
61	PriOpExp	60,699	60,699	-	-
62		100.00%	100.00%	0.00%	0.00%
63					

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Classification Factors

ClassFctr
Sch. HSG-1G-2
Fac
Classification Factors

0	Allocator Name	Total	Demand	Commodity	Customer
64	PriPretax	23,869	23,869	-	-
65		100.00%	100.00%	0.00%	0.00%
66					
67	Sec_OH	223,149	223,149	-	-
68		100.00%	100.00%	0.00%	0.00%
69					
70	Sec_UG	31,772	31,772	-	-
71		100.00%	100.00%	0.00%	0.00%
72					
73	SecPlant	604,184	455,735	-	148,450
74		100.00%	75.43%	0.00%	24.57%
75					
76	SecNetPlant	279,668	213,823	-	65,845
77		100.00%	76.46%	0.00%	23.54%
78					
79	Sec364-367	254,921	254,921	-	-
80		100.00%	100.00%	0.00%	0.00%
81					
82	Sec_RB	258,346	198,034	-	60,312
83		100.00%	76.65%	0.00%	23.35%
84					
85	SecDxLabor	8,283	7,141	-	1,142
86		100.00%	86.21%	0.00%	13.79%
87					
88	SecLabor	8,887	7,662	-	1,225
89		100.00%	86.21%	0.00%	13.79%
90					
91	SecOpExp	40,058	34,191	-	5,867
92		100.00%	85.35%	0.00%	14.65%
93					
94	SecPretax	13,756	12,400	-	1,356
95		100.00%	90.14%	0.00%	9.86%
96					
97	Sec_RRPF	86,120	61,227	-	24,893
98		100.00%	71.09%	0.00%	28.91%
99					

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation Factors

AllocFctr
Sch. HSG-1G-3
Fac
Class Allocation Factors

0	Allocator Name	Total	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
1	None	-	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
3									
4	A16/A60	100.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
5									
6									
7	Lighting	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
8									
9									
10	MWh-Meter	7,295,727	2,946,725	598,981	1,290,927	1,952,810	420,270	62,050	23,963
11		100.00%	40.39%	8.21%	17.69%	26.77%	5.76%	0.85%	0.33%
12									
13	MWh-Gen	7,773,861	3,186,181	647,655	1,394,628	2,019,488	434,854	67,092	23,963
14		100.00%	40.99%	8.33%	17.94%	25.98%	5.59%	0.86%	0.31%
15									
16	NCP_at_115	1,938	938	187	316	385	85	15	11
17		100.00%	48.38%	9.66%	16.32%	19.88%	4.40%	0.79%	0.57%
18									
19	NCP_at_Pri	1,856	906	181	306	367	82	15	-
20		100.00%	48.81%	9.75%	16.46%	19.75%	4.44%	0.80%	0.00%
21									
22	NCP_at_Sec	1,341	867	173	287	-	-	14	-
23		100.00%	64.65%	12.91%	21.39%	0.00%	0.00%	1.06%	0.00%
24									
25	Bills	6,090	5,285	627	105	13	0	60	0
26		100.00%	86.78%	10.29%	1.72%	0.22%	0.00%	0.99%	0.00%
27									
28	Customers	507,492	440,389	52,216	8,745	1,109	0.013	5,020	0.001
29		100.00%	86.78%	10.29%	1.72%	0.22%	0.00%	0.99%	0.00%
30									
31	Xfmr_Cost	108,932	51,967	11,376	23,999	19,906	1,684	-	-
32		100.00%	47.71%	10.44%	22.03%	18.27%	1.55%	0.00%	0.00%
33									
34	Services_Cost	894,020	793,737	88,952	11,099	229	4	-	-
35		100.00%	88.78%	9.95%	1.24%	0.03%	0.00%	0.00%	0.00%
36									
37	Meter_Cost	44,178	24,952	13,132	4,671	1,413	6	-	5
38		100.00%	56.48%	29.73%	10.57%	3.20%	0.01%	0.00%	0.01%
39									
40	All_Meters	513	449	54	9	1	0	-	0
41		100.00%	87.62%	10.48%	1.69%	0.21%	0.00%	0.00%	0.00%
42									

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation Factors

AllocFctr
Sch. HSG-1G-3
Fac
Class Allocation Factors

0	Allocator Name	Total	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
43	kWh_Rev	142,462	104,958	19,515	6,042	10,760	-	804	383
44		100.00%	73.67%	13.70%	4.24%	7.55%	0.00%	0.56%	0.27%
45	Demand_Rev	31,275	-	-	17,431	10,798	3,046	-	-
46		100.00%	0.00%	0.00%	55.73%	34.53%	9.74%	0.00%	0.00%
47									
48	Total_DeL_Rev	270,662	144,451	28,729	42,965	38,950	6,584	8,291	692
49		100.00%	53.37%	10.61%	15.87%	14.39%	2.43%	3.06%	0.26%
50									
51	Acct903	0	0	0	0	0	0	0	0
52		100.00%	85.41%	9.69%	3.13%	0.62%	0.28%	0.87%	0.00%
53									
54	Write-Offs	3,122	2,593	270	173	41	24	21	-
55		100.00%	83.05%	8.66%	5.55%	1.31%	0.77%	0.66%	0.00%
56									
57	CustDep	100.00%	4.50%	41.54%	42.50%	11.44%	0.00%	0.03%	0.00%
58		100.00%	4.50%	41.54%	42.50%	11.44%	0.00%	0.03%	0.00%
59									
60	Light-Fixtures	6	-	-	-	-	-	6	-
61		100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
62									
63	Lighting	1	0	0	0	0	0	1	0
64		100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
65									
66	SubT-Pt	74,139	35,387	7,076	12,203	15,136	3,339	591	407
67		100.00%	47.73%	9.54%	16.46%	20.42%	4.50%	0.80%	0.55%
68									
69	SubT-NetPt	40,454	19,409	3,879	6,637	8,176	1,805	321	226
70		100.00%	47.98%	9.59%	16.41%	20.21%	4.46%	0.79%	0.56%
71									
72	SubT-OpEx	13,751	6,039	1,217	2,381	3,240	703	116	55
73		100.00%	43.92%	8.85%	17.32%	23.56%	5.12%	0.84%	0.40%
74									
75	SubT-RB	38,516	18,417	3,680	6,336	7,836	1,728	308	210
76		100.00%	47.82%	9.56%	16.45%	20.34%	4.49%	0.80%	0.55%
77									
78	SubT-Lab	3,503	1,520	307	610	841	182	29	14
79		100.00%	43.39%	8.76%	17.41%	24.00%	5.21%	0.84%	0.39%
80									
81	SubT-Pretax	1,736	2,444	469	55	(1,247)	(409)	450	(27)
82		100.00%	140.84%	27.01%	3.17%	-71.83%	-23.54%	25.92%	-1.57%
83									
84									

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation Factors

AllocFctr
Sch. HSG-1G-3
Fac
Class Allocation Factors

0	Allocator Name	Total	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
85	PriD-RB	449,280	219,514	43,810	73,947	88,527	19,886	3,594	1
86		100.00%	48.86%	9.75%	16.46%	19.70%	4.43%	0.80%	0.00%
87	PriD-Lab	13,676	6,670	1,332	2,252	2,705	608	109	0
88		100.00%	48.77%	9.74%	16.47%	19.78%	4.44%	0.80%	0.00%
90	PriD-OpExp	60,699	29,777	5,927	9,984	11,858	2,659	493	1
91		100.00%	49.06%	9.76%	16.45%	19.54%	4.38%	0.81%	0.00%
92	PriD-Pt	768,085	374,899	74,867	126,444	151,668	34,081	6,125	0
93		100.00%	48.81%	9.75%	16.46%	19.75%	4.44%	0.80%	0.00%
96	PriD-NetPt	488,347	238,360	47,601	80,393	96,430	21,669	3,894	0
97		100.00%	48.81%	9.75%	16.46%	19.75%	4.44%	0.80%	0.00%
98	PriD-Pt-Tax	748,476	365,335	72,957	123,215	147,790	33,210	5,969	-
99		100.00%	48.81%	9.75%	16.46%	19.75%	4.44%	0.80%	0.00%
100	PriD-PreTax	23,869	17,136	3,391	3,209	(1,787)	2,994	2,994	316
101		100.00%	71.79%	14.21%	13.45%	-7.49%	-5.83%	12.54%	1.32%
102	SecD-RB	198,034	117,444	24,005	42,664	11,476	1,001	1,443	1
103		100.00%	59.30%	12.12%	21.54%	5.79%	0.51%	0.73%	0.00%
104	SecD-Lab	7,662	4,893	980	1,638	65	8	78	0
105		100.00%	63.86%	12.79%	21.38%	0.85%	0.10%	1.02%	0.00%
106	SecD-OpExp	34,191	21,512	4,311	7,261	686	86	334	1
107		100.00%	62.92%	12.61%	21.24%	2.01%	0.25%	0.98%	0.00%
108	SecD-Pt	455,735	262,375	54,140	98,687	34,782	2,946	2,804	0
109		100.00%	57.57%	11.88%	21.65%	7.63%	0.65%	0.62%	0.00%
110	SecD-NetPt	213,823	126,680	25,922	46,165	12,460	1,056	1,539	0
111		100.00%	59.25%	12.12%	21.59%	5.83%	0.49%	0.72%	0.00%
112	SecD-Pt-Tax	444,749	255,360	52,735	96,339	34,688	2,935	2,693	-
113		100.00%	57.42%	11.86%	21.66%	7.80%	0.66%	0.61%	0.00%
114	SecD-DiPt	444,749	255,360	52,735	96,339	34,688	2,935	2,693	-
115		100.00%	57.42%	11.86%	21.66%	7.80%	0.66%	0.61%	0.00%
116		444,749	255,360	52,735	96,339	34,688	2,935	2,693	-
117		100.00%	57.42%	11.86%	21.66%	7.80%	0.66%	0.61%	0.00%
118		444,749	255,360	52,735	96,339	34,688	2,935	2,693	-
119		100.00%	57.42%	11.86%	21.66%	7.80%	0.66%	0.61%	0.00%
120		444,749	255,360	52,735	96,339	34,688	2,935	2,693	-
121		100.00%	57.42%	11.86%	21.66%	7.80%	0.66%	0.61%	0.00%
122		444,749	255,360	52,735	96,339	34,688	2,935	2,693	-
123		100.00%	57.42%	11.86%	21.66%	7.80%	0.66%	0.61%	0.00%
124		444,749	255,360	52,735	96,339	34,688	2,935	2,693	-
125		100.00%	57.42%	11.86%	21.66%	7.80%	0.66%	0.61%	0.00%
126		444,749	255,360	52,735	96,339	34,688	2,935	2,693	-
127		100.00%	57.42%	11.86%	21.66%	7.80%	0.66%	0.61%	0.00%

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation Factors

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Sch. HSG-1G-3
Fac
Class Allocation Factors

0	Allocator Name	Total	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
127	SecD-Pretax	12,400	2,971	458	(957)	6,842	1,342	1,577	166
128		100.00%	23.96%	3.69%	-7.71%	55.18%	10.82%	12.72%	1.34%
129									
130	SecC-RB	60,312	50,573	5,686	777	80	14	3,181	0
131		100.00%	83.85%	9.43%	1.29%	0.13%	0.02%	5.27%	0.00%
132									
133	SecC-Lab	1,225	0	0	0	0	0	1,225	0
134		100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%
135									
136	SecC-OpExp	5,867	940	119	65	49	10	4,684	0
137		100.00%	16.02%	2.03%	1.11%	0.83%	0.17%	79.83%	0.00%
138									
139	SecC-Pt	148,450	95,006	10,647	1,328	27	0	41,441	0
140		100.00%	64.00%	7.17%	0.89%	0.02%	0.00%	27.92%	0.00%
141									
142	SecC-NetPt	65,845	56,048	6,281	784	16	0	2,716	0
143		100.00%	85.12%	9.54%	1.19%	0.02%	0.00%	4.12%	0.00%
144									
145	SecC-Pt-Tax	148,450	95,006	10,647	1,328	27	0	41,441	0
146		100.00%	64.00%	7.17%	0.89%	0.02%	0.00%	27.92%	0.00%
147									
148	SecC-Pretax	1,356	(1,341)	820	3,143	3,005	506	(4,832)	54
149		100.00%	-98.88%	60.50%	231.74%	221.59%	37.32%	-356.28%	4.01%
150									
151	Bill-RB	12,109	13,843	704	(2,161)	(418)	60	79	3
152		100.00%	114.32%	5.81%	-17.85%	-3.45%	0.49%	0.65%	0.03%
153									
154	Bill-DxLab	1,652	933	491	175	53	0	-	0
155		100.00%	56.48%	29.73%	10.57%	3.20%	0.01%	0.00%	0.01%
156									
157	Bill-Lab	7,189	5,545	1,121	369	95	12	45	0
158		100.00%	77.13%	15.60%	5.14%	1.33%	0.17%	0.63%	0.00%
159									
160	Bill-OpExp	36,289	27,169	4,990	2,205	1,382	279	252	13
161		100.00%	74.87%	13.75%	6.08%	3.81%	0.77%	0.70%	0.04%
162									
163	Bill-Pt	67,499	40,289	18,585	6,566	1,962	25	66	7
164		100.00%	59.69%	27.53%	9.73%	2.91%	0.04%	0.10%	0.01%
165									
166	Bill-NetPt	16,697	10,886	3,969	1,381	402	13	44	1
167		100.00%	65.20%	23.77%	8.27%	2.41%	0.08%	0.27%	0.01%
168									

Narragansett Electric Company d/b/a National Grid
Class Cost of Service Study (\$000s)
Rate Year Ending August 31, 2019
Class Allocation Factors

AllocFctr
Sch. HSG-1G-3
Fac
Class Allocation Factors

0	Allocator Name	Total	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
169	Bill-DiPt	57,192	32.339	16,977	6,036	1,825	7	1	7
170		100.00%	56.54%	29.68%	10.55%	3.19%	0.01%	0.00%	0.01%
171		(1,668)	(9,143)	(2,115)	3,628	4,222	692	959	89
172	Bill-PreTax	100.00%	547.98%	126.76%	(217.45%)	(253.05%)	(41.48%)	(57.45%)	(5.31%)
174									
175	Labor	33,255	18,628	3,740	4,869	3,706	810	1,487	14
176		100.00%	56.02%	11.25%	14.64%	11.14%	2.44%	4.47%	0.04%
177									
178	Labor-DistOM	25,947	13,127	2,932	4,369	3,418	744	1,344	13
179		100.00%	50.59%	11.30%	16.84%	13.17%	2.87%	5.18%	0.05%
180									
181	Plant	1,513,907	807,956	165,315	245,228	203,574	40,392	51,027	415
182		100.00%	53.37%	10.92%	16.20%	13.45%	2.67%	3.37%	0.03%
183									
184	RateBase	758,251	419,790	77,886	121,564	107,500	22,689	8,606	216
185		100.00%	55.36%	10.27%	16.03%	14.18%	2.99%	1.13%	0.03%
186									
187	Total_RevReq	320,488	180,965	34,766	47,918	40,067	8,414	8,240	119
188		100.00%	56.47%	10.85%	14.95%	12.50%	2.63%	2.57%	0.04%
189									

Schedule HSG-2

Development of External Allocators for the Allocated Cost of Service

Development of Allocators - Index

Index
HSG-2 Index

Line	Schedule	Description	No. Pages
1	Sch. HSG-2 Index	<u>Development of Allocators - Index</u>	1
2	Sch. HSG-2A	<u>External Allocator Values- Class Allocation</u>	1
3	Sch. HSG-2B	<u>External Allocator Values- Functionalization</u>	1
4	Sch. HSG-2C	<u>Proof of Distribution Revenue at Current Rates- Rate Year</u>	3
5	Sch. HSG-2D	<u>Transformer Costs</u>	1
6	Sch. HSG-2E	<u>Transformer Cost Allocation to Rate Classes</u>	4
7	Sch. HSG-2F	<u>Transformer Unit Costs</u>	1
8	Sch. HSG-2G	<u>Services Costs</u>	2
9	Sch. HSG-2H	<u>Meter Costs</u>	1
10	Sch. HSG-2I	<u>Customer Deposits</u>	1
11	Sch. HSG-2J	<u>Customer Records and Accounting- Account 903</u>	1
12	Sch. HSG-2K	<u>Write-Offs</u>	1
13	Sch. HSG-2L	<u>Schedules for Demand Allocators</u>	1
14	Sch. HSG-2M	<u>Historical Load Factors and ICP / NCP</u>	1
15	Sch. HSG-2N	<u>Test Year Ended 6/30/2017 Class Contributions to ICP and Class NCP</u>	1
16	Sch. HSG-2O	<u>Rate Year 8/31/2019 Class Contributions to ICP at Voltage Levels</u>	1
17	Sch. HSG-2P	<u>Rate Year 8/31/2019 Class NCP at Voltage Levels</u>	1
18	Sch. HSG-2Q	<u>Rate Year 8/31/2019 MWh Sales at Voltage Levels</u>	1
19	Sch. HSG-2R	<u>Functional Splits</u>	1

External Allocator Values- Class Allocation

Alloc:
HSG-2A

Line	Allocator Names	Total	Units	Residential				General C&I		200 kW Demand		5000 kW Demand		Lighting	Propulsion
				A16/A60	Small C&I	G02	B32 / G32	B62 / G62	S05/S06/S10/S14	X01					
ALLOCATION VALUES															
1	MWh-Meter	7,295,727	MWh	2,946,725	598,981	1,290,927	1,952,810	420,270	62,050	23,963					
2	MWh-Gen	7,773,861	MWh	3,186,181	647,655	1,394,628	434,854	67,092	23,963						
3	MWh-CI	4,262,989	MWh	598,981	1,290,927	1,952,810	420,270								
4															
5	NCP at 115	1,937,857	MW	937,555	187,230	316,205	385,231	85,227	15,318	11,091					
6	NCP at Pri	1,856,389	MW	906,113	180,951	305,601	366,552	82,368	14,804	0					
7	NCP at Sec	1,341,258	MW	867,094	173,159	286,839	0	0	14,167	0					
8	Customers-VL	1,122	MW				1,109	13							
9	Bills	6,089,923	#	5,284,666	626,592	104,935	13,307	156	60,254	12					
10	Customers	507,492	#	440,389	52,216	8,745	1,109	13	5,020	1					
11	Customers-CI	62,084	#	52,216	52,216	8,745	1,109	13		1					
12	Customers-Large	9,867	#			8,745	1,109	13							
13	Xfmr Cost	108,932,218	#	51,967,079	11,376,012	23,999,207	19,905,638	1,684,281	0	0					
14	Services Cost	894,020,312	\$	793,737,225	88,952,112	11,098,734	228,709	3,533	0	0					
15	Meter Cost	44,178,183	\$	24,951,924	13,132,122	4,670,716	1,412,718	5,586	0	5,116					
16	All Meters	512,923	#	449,413	53,757	8,666	1,078	5	0	4					
17	Cust Chge Rev	64,929,905	\$	24,237,476	6,226,298	14,166,287	10,977,890	2,658,482	6,461,580	201,893					
18	kWh Rev	142,462,130	\$	104,957,514	19,515,431	6,041,540	10,759,982	0	804,259	383,403					
19	Demand Rev	31,275,430	\$	0	0	17,431,271	10,798,356	3,045,803	0	0					
20	Demand Discounts	(812,303)	\$	0	0	(47,568)	(118,564)	(646,172)	0	0					
21	Total Del Rev	270,662,304	\$	144,451,182	28,729,051	42,965,257	38,949,849	6,583,881	8,290,740	692,345					
22	Other Dist Rev	0	\$												
23	Acct903	100.00%	%	85.41%	9.69%	3.13%	0.62%	0.28%	0.87%	0.00%					
24	Write-Offs	3,122,186	\$	2,593,073	270,263	173,316	40,907	24,073	20,553	0					
25	CustDep	100.00%	%	4.50%	41.54%	42.50%	11.44%	0.00%	0.03%	0.00%					
26	Light-Fixtures	6,105	#						6,105						

External Allocator Values- Functionalization

Functions
HSG-2B

Line	Functional Allocator Values	Source	Total	Supply	SubTransmission	Primary	Secondary	Billing
1	<u>Func-364</u>	Schedule HSG-2R, lines 9-11	10,298		326	4,885	5,087	
2	<u>Func-365</u>	Schedule HSG-2R, lines 1-3	14,922		932	8,873	5,116	
3	<u>Func-366</u>	Schedule HSG-2R, lines 17-19	1,392		154	1,004	234	
4	<u>Func-367</u>	Schedule HSG-2R, lines 25-27	2,466		444	1,744	279	

Proof of Distribution Revenue at Current Rates- Rate Year

Revenue
HSG-2C

	Code	Description	Includes	Customers	Annual Bills	Monthly Customer Charge	Customer Charge Revenue	Billing Demand	Demand Charge	Demand Charge Revenue
1	A16	Residential	A-16,A-60	440,389	5,284,666		24,237,476			
2	C06	Small C&I	C-06,C-08	52,216	626,592		6,226,298			17,431,271
3	G02	General C&I	G-02	8,745	104,935		14,166,287	3,594,077		
4	G32	200 kW Demand	B-32,G-32	1,109	13,307		10,977,890	2,996,026		10,798,356
5	G62	5000 kW Demand	B-62,G-62	13	156		2,658,482	1,018,663		3,045,803
6	SL	Lighting	S-05/06/10/14	5,020	60,254		6,461,580			
7	X01	Propulsion	X-01	1	12		201,893			
8				507,492	6,089,923		64,929,905	7,608,765		31,275,430
9										
10	A16	Residential Basic	A16/A60	403,958	4,847,495	\$5.00	24,237,476			
11	A60	Resid. Low Income	A16/A60	36,431	437,171	-	-			
12	B32	C&I Back-up	B32 / G32	5	60	\$825.00	49,629	126,964	See below	182,826
13	B62	5000 kW Back-up	B62 / G62	-	-	\$17,000.00	-	-	See below	-
14	C06	Small C&I	C06	51,391	616,686	\$10.00	6,166,861			
15	C08	Small C&I Unmetrd	C06	826	9,906	\$6.00	59,437			
16	G02	General C&I	G02	8,745	104,935	\$135.00	14,166,287	3,594,077	\$4.85	17,431,271
17	G32	200 kW Demand	B32 / G32	1,104	13,246	\$825.00	10,928,261	2,869,062	\$3.70	10,615,530
18	G62	5000 kW Demand	B62 / G62	13	156	\$17,000.00	2,658,482	1,018,663	\$2.99	3,045,803
19	S05	SL Customer-owned Lighting								
20	S06	SL Decorative Lighting			14	\$450.54	6,308			
21	S10	SL Private Lighting		427	5,124	\$157.93	809,211			
22	S14	SL Street Lighting		4,593	55,116	\$102.44	5,646,062			
23	X01	X-01		1	12	\$16,500.00	201,893			
24				507,492	6,089,923		64,929,905	7,608,765		31,275,430
25					6,089,923					
26										
27		B-32 C&I Back-up	Back-up					95,646	\$0.70	66,952
28			Supplemental					31,317	\$3.70	115,874
29								126,964		182,826
30										
31		B-62 5000 kW Back-up	Back-up							
32			Supplemental							
33										
34										
35		C-6 Small C&I	kWh						\$0.30	-
36			Over 25 kVA						\$2.99	-
37										
38										
39		C-8 Small C&I Unmetrd	kWh							
40			Over 25 kVA							

Proof of Distribution Revenue at Current Rates- Rate Year

Revenue
HSG-2C

Code	Description	Includes	kWh Deliveries	kWh Charge	kWh Charge Revenue	HVD Billing Units	HVD Credit Revenue	HVM Billing Units	HVM Credit Revenue
1	A16 Residential	A-16,A-60	2,946,725,332		104,957,514				
2	C06 Small C&I	C-06,C-08	598,981,304		19,515,431				
3	G02 General C&I	G-02	1,290,927,306		6,041,540	64,848	(28,766)	37,639,098	(18,802)
4	G32 200 kW Demand	B-32,G-32	1,952,809,776		10,759,982	1,392,345	(617,630)	33,349,315	(314,020)
5	G62 5000 kW Demand	B-62,G-62	420,270,233		-	893,698	(396,436)	5,704,285	(249,736)
6	SL Lighting	S-05/06/10/14	62,049,950		804,259				
7	X01 Propulsion	X-01	23,962,704		383,403				
8			<u>7,295,726,605</u>		<u>142,462,130</u>	<u>2,350,891</u>	<u>(1,042,832)</u>	<u>76,692,698</u>	<u>(582,559)</u>
9									
10	A16 Residential Basic	A16/A60	2,723,228,532	\$0.03664	99,779,093				
11	A60 Resid. Low Income	A16/A60	223,496,800	\$0.02317	5,178,421				
12	B32 C&I Back-up	B32 / G32	13,230,918	\$0.00551	72,902		-	305,357	(5,549)
13	B62 5000 kW Back-up	B62 / G62	-		-		-	-	-
14	C06 Small C&I	C06	595,486,038	See below	19,385,591				
15	C08 Small C&I Unmetrd	C06	3,495,266	See below	129,840				
16	G02 General C&I	G02	1,290,927,306	\$0.00468	6,041,540	64,848	(28,766)	37,639,098	(18,802)
17	G32 200 kW Demand	B32 / G32	1,939,578,858	\$0.00551	10,687,080	1,392,345	(617,630)	33,043,958	(308,471)
18	G62 5000 kW Demand	B62 / G62	420,270,233	-	-	893,698	(396,436)	5,704,285	(249,736)
19	S05 SL Customer-owned	Lighting	30,303,659	\$0.02654	804,259				
20	S06 SL Decorative	Lighting	3,451	-	-				
21	S10 SL Private	Lighting	7,793,834	-	-				
22	S14 SL Street	Lighting	23,949,006	-	-				
23	X01	Lighting	23,962,704	\$0.01600	383,403				
24			<u>7,295,726,605</u>		<u>142,462,130</u>	<u>2,350,891</u>	<u>(1,042,832)</u>	<u>76,692,698</u>	<u>(582,559)</u>
25			<i>7,295,726,605</i>		<i>142,462,130</i>		<i>(1,042,838)</i>		<i>(582,559)</i>
26									
27	B-32 C&I Back-up	Back-up		\$0.00818					
28		Supplemental							
29									
30									
31	B-62 5000 kW Back-up	Back-up		\$0.03253	19,371,161				
32		Supplemental		\$1.85000	14,430				
33									
34									
35	C-6 Small C&I	kWh	595,486,038	\$0.03253	19,371,161				
36		Over 25 kVA	7,800	\$1.85000	14,430				
37			<u>595,493,838</u>		<u>19,385,591</u>				
38									
38	C-8 Small C&I Unmetrd	kWh	3,495,266	\$0.03253	113,701				
39		Over 25 kVA	8,724	\$1.85000	16,139				
40			<u>3,503,990</u>		<u>129,840</u>				

Proof of Distribution Revenue at Current Rates- Rate Year

Revenue
HSG-2C

Code	Description	Includes	Feeder Service Billing Units	Feeder Service Revenue	CapEx Rev Req- FY 2018 ISR Plan	Normalized Rate Year Revenue	Adjust to RDM	Rate Year Revenue
1	A16 Residential	A-16,A-60			8,486,569	137,681,559	6,769,623	144,451,182
2	C06 Small C&I	C-06,C-08			1,611,260	27,352,989	1,376,062	28,729,051
3	G02 General C&I	G-02			2,408,031	39,999,561	2,965,696	42,965,257
4	G32 200 kW Demand	B-32,G-32	295,668	813,087	2,045,922	34,463,586	4,486,263	38,949,849
5	G62 5000 kW Demand	B-62,G-62			560,265	5,618,378	965,503	6,583,881
6	SL Lighting	S-05/06/10/14			882,350	8,148,190	142,550	8,290,740
7	X01 Propulsion	X-01			51,999	637,295	55,050	692,345
8			295,668	813,087	16,046,396	253,901,557	16,760,747	270,662,304
9								
10	A16 Residential Basic	A16/A60			7,842,898	131,859,467	6,256,175	138,115,642
11	A60 Resid. Low Income	A16/A60			643,671	5,822,092	513,448	6,335,539
12	B32 C&I Back-up	B32 / G32			8,887	308,696	30,396	339,091
13	B62 5000 kW Back-up	B62 / G62			-	-	-	-
14	C06 Small C&I	C06			1,601,857	27,154,310	1,368,032	28,522,342
15	C08 Small C&I Unmetrd	C06			9,402	198,679	8,030	206,709
16	G02 General C&I	G02			2,408,031	39,999,561	2,965,696	42,965,257
17	G32 200 kW Demand	B32 / G32			2,037,034	34,154,890	4,455,867	38,610,758
18	G62 5000 kW Demand	B62 / G62	295,668	813,087	560,265	5,618,378	965,503	6,583,881
19	S05 SL Customer-owned Lighting	Lighting			430,918	1,235,177	69,618	1,304,795
20	S06 SL Decorative Lighting	Lighting			49	6,357	8	6,365
21	S10 SL Private Lighting	Lighting			110,828	920,039	17,905	937,944
22	S14 SL Street Lighting	Lighting			340,555	5,986,617	55,019	6,041,636
23	X01				51,999	637,295	55,050	692,345
24			295,668	813,087	16,046,396	253,901,557	16,760,747	270,662,304
25				813,087	16,046,396	253,901,551	16,760,747	270,662,298
26				\$2.75		253,901,551		
27	B-32 C&I Back-up	Back-up						
28		Supplemental						
29								
30								
31	B-62 5000 kW Back-up	Back-up						
32		Supplemental						
33								
34								
35	C-6 Small C&I	kWh						
36		Over 25 kVA						
37								
38								
39	C-8 Small C&I Unmetrd	kWh						
40		Over 25 kVA						

Transformer Costs

Xfmr
HSG-2D

Line	Rate Class	Includes	Customers	Source	Average Cost Per Customer	Total Transformers Cost
1	Residential	A-16,A-60	423,655	See below	\$123	51,967,079
2	Small C&I	C-06,C-08	47,430	See below	\$240	11,376,012
3	General C&I	G-02	7,836	See below	\$3,063	23,999,207
4	200 kW Demand	B-32,G-32	874	See below	\$22,775	19,905,638
5	5000 kW Demand	B-62,G-62	5	See below	\$336,856	1,684,281
6	Lighting	S-05/06/10/14	0		0	0
7	Propulsion	X-01	1		0	0
8			<u>479,801</u>		<u>\$227</u>	<u>108,932,218</u>
9	Check		<u>479,803</u>			<u>108,932,218</u>
10						
11	A16		389,709	From Detail	\$124	48,410,285
12	A60		33,946	From Detail	\$105	3,556,794
13			<u>423,655</u>			<u>51,967,079</u>
14						
15	C06		46,894	From Detail	\$240	11,250,437
16	C08		536	From Detail	\$234	125,576
17			<u>47,430</u>			<u>11,376,012</u>
18						
19	200 kW Backup	B32	4	From Detail	\$28,673	114,690
20	200 kW Demand	B-32,G-32	870	From Detail	\$22,748	19,790,948
21			<u>874</u>			<u>19,905,638</u>
22						
23	5000 kW Backup	B62	0	From Detail	#DIV/0!	0
24	5000 kW Demand	B-62,G-62	5	From Detail	\$336,856	1,684,281
25			<u>5</u>			<u>1,684,281</u>
26						
27	General C&I		7,836	From Detail	\$3,063	23,999,207
28			<u>7,836</u>			<u>23,999,207</u>

Transformer Cost Allocation to Rate Classes

Xfmr_Detail
HSG-2E

Line	Transformer	Rate Code	Total Customers	Class NCP Per Customer	NCP of Customers on Transformer	Total NCP for Transformer	% of NCP for Transformer	Transformer Total Cost	Allocated Transformer Cost
1	OH_1_10	A16	15,760	2.06	32,427	71.95%	5,707,811	4,107,078	
2	OH_1_10	A60	863	2.06	1,776	3.940%	5,707,811	224,899	
3	OH_1_10	C06	1,897	3.47	6,574	14.588%	5,707,811	832,636	
4	OH_1_10	C08	40	3.47	139	0.308%	5,707,811	17,557	
5	OH_1_10	G02	62	34.95	2,167	4.808%	5,707,811	274,433	
6	OH_1_10	G32	6	330.56	1,983	4.401%	5,707,811	251,208	
7	OH_1_100	A16	1,052	2.06	2,165	43.715%	131,917	57,668	
8	OH_1_100	A60	94	2.06	193	3.906%	131,917	5,153	
9	OH_1_100	C06	344	3.47	1,192	24.076%	131,917	31,761	
10	OH_1_100	C08	1	3.47	3	0.070%	131,917	92	
11	OH_1_100	G02	40	34.95	1,398	28.232%	131,917	37,243	
12	OH_1_167	A16	68	2.06	140	97.583%	8,144	7,947	
13	OH_1_167	C06	1	3.47	3	2.417%	8,144	197	
14	OH_1_25	A16	141,392	2.06	290,918	77.758%	19,695,158	15,314,485	
15	OH_1_25	A60	10,480	2.06	21,563	5.763%	19,695,158	1,135,112	
16	OH_1_25	C06	9,910	3.47	34,342	9.179%	19,695,158	1,807,850	
17	OH_1_25	C08	142	3.47	492	0.132%	19,695,158	25,905	
18	OH_1_25	G02	369	34.95	12,896	3.447%	19,695,158	678,846	
19	OH_1_25	G32	23	330.56	7,603	2.032%	19,695,158	400,231	
20	OH_1_25	G62	1	6,320.59	6,321	1.689%	19,695,158	332,728	
21	OH_1_50	A16	173,502	2.06	356,985	71.689%	16,934,082	12,139,845	
22	OH_1_50	A60	19,048	2.06	39,192	7.870%	16,934,082	1,332,779	
23	OH_1_50	C06	16,271	3.47	56,386	11.323%	16,934,082	1,917,495	
24	OH_1_50	C08	189	3.47	655	0.132%	16,934,082	22,273	
25	OH_1_50	G02	882	34.95	30,824	6.190%	16,934,082	1,048,201	
26	OH_1_50	G32	23	330.56	7,603	1.527%	16,934,082	258,549	
27	OH_1_50	G62	1	6,320.59	6,321	1.269%	16,934,082	214,941	
28	OH_1_50	M1	1	-	-	0.000%	16,934,082	-	
29	OH_1_75	A16	397	2.06	817	37.316%	54,965	20,511	
30	OH_1_75	A60	31	2.06	64	2.914%	54,965	1,602	
31	OH_1_75	C06	96	3.47	333	15.198%	54,965	8,354	
32	OH_1_75	G02	9	34.95	315	14.369%	54,965	7,898	
33	OH_1_75	G32	2	330.56	661	30.203%	54,965	16,601	
34	OH_3_1000	G02	1	34.95	35	5.021%	52,395	2,631	
35	OH_3_1000	G32	2	330.56	661	94.979%	52,395	49,764	
36	OH_3_150	A16	1,985	2.06	4,084	6.173%	5,650,374	348,787	
37	OH_3_150	A60	189	2.06	389	0.588%	5,650,374	33,209	
38	OH_3_150	C06	3,238	3.47	11,221	16.959%	5,650,374	958,269	
39	OH_3_150	C08	24	3.47	83	0.126%	5,650,374	7,103	
40	OH_3_150	G02	1,281	34.95	44,767	67.661%	5,650,374	3,823,102	
41	OH_3_150	G32	17	330.56	5,620	8.493%	5,650,374	479,904	

Xfmr_Detail
HSG-2E
Transformer Cost Allocation to Rate Classes

Line	Transformer	Rate Code	Total Customers	Class NCP Per Customer	NCP of Customers on Transformer	Total NCP for Transformer	% of NCP for Transformer	Transformer Total Cost	Allocated Transformer Cost
42	OH_3_1500	A16	2	2.06	4		0.132%	284,818	375
43	OH_3_1500	C06	2	3.47	7		0.222%	284,818	632
44	OH_3_1500	G02	4	34.95	140		4.472%	284,818	12,737
45	OH_3_1500	G32	9	330.56	2,975	3,126	95.175%	284,818	271,075
46	OH_3_2000	C06	6	3.47	21		1.310%	157,492	2,063
47	OH_3_2000	G02	7	34.95	245		15.408%	157,492	24,267
48	OH_3_2000	G32	4	330.56	1,322	1,588	83.282%	157,492	131,163
49	OH_3_30	A16	1,353	2.06	2,784		10.481%	3,450,181	361,597
50	OH_3_30	A60	117	2.06	241		0.906%	3,450,181	31,269
51	OH_3_30	C06	2,043	3.47	7,080		26.654%	3,450,181	919,615
52	OH_3_30	C08	11	3.47	38		0.144%	3,450,181	4,951
53	OH_3_30	G02	432	34.95	15,097		56.838%	3,450,181	1,961,000
54	OH_3_30	G32	4	330.56	1,322	26,562	4.978%	3,450,181	171,748
55	OH_3_300	A16	164	2.06	337		1.949%	1,304,417	25,426
56	OH_3_300	A60	36	2.06	74		0.428%	1,304,417	5,581
57	OH_3_300	C06	350	3.47	1,213		7.007%	1,304,417	91,394
58	OH_3_300	C08	1	3.47	3		0.020%	1,304,417	261
59	OH_3_300	G02	165	34.95	5,766		33.310%	1,304,417	434,502
60	OH_3_300	G32	30	330.56	9,917	17,311	57.286%	1,304,417	747,252
61	OH_3_500	A16	2	2.06	4		0.038%	516,859	198
62	OH_3_500	A60	1	2.06	2		0.019%	516,859	99
63	OH_3_500	C06	67	3.47	232		2.159%	516,859	11,161
64	OH_3_500	G02	36	34.95	1,258		11.701%	516,859	60,477
65	OH_3_500	G32	28	330.56	9,256	10,752	86.082%	516,859	444,924
66	OH_3_75	A16	2,926	2.06	6,020		7.684%	7,252,769	557,318
67	OH_3_75	A60	330	2.06	679		0.867%	7,252,769	62,855
68	OH_3_75	C06	4,290	3.47	14,867		18.976%	7,252,769	1,376,251
69	OH_3_75	C08	21	3.47	73		0.093%	7,252,769	6,737
70	OH_3_75	G02	1,547	34.95	54,063		69.005%	7,252,769	5,004,800
71	OH_3_75	G32	8	330.56	2,644	78,347	3.375%	7,252,769	244,807
72	OH_3_750	A16	4	2.06	8		0.157%	243,517	382
73	OH_3_750	C06	14	3.47	49		0.925%	243,517	2,253
74	OH_3_750	G02	16	34.95	559		10.663%	243,517	25,967
75	OH_3_750	G32	14	330.56	4,628	5,244	88.255%	243,517	214,915
76	UG_1_100	A16	2,174	2.06	4,473		67.652%	738,498	499,611
77	UG_1_100	A60	86	2.06	177		2.676%	738,498	19,764
78	UG_1_100	C06	309	3.47	1,071		16.195%	738,498	119,603
79	UG_1_100	C08	5	3.47	17		0.262%	738,498	1,935
80	UG_1_100	G02	25	34.95	874	6,612	13.214%	738,498	97,584
81	UG_1_167	A16	168	2.06	346		31.937%	79,574	25,414
82	UG_1_167	A60	1	2.06	2		0.190%	79,574	151
83	UG_1_167	C06	44	3.47	152		14.088%	79,574	11,210

Xfmr_Detail
HSG-2E
Transformer Cost Allocation to Rate Classes

Line	Transformer	Rate Code	Total Customers	Class NCP Per Customer	NCP of Customers on Transformer	Total NCP for Transformer	% of NCP for Transformer	Transformer Total Cost	Allocated Transformer Cost
84	UG_1_167	C08	2	3.47	7	0.640%	79,574	510	
85	UG_1_167	G02	7	34.95	245	22.602%	79,574	17,986	
86	UG_1_167	G32	1	330.56	331	30.542%	79,574	24,303	
87	UG_1_25	A16	9,861	2.06	20,289	88.620%	5,062,089	4,486,027	
88	UG_1_25	A60	200	2.06	412	1.797%	5,062,089	90,985	
89	UG_1_25	C06	336	3.47	1,164	5.086%	5,062,089	257,449	
90	UG_1_25	G02	20	34.95	699	3.053%	5,062,089	154,539	
91	UG_1_25	G32	1	330.56	331	1.444%	5,062,089	73,088	
92	UG_1_25	M1	1	-	-	0.000%	5,062,089	-	
93	UG_1_25	X01	1	-	-	0.000%	5,062,089	-	
94	UG_1_250	A16	22	2.06	45	22.756%	36,939	8,406	
95	UG_1_250	C06	4	3.47	14	6.969%	36,939	2,574	
96	UG_1_250	G02	4	34.95	140	70.275%	36,939	25,959	
97	UG_1_50	A16	14,629	2.06	30,100	80.406%	6,602,570	5,308,845	
98	UG_1_50	A60	452	2.06	930	2.484%	6,602,570	164,030	
99	UG_1_50	C06	700	3.47	2,426	6.480%	6,602,570	427,853	
100	UG_1_50	C08	15	3.47	52	0.139%	6,602,570	9,168	
101	UG_1_50	G02	84	34.95	2,936	7.842%	6,602,570	517,764	
102	UG_1_50	G32	3	330.56	992	2.649%	6,602,570	174,909	
103	UG_1_500	C06	2	3.47	7	16.550%	8,338	1,380	
104	UG_1_500	G02	1	34.95	35	83.450%	8,338	6,958	
105	UG_1_75	A16	2,132	2.06	4,387	73.342%	710,803	521,320	
106	UG_1_75	A60	118	2.06	243	4.059%	710,803	28,854	
107	UG_1_75	C06	145	3.47	502	8.401%	710,803	59,717	
108	UG_1_75	C08	3	3.47	10	0.174%	710,803	1,236	
109	UG_1_75	G02	24	34.95	839	14.023%	710,803	99,677	
110	UG_3_1000	A16	666	2.06	1,370	2.968%	2,519,155	74,758	
111	UG_3_1000	A60	6	2.06	12	0.027%	2,519,155	673	
112	UG_3_1000	C06	152	3.47	527	1.141%	2,519,155	28,737	
113	UG_3_1000	C08	1	3.47	3	0.008%	2,519,155	189	
114	UG_3_1000	G02	102	34.95	3,565	7.720%	2,519,155	194,468	
115	UG_3_1000	G32	104	330.56	34,378	74.450%	2,519,155	1,875,511	
116	UG_3_1000	G62	1	6,320.59	6,321	13.688%	2,519,155	344,820	
117	UG_3_150	A16	8,017	2.06	16,495	27.115%	7,600,395	2,060,860	
118	UG_3_150	A60	768	2.06	1,580	2.598%	7,600,395	197,423	
119	UG_3_150	C06	2,405	3.47	8,334	13.700%	7,600,395	1,041,269	
120	UG_3_150	C08	20	3.47	69	0.114%	7,600,395	8,659	
121	UG_3_150	G02	879	34.95	30,719	50.496%	7,600,395	3,837,892	
122	UG_3_150	G32	11	330.56	3,636	5.977%	7,600,395	454,292	
123	UG_3_1500	A16	10	2.06	21	0.065%	1,974,262	1,281	
124	UG_3_1500	A60	2	2.06	4	0.013%	1,974,262	256	
125	UG_3_1500	B32	1	330.56	331	1.042%	1,974,262	20,576	

Xfmr_Detail
HSG-2E
Transformer Cost Allocation to Rate Classes

Line	Transformer	Rate Code	Total Customers	Class NCP Per Customer	NCP of Customers on Transformer	Total NCP for Transformer	% of NCP for Transformer	Transformer Total Cost	Allocated Transformer Cost
126	UG_3_1500	C06	64	3.47	222		0.699%	1,974,262	13,805
127	UG_3_1500	C08	1	3.47	3		0.011%	1,974,262	216
128	UG_3_1500	G02	48	34.95	1,677		5.289%	1,974,262	104,413
129	UG_3_1500	G32	70	330.56	23,139		72.954%	1,974,262	1,440,293
130	UG_3_1500	G62	1	6,320.59	6,321	31,718	19.928%	1,974,262	393,422
131	UG_3_2000	A16	8	2.06	16		0.196%	630,205	1,236
132	UG_3_2000	C06	2	3.47	7		0.083%	630,205	520
133	UG_3_2000	G02	3	34.95	105		1.249%	630,205	7,873
134	UG_3_2000	G32	25	330.56	8,264	8,392	98.472%	630,205	620,576
135	UG_3_2500	A16	1	2.06	2		0.012%	1,075,322	130
136	UG_3_2500	C06	5	3.47	17		0.102%	1,075,322	1,092
137	UG_3_2500	C08	1	3.47	3		0.020%	1,075,322	218
138	UG_3_2500	G02	4	34.95	140		0.819%	1,075,322	8,811
139	UG_3_2500	G32	32	330.56	10,578		62.000%	1,075,322	666,701
140	UG_3_2500	G62	1	6,320.59	6,321	17,061	37.047%	1,075,322	398,370
141	UG_3_3000	A16	5,606	2.06	11,535		13.216%	8,282,755	1,094,673
142	UG_3_3000	A60	525	2.06	1,080		1.238%	8,282,755	102,516
143	UG_3_3000	B32	3	330.56	992		1.136%	8,282,755	94,115
144	UG_3_3000	C06	2,207	3.47	7,648		8.763%	8,282,755	725,847
145	UG_3_3000	C08	32	3.47	111		0.127%	8,282,755	10,524
146	UG_3_3000	G02	959	34.95	33,514		38.401%	8,282,755	3,180,661
147	UG_3_3000	G32	98	330.56	32,395	87,275	37.118%	8,282,755	3,074,419
148	UG_3_3000	G62	3	330.56	992	992	100.000%	187,625	187,625
149	UG_3_5000	A16	4,201	2.06	8,644		9.621%	6,478,957	623,332
150	UG_3_5000	A60	389	2.06	800		0.891%	6,478,957	57,719
151	UG_3_5000	C06	1,357	3.47	4,703		5.234%	6,478,957	339,123
152	UG_3_5000	C08	19	3.47	66		0.073%	6,478,957	4,748
153	UG_3_5000	G02	471	34.95	16,460		18.321%	6,478,957	1,187,011
154	UG_3_5000	G32	179	330.56	59,170	89,843	65.860%	6,478,957	4,267,024
155	UG_3_7500	A16	1,683	2.06	3,463		32.769%	1,655,297	542,416
156	UG_3_7500	A60	182	2.06	374		3.544%	1,655,297	58,657
157	UG_3_7500	C06	395	3.47	1,369		12.953%	1,655,297	214,416
158	UG_3_7500	C08	5	3.47	17		0.164%	1,655,297	2,714
159	UG_3_7500	G02	134	34.95	4,683		44.314%	1,655,297	733,535
160	UG_3_7500	G32	2	330.56	661	10,568	6.256%	1,655,297	103,558
161	UG_3_7500	A16	1,924	2.06	3,959		5.732%	3,844,535	220,360
162	UG_3_7500	A60	28	2.06	58		0.083%	3,844,535	3,207
163	UG_3_7500	C06	238	3.47	825		1.194%	3,844,535	45,911
164	UG_3_7500	C08	3	3.47	10		0.015%	3,844,535	579
165	UG_3_7500	G02	220	34.95	7,688		11.132%	3,844,535	427,973
166	UG_3_7500	G32	171	330.56	56,526	69,066	81.844%	3,844,535	3,146,506
<hr/> <hr/>									
							479,803	1,630,408	108,932,218

Transformer Unit Costs

Xfmr_Cost
HSG-2F

Line	Transformer Type	Number	Total Unit Cost	Total Replacement Cost	kVA Rating	Average Cost Per kVA
1	OH_1_10	8,136	702	\$5,707,811	10	\$70.16
2	OH_1_100	119	1,109	131,917	100	\$11.09
3	OH_1_167	3	2,715	8,144	167	\$16.25
4	OH_1_25	25,194	782	19,695,158	25	\$31.27
5	OH_1_50	15,623	1,084	16,934,082	50	\$21.68
6	OH_1_667	0	13,776	-	75	\$183.67
7	OH_1_75	37	1,486	54,965	1,000	\$1.49
8	OH_3_1000	3	17,465	52,395	150	\$116.43
9	OH_3_150	1,668	3,388	5,650,374	1,500	\$2.26
10	OH_3_1500	12	23,735	284,818	2,000	\$11.87
11	OH_3_2000	7	22,499	157,492	30	\$749.96
12	OH_3_30	1,825	1,891	3,450,181	300	\$6.30
13	OH_3_300	223	5,849	1,304,417	500	\$11.70
14	OH_3_500	68	7,601	516,859	75	\$101.34
15	OH_3_75	3,110	2,332	7,252,769	750	\$3.11
16	OH_3_750	20	12,176	243,517	100	\$121.76
17	UG_1_100	250	2,954	738,498	167	\$17.69
18	UG_1_167	22	3,617	79,574	25	\$144.68
19	UG_1_25	2,336	2,167	5,062,089	250	\$8.67
20	UG_1_250	7	5,277	36,939	50	\$105.54
21	UG_1_50	2,618	2,522	6,602,570	500	\$5.04
22	UG_1_500	1	8,338	8,338	75	\$111.17
23	UG_1_75	262	2,713	710,803	1,000	\$2.71
24	UG_3_1000	206	12,229	2,519,155	150	\$81.53
25	UG_3_150	1,390	5,468	7,600,395	1,500	\$3.65
26	UG_3_1500	123	16,051	1,974,262	2,000	\$8.03
27	UG_3_2000	32	19,694	630,205	2,500	\$7.88
28	UG_3_2500	42	25,603	1,075,322	300	\$85.34
29	UG_3_300	1,126	7,356	8,282,755	3,000	\$2.45
30	UG_3_3000	6	31,271	187,625	500	\$62.54
31	UG_3_500	679	9,542	6,478,957	75	\$127.23
32	UG_3_75	315	5,255	1,655,297	750	\$7.01
33	UG_3_750	364	10,562	3,844,535		
34		<u>65,827</u>		<u>\$108,932,218</u>	15,387,421	\$7.08

Services Costs

Services
HSG-2G

Line	Rate Class	Includes	Services / Customers	Average Services Cost		Total Services Cost	Service Drop Types for Each Rate Class						Total	
				A	B		C	D	E	F	D-Conv			
1	Residential	A-16,A-60	423,655	1,874	793,737,225	A16	231	931	1,993	1,150	2,203	0	2,608	
2	Small C&I	C-06,C-08	47,430	1,875	88,952,112	C06	A							
3	General C&I	G-02	7,836	1,416	11,098,734	G02								
4	200 kW Demand	B-32,G-32	871	263	228,709	G32								
5	5000 kW Demand	B-62,G-62	5	707	3,533	G62								
6	Lighting	S-05/06/10/14	0	0	0	S10								
7	Propulsion	X-01	3	0	0	X01								
8			479,800	\$1,863	894,020,312									
9														
Cost/=>														
Weighted Average Cost														
A-16			1,869	28,992	332,171		231	931	1,993	1,150	2,203	0	2,608	389,709
A-60			1,923	858	30,516									33,946
B-32			2,608	1,607	28,519									1
C-6			1,878	1	372									46,894
C-8			1,661	5	1,362									536
G-2			1,416	2	3,481									7,836
G-32			260	2										870
G-62			707	4										5
M-1			1,571	1										2
X-1			231	1										1
Total														479,800
A-16,A-60			1,874	29,850	362,687									423,655
B32-G32			263	0	2									871
C6-C8			1,875	1,608	28,891									47,430
Services Costs by Service Type														
A	Underground Service connections in Padmount (Res./Com.)		3,951	31,463	392,943		231	931	1,993	1,150	2,203	0	2,608	\$231.25
B	Underground Service connections only (Residential)		0	29,850	362,687									\$929.72
B	Underground Service connections in Padmount (Res./Com.)		859	0	2									\$231.25
B	Underground Service with connections (Residential Conventional)		107	1,608	28,891									\$2,358.46
	*Splits are a best guess based on engineering review													\$931.31
C	Overhead Service with connections (Residential)													\$1,992.62
D	Underground Service connections only (Commercial)													\$1,172.18
D	Underground Service connections in Padmount (Res./Com.)													\$231.25
D	Underground Service with connections (Commercial Conventional)													\$2,607.98
	*Splits are a best guess based on engineering review													\$1,149.88
D-Conv	Overhead Service with connections (Commercial)													\$2,203.43
E	Primary metered service with no secondary related cost													\$0.00
F	None													\$0.00

Meter Costs

Meters
HSG-2H

Line	Rate Class	Includes	Meter Count	Total Cost	Average Meter Cost	Customers	kVA	Instr. Transf.	Extended Cost	Average Total Cost
1	Residential	A-16,A-60	449,413	26,339,551	58.61	423,655		213	24,951,924	58.90
2	Small C&I	C-06,C-08	53,757	9,485,841	176.46	47,430		8,314	13,132,122	276.87
3	General C&I	G-02	8,666	2,184,660	252.10	7,836	1,975	3,678	4,670,716	596.06
4	200 kW Demand	B-32,G-32	1,078	586,719	544.27	871	1,078	1,078	1,412,718	1,621.95
5	5000 kW Demand	B-62,G-62	5	2,721	544.27	5		5	5,586	1,117.12
6	Lighting	S-05/06/10/14				0			0	
7	Propulsion	X-01	4	2,177	544.27	3	4	4	5,116	1,705.26
8			<u>512,923</u>	<u>38,601,670</u>	<u>75.26</u>	<u>479,800</u>			<u>44,178,183</u>	
9							297.89	572.86		
10										
11										

(a) Average costs represent total dollars for the class divided by the number of meters. See 'Meter Detail' for unit costs.

Customer Deposits

CustDep
HSG-2I

Line	Activity	Total	Residential A16/A60	Small C&I C06	General C&I G02	200 kW Demand B32 / G32	5000 kW Demand B62 / G62	Lighting S05/S06/S10/S14	Propulsion X01
1	Narragansett Electric Company	1,005,981	45,252	417,856	427,539	115,061		273	
2		1,005,981	45,252	417,856	427,539	115,061	-	273	-
3									
4									
5	Cust_Dep Allocator	100.0%	4.5%	41.5%	42.5%	11.4%	0.0%	0.0%	0.0%

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC Docket No. 4770
Schedule HSG-2J
Sheet 1 of 1

Customer Records and Accounting- Account 903

Acc903
HSG-2J

Line	Activity	Total	Allocator	Total	Residential	Small C&I	General C&I	200 kW Demand	5000 kW Demand	Lighting	Propulsion
					A16/A60	C06	G02	B32 / G32	B62 / G62	S05/S06/S10/S14	X01
1	Credit & Collections	1,558,051	Write-offs	1,558,051	1,294,010	134,868	86,489	20,414	12,013	10,256	-
2	Mailing - Customer Service	2,109,719	Bills	2,109,719	1,830,756	217,069	36,353	4,610	54	20,874	4
3	Respond to Customer Calls / Inquiries	2,226,547	Customers	2,226,547	1,932,140	229,090	38,366	4,865	57	22,024	4
4	Customer Billing	1,612,851	Bills	1,612,851	1,399,588	165,946	27,791	3,524	41	15,958	3
5	Payment Processing	697,342	Bills	697,342	605,134	71,750	12,016	1,524	18	6,900	1
6	Collections	2,294,336	Write-offs	2,294,336	1,905,518	198,603	127,361	30,061	17,690	15,103	-
7		<u>10,498,846</u>		<u>10,498,846</u>	<u>8,967,145</u>	<u>1,017,326</u>	<u>328,376</u>	<u>64,997</u>	<u>29,874</u>	<u>91,115</u>	<u>13</u>
8											
9	Acc903 Allocator			100.00%	85.41%	9.69%	3.13%	0.62%	0.28%	0.87%	0.00%

Write-Offs

WOFFs
HSG-2K

Line	Rate Class	Includes	Normalized Revenue	Net Write-Offs 2013-2016	Revenue 2013-2016	Write-Offs / Revenue	Write-Offs Applied to Normalized Revenue	Write-Offs Allocator
1	Residential	A-16,A-60	137,681,559	38,576,960	2,048,278,611	1.88%	2,593,073	83.1%
2	Small C&I	C-06,C-08	27,352,989	3,476,724	351,874,945	0.99%	270,263	8.7%
3	General C&I	G-02	39,999,561	2,454,591	566,493,150	0.43%	173,316	5.6%
4	200 kW Demand	B-32,G-32	34,463,586	669,854	564,339,558	0.12%	40,907	1.3%
5	5000 kW Demand	B-62,G-62	5,618,378	504,952	117,848,675	0.43%	24,073	0.8%
6	Lighting	S-05/06/10/14	8,148,190	159,879	63,384,652	0.25%	20,553	0.7%
7	Propulsion	X-01	637,295	0.0%	7,751,167	0.00%	0	0.0%
8			253,901,557	45,842,959	3,719,970,758	1.23%	3,122,186	100.0%

Schedules for Demand Allocators

Demand
HSG-2L

<u>Line</u>	<u>Schedule</u>	<u>Title</u>	<u>Allocator Values</u>
	<u>Demand-1</u>	Historical Load Factors and ICP / NCP <i>Development of Rate Year Class Contributions to ICP and Class NCP</i>	
	<u>Demand-2</u>	Test Year Ended 6/30/2017 Class Contributions to ICP and Class NCP	
	<u>Demand-3</u>	Rate Year 8/31/2019 Class Contributions to ICP at Voltage Levels	
	<u>Demand-4</u>	Rate Year 8/31/2019 Class NCP at Voltage Levels	<u>NCP at 115</u> <u>NCP at Pri</u> <u>NCP at Sec</u>
	<u>Demand-5</u>	Rate Year 8/31/2019 MWh Sales at Voltage Levels	<u>MWh-Gen</u> <u>MWh-Meter</u>

Demand-1
HSG-2M
Historical Load Factors and ICP / NCP

Line	Rate Class	Includes	12/31/2008		11/30/2011		Test Year 6/30/2017			Rate Year 8/31/2019		
			Load Factor at NCP	Load Factor at NCP	Historical MWh	Historical Class NCP	Load Factor at NCP	Average Load Factor at NCP	Rate Year MWh	Rate Year Class NCP		
1	Residential	A-16,A-60	42.4%	36.7%	3,066,425	940,122	37.2%	38.8%	2,946,725	867,094		
2	Small C&I	C-06,C-08	40.0%	40.7%	602,260	182,144	37.7%	39.5%	598,981	173,159		
3	General C&I	G-02	50.3%	51.9%	1,300,006	303,937	48.8%	50.3%	1,290,927	292,693		
4	200 kW Demand	B-32,G-32	60.1%	60.9%	1,972,855	384,319	58.6%	59.8%	1,952,810	372,512		
5	5000 kW Demand	B-62,G-62	56.1%	59.9%	431,699	83,832	58.8%	58.2%	420,270	82,368		
6	Lighting	S-05/06/10	49.3%	50.7%	43,695	10,894	45.8%*	50.0%	62,050	14,167		
7	Propulsion	X-01	21.9%	27.5%	23,832	11,120	45.8%*	24.7%	23,963	11,091		
8	System		48.2%	45.5%	7,440,773	1,916,368	44.3%		7,295,727	1,813,084		
9	Check=				7,440,773	1,916,368			7,295,727			

*=Use 2008 and 2011

Line	Rate Class	Includes	12/31/2008		11/30/2011		Test Year 6/30/2017			Rate Year 8/31/2019		
			Load Factor at ICP	Load Factor at ICP	Historical MWh	Historical Contribution to ICP	Load Factor at ICP	Average Load Factor at ICP	Rate Year MWh	Rate Year ICP		
13	Residential	A-16,A-60	47.0%	38.6%	3,066,425	857,807	40.8%	42.2%	2,946,725	797,973		
14	Small C&I	C-06,C-08	40.1%	44.2%	602,260	158,562	43.4%	42.5%	598,981	160,781		
15	General C&I	G-02	50.9%	53.7%	1,300,006	281,080	52.8%	52.5%	1,290,927	280,886		
16	200 kW Demand	B-32,G-32	61.7%	67.1%	1,972,855	364,220	61.8%	63.5%	1,952,810	350,818		
17	5000 kW Demand	B-62,G-62	60.3%	89.1%	431,699	69,696	70.7%	73.4%	420,270	65,390		
18	Lighting	S-05/06/10	7528.4%	7797.0%	43,695	28	17814.3%*	7662.7%	62,050	92		
19	Propulsion	X-01	49.7%	61.3%	23,832	4,125	66.0%*	55.5%	23,963	4,927		
20	System		51.8%	49.6%	7,440,773	1,735,518	48.9%		7,295,727	1,660,868		
21	Check=				7,440,773	1,735,518			7,295,727			

*=Use 2008 and 2011

Test Year Ended 6/30/2017 Class Contributions to ICP and Class NCP

Demand-2
HSG-2N

Test Year 6/30/2017 Contributions to ICP														
Rate Class	Includes	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	ICP
1 Residential	A-16,A-60	761,978	857,807	684,818	269,085	451,976	548,652	531,597	470,989	484,392	384,095	518,573	626,604	857,807
2 Small C&I	C-06,C-08	148,935	158,562	161,733	119,602	72,269	84,560	78,901	67,790	65,308	54,559	136,336	165,480	158,562
3 General C&I	G-02	266,365	281,080	283,215	239,549	167,241	182,004	174,162	160,822	157,285	143,225	236,966	268,586	281,080
4 200 kW Demand	B-32,G-32	331,913	364,220	359,355	330,998	257,515	262,811	262,552	234,254	238,818	217,499	310,447	347,519	364,220
5 5000 kW Demand	B-62,G-62	70,960	69,696	72,887	66,355	52,493	58,608	54,570	51,213	51,026	47,119	62,181	80,684	69,696
6 Lighting	S-05/06/10/14	28	28	28	28	10,301	9,598	10,433	10,894	9,343	10,200	28	27	28
7 Propulsion	X-01	6,885	4,125	7,379	4,229	4,273	4,724	4,786	6,759	5,020	4,143	5,264	3,954	4,125
8 Total		1,587,064	1,735,518	1,569,415	1,029,846	1,016,068	1,150,957	1,117,001	1,002,721	1,011,192	860,840	1,269,795	1,492,854	1,735,518
9 Check=		0	0	0	0	0	0	0	0	0	0	0	0	0
10 Backup 200 kW	B32	3,967	3,269	2,372	1,967	2,405	2,152	1,482	1,439	1,320	1,218	1,839	6,341	B32
11 200 kW Demand	G32	327,946	360,951	356,983	329,031	255,110	260,659	261,070	232,815	237,498	216,281	308,608	341,178	G02
12		331,913	364,220	359,355	330,998	257,515	262,811	262,552	234,254	238,818	217,499	310,447	347,519	
13														
14														

Test Year 6/30/2017 Class NCP

Rate Class	Includes	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17	Class NCP	Month of Class NCP
16 Residential	A-16,A-60	861,555	940,122	719,492	451,368	538,894	609,613	636,173	553,848	523,667	449,566	575,224	574,387	940,122	Aug-16
17 Small C&I	C-06,C-08	182,144	177,186	172,817	119,602	117,248	128,613	126,242	123,347	123,473	104,020	146,548	181,313	182,144	Jul-16
18 General C&I	G-02	298,175	303,937	297,359	243,927	210,188	220,445	220,465	212,942	216,288	204,728	257,063	291,060	303,937	Aug-16
19 200 kW Demand	B-32,G-32	368,792	384,319	380,496	341,774	302,158	302,171	295,891	281,581	293,887	283,863	334,881	364,431	384,319	Aug-16
20 5000 kW Demand	B-62,G-62	77,432	73,320	74,564	67,322	57,892	63,662	59,112	58,286	57,194	59,238	64,441	83,832	83,832	Jun-17
21 Lighting	S-05/06/10/14	9,720	8,621	9,588	9,047	10,301	9,598	10,433	10,894	9,343	10,200	7,367	7,587	10,894	Feb-17
22 Propulsion	X-01	7,709	8,001	7,379	8,691	7,355	6,778	8,218	6,769	11,120	7,197	8,616	9,336	11,120	Mar-17
23 Total		1,805,527	1,895,506	1,661,695	1,241,731	1,244,036	1,340,880	1,356,534	1,247,667	1,234,972	1,118,812	1,394,140	1,511,946	1,916,368	
24 Check=		0	0	0	0	0	0	0	0	0	0	0	0	0	
25 Backup 200 kW	B32	4,335	3,269	2,372	6,516	2,867	2,598	1,641	1,835	1,697	1,602	2,034	6,489		
26 200 kW Demand	G32	364,457	381,050	378,124	335,258	299,291	299,573	294,250	279,746	292,190	282,261	332,847	357,942		
27		368,792	384,319	380,496	341,774	302,158	302,171	295,891	281,581	293,887	283,863	334,881	364,431		

Rate Year 8/31/2019 Class Contributions to ICP at Voltage Levels

Line	Rate Class	Includes	Rate Year ICP at Customer	% at 115 kV	% at		Rate Year ICP at Secondary	Rate Year ICP at Primary Before Losses	Rate Year ICP at 115kV Before Losses
					Primary	Secondary			
1	Residential	A-16,A-60	797,973		100%		797,973	833,882	862,818
2	Small C&I	C-06,C-08	160,781		100%		160,781	168,016	173,847
3	General C&I	G-02	280,886		2%		275,269	293,273	303,450
4	200 kW Demand	B-32,G-32	350,818	1.6%	98.4%		0	345,205	362,796
5	5000 kW Demand	B-62,G-62	65,390		100%		0	65,390	67,660
6	Lighting	S-05/06/10/14	92		100%		92	97	100
7	Propulsion	X-01	4,927	100%	0%		0	0	4,927
8	Total		1,660,868				1,234,116	1,705,864	1,775,597

Check =

1,660,868

9

Loss Multipliers

1.0450	1.0347
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Rate Year 8/31/2019 Class NCP at Voltage Levels

Demand-4
HSG-2P

Line	Rate Class	Includes	Rate Year Class NCP at Customer	1	2	3	4	5	8	10	Rate Year	
											% at 115 kV	% at Primary
1	Residential	A-16,A-60	867,094	0%	0%	100%	867,094	867,094	906,113	937,555		
2	Small C&I	C-06,C-08	173,159	0%	0%	100%	173,159	173,159	180,951	187,230		
3	General C&I	G-02	292,693	0%	2%	98%	286,839	286,839	305,601	316,205		
4	200 kW Demand	B-32,G-32	372,512	2%	98%	0%	0	0	366,552	385,231		
5	5000 kW Demand	B-62,G-62	82,368	0%	100%	0%	0	0	82,368	85,227		
6	Lighting	S-05/06/10/14	14,167	0%	0%	100%	14,167	14,167	14,804	15,318		
7	Propulsion	X-01	11,091	100%	0%	0%	0	0	0	11,091		
8	Total		1,813,084				1,341,258	1,341,258	1,856,389	1,937,857		

Check= 1,813,084

Loss Multipliers	1.0450	1.0347
------------------	--------	--------

Loss Multipliers

Rate Year 8/31/2019 MWh Sales at Voltage Levels

Demand-5
HSG-2Q

Line	Rate Class	Includes	Rate Year MWh at Customer	1	2	3	4	5	8	10	Rate Year MWh	
											% at 115 kV	% at Primary
1	Residential	A-16,A-60	2,946,725	0.0%	0.0%	100.0%	2,946,725	3,079,328	3,186,181			
2	Small C&I	C-06,C-08	598,981	0.0%	0.0%	100.0%	598,981	625,935	647,655			
3	General C&I	G-02	1,290,927	0.0%	2.0%	98.0%	1,265,109	1,347,857	1,394,628			
4	200 kW Demand	B-32,G-32	1,952,810	1.6%	98.4%	0.0%	-	1,921,565	2,019,488			
5	5000 kW Demand	B-62,G-62	420,270	0.0%	100.0%	0.0%	-	420,270	434,854			
6	Lighting	S-05/06/10/14	62,050	0.0%	0.0%	100.0%	62,050	64,842	67,092			
7	Propulsion	X-01	23,963	100.0%	0.0%	0.0%	-	-	23,963			
8	Total		7,295,727				4,872,865	7,459,798	7,773,861			

7	1.0450	9	1.0347
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Loss Multipliers

Func 364-368
HSG-2R

		Functional Splits		
		Account 365- Overhead Conductors and Devices		
Line	Function	Conductor Rating	From GIS	%
1	Subtransmission	>15kV	932.417	6.2%
2	Primary	<=15kV	8,872.805	59.5%
3	Secondary		5,116.449	34.3%
4			14,921.671	100.0%
5				
6				
7				
		Account 364- Poles, Towers and Fixtures		
		Overhead Linear Miles		
Line	Function	Conductor Rating	From GIS	%
8	Subtransmission	>15kV	326.010	3.2%
9	Primary	<=15kV	4,885.123	47.4%
10	Secondary		5,086.901	49.4%
11			10,298.034	100.0%
12				
13				
14				
15				
		Account 366- Underground Conduits		
		Circuit Miles		
Line	Function	Conduit (Conductor) Rating	From GIS	%
16	Subtransmission	>15kV	153.628	11.0%
17	Primary	<=15kV	1,003.856	72.1%
18	Secondary		234.355	16.8%
19			1,391.839	100.0%
20				
21				
22				
		Account 367- Underground Conductors		
		Circuit Miles Excluding Neutrals		
Line	Function	Conductor Rating	From GIS	%
23	Subtransmission	>15kV	443.787	18.0%
24	Primary	<=15kV	1,743.503	70.7%
25	Secondary		279.099	11.3%
26			2,466.389	100.0%
27				
28				
29				

Schedule HSG-3

Proposed Distribution Revenue Allocation

The Narragansett Electric Company
RESULTS OF ALLOCATED COST OF SERVICE STUDY AND REVENUE ALLOCATION

Line	Source	Total	Residential Rate A-16/ A-60	Small C&I Rate C-06	General C&I Rate G- 02	200 kW Demand Rate G-32	5000 kW Demand Rate G-62	Lighting Rates S-05/S-06/ S-10/S-14	Propulsion Rate X-01
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
SECTION 1. SUMMARY OF RESULTS OF ALLOCATED COST OF SERVICE STUDY									
1									
2									
3	Distribution Revenue at Present Rates	270,662	144,451	28,729	42,965	38,950	6,584	8,291	692
4	Late Payment Charges	1,657	884	176	263	238	40	51	4
5	Other Revenue	6,873	3,833	758	1,148	802	162	163	7
6	Total Revenue at Present Rates	279,192	149,168	29,663	44,377	39,991	6,786	8,504	703
7	Expenses	249,347	139,613	27,269	37,188	31,253	6,199	7,595	230
8	Net Income	29,845	9,555	2,394	7,189	8,738	587	909	474
9									
10	Rate Base	758,251	419,790	77,886	121,564	107,500	22,689	8,606	216
11									
12	Return at Present rates	3.94%	2.28%	3.07%	5.91%	8.13%	2.59%	10.56%	219.46%
13	Relative Return	1.00 X	0.58 X	0.78 X	1.50 X	2.07 X	0.66 X	2.68 X	55.76 X
14									
15	Return on Rate Base at System Return	56,338	31,190	5,787	9,032	7,987	1,686	639	16
16	Operating Expenses	237,378	134,901	26,202	34,644	28,362	5,944	7,230	95
17	Uncollectibles	4,660	2,631	506	697	583	122	120	2
18	Income Tax Expense	22,112	12,242	2,271	3,545	3,135	662	251	6
19	Total Distribution Revenue Requirement	320,488	180,965	34,766	47,918	40,067	8,414	8,240	119
20	Less: Other revenue	8,530	4,717	934	1,411	1,041	202	214	11
21	Distribution Rates Revenue Requirement	311,958	176,248	33,832	46,506	39,026	8,212	8,027	108
22	Increase/(Decrease) - Total Dist Revenue	41,296	31,797	5,103	3,541	76	1,628	(264)	(585)
23	M1 Increase	(22)	(12)	(2)	(3)	(3)	(1)	(1)	0
24	Increase/(Decrease) - Total Dist Revenue	41,274	31,785	5,101	3,538	73	1,627	(265)	(585)
25	Percentage Increase/(Decrease) to Full COS	15.3%							
26	Percentage Increase/(Decrease) excl M-01	15.2%	22.0%	17.8%	8.2%	0.2%	24.7%	(3.2%)	(84.4%)
27									

The Narragansett Electric Company
RESULTS OF ALLOCATED COST OF SERVICE STUDY AND REVENUE ALLOCATION

Line	Source	Total	Residential Rate A-16/ A-60	Small C&I Rate C-06	General C&I Rate G-02	200 kW Demand Rate G-32	5000 kW Demand Rate G-62	Lighting Rates S-05/S-06/ S-10/S-14	Propulsion Rate X-01
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
SECTION 2. PROPOSED REVENUE ALLOCATION									
28									
29	Percentage Increase/(Decrease) to Full COS	15.2%	22.0%	17.8%	8.2%	0.2%	24.7%	(3.2%)	(84.4%)
30	Relative Increase (Decrease)	1.00 X	1.44 X	1.16 X	0.54 X	0.01 X	1.62 X	(0.21)X	(5.54)X
31	Input		Max Rel Incr	2.00 X	30.5% Min Rel Incr	0.00 X			
32									
33	Increase / (Decrease) for Full COS	41,274	31,785	5,101	3,538	73	1,627	(265)	(585)
34	Reduce classes over maximum increase 2.00X average	0	-	-	-	-	-	-	-
35	Increase classes under minimum increase 0.00X average	850	-	-	-	-	-	265	585
36		42,124	31,785	5,101	3,538	73	1,627	0	0
37	Re-allocation of Surplus on Rev Req	(850)	(480)	(92)	(127)	(106)	(22)	(22)	(0)
38	Subtotal	41,274	31,305	5,009	3,411	(33)	1,605	(22)	(0)
39	Increase classes under minimum increase 0.00X average	0	(42)	(7)	(5)	33	(2)	22	0
40		0							
41	Increase/(Decrease) - Total Dist Revenue	41,274	31,263	5,002	3,407	0	1,603	0	0
42	Percentage Increase/(Decrease)	15.2%	21.6%	17.4%	7.9%	-	24.3%	-	-
43	Relative Increase (Decrease)	1.00 X	1.42 X	1.14 X	0.52 X	0.00 X	1.60 X	0.00 X	0.00 X
44									
45	Distribution Rates Revenue at Present	270,662	144,451	28,729	42,965	38,950	6,584	8,291	692
46	Increase/(Decrease) - Total Dist Revenue	41,274	31,263	5,002	3,407	0	1,603	0	0
47	Distribution Rates Revenue at Proposed	311,936	175,714	33,731	46,372	38,950	8,187	8,291	692
48	Other Revenue	8,552	4,729	936	1,414	1,044	203	215	11
49	Total Revenue	320,488	180,443	34,667	47,786	39,994	8,390	8,505	703
50	Operating Expenses	(237,378)	(134,901)	(26,202)	(34,644)	(28,362)	(5,944)	(7,230)	(95)
51	Uncollectibles	(4,660)	(2,625)	(504)	(693)	(582)	(122)	(124)	(10)
52	Income Tax Expense	(22,112)	(12,097)	(2,244)	(3,509)	(3,114)	(655)	(325)	(169)
53	Return on Rate Base at Proposed Rates	56,338	30,820	5,717	8,941	7,935	1,668	827	430
54									
55	Return on Rate Base at Proposed Rates	7.43%	7.34%	7.34%	7.35%	7.38%	7.35%	9.61%	199.10%
56	Relative return	1.00 X	0.99 X	0.99 X	0.99 X	0.99 X	0.99 X	1.29 X	26.80 X
57	Progress Toward Unity		97%	94%	102%	101%	97%	83%	53%

Schedule HSG-4
Development of Proposed Rates

The Narragansett Electric Company
Development of Proposed Rates

Schedule Title	Reference
Index	HSG-4-Index
Rate Design for Residential Rates A-16 / A-60	HSG-4-A
Rate Design for Small C & I - Rate C-06	HSG-4-B
Rate Design for General C&I - Rate G-02	HSG-4-C
Rate Design for Large Demand - Rate G-32 / G-62 (includes Back-up Rate B-32 / B-62)	HSG-4-D
Rate Design for Propulsion - Rate X-01	HSG-4-E
Rate Design for Street and Area Lighting	HSG-4-F
Rate Design for Station Power- Rate M-1	HSG-4-G
2.4 kV Discount and High Voltage Delivery (115 kV) Discount	HSG-4-H
Summary of Proposed Electric Service Rates	HSG-4-I
Summary of Proposed Electric Service Rates- Street and Area Lighting	HSG-4-J
Rate Year Proof of Revenue at PROPOSED Rates	HSG-4-K

**The Narragansett Electric Company
Rate Design for Residential Rates A-16 / A-60**

Line	Year 1		
	Billing Units	Proposed Rates	Revenue
	(a)	(b)	(c)
1	Revenue Allocation		<u><u>\$175,713,761</u></u>
2			
3	<u>Customer Charge:</u>		
4	Monthly Bills- A-16	\$8.50	\$41,203,708
5	Monthly Bills- A-60	\$8.50	3,715,955
6	Customer Charge Revenue		<u><u>44,919,663</u></u>
7			
8	<u>Energy-based Charge:</u>		
9	kWh Sales- A-16	\$0.04438	120,856,882
10	kWh Sales- A-60	\$0.04438	9,918,788
11	Distribution Charge Revenue		<u><u>130,775,670</u></u>
12			
13	Rate A-16 Rev		162,060,591
14	Rate A-60 Rev		13,634,743
15			
16	Total Revenue		<u><u>\$175,695,333</u></u>
17			
18	Difference		(\$18,428)
19			
20	Customer costs per month	Sch. HSG-1C-1, Line 23	\$9.61
21	Demand costs per kW-month	Sch. HSG-1C-1, Line 10	\$11.57
22	Use kW X	0.50	\$5.79
23	Total		\$15.39
24	Use	A-16	\$8.50
25		A-60	\$8.50
26			
27	<u>Item</u>	<u>Source</u>	
28	Line 1	Schedule HSG-3, Line 47	
29	Lines 4-5, Column (a)	Schedule HSG-4L, Lines 10-11	
30	Lines 4-5, Column (b)	Proposed	
31	Lines 9-10, Column (a)	Schedule HSG-4L, Lines 10-11	
32	Lines 9-10, Column (b)	Proposed, to produce revenue allocation	

**The Narragansett Electric Company
Rate Design for Small C & I - Rate C-06**

Line	Billing Units	Proposed Rates	Revenue
	(a)	(b)	(c)
1	Revenue Allocation		<u><u>\$33,730,938</u></u>
2			
3	<u>Customer Charge:</u>		
4	Monthly Bills- Metered	\$13.00	\$8,016,920
5	Monthly Bills- Unmetered	\$8.75	86,678
6	Customer Charge Revenue		<u><u>8,103,598</u></u>
7			
8	<u>Energy-based Charge:</u>		
9	kWh Sales- Metered	\$0.04273	25,445,118
10	kWh Sales- Unmetered	\$0.04273	149,353
11			<u>25,594,471</u>
12			
13	Over 25 kVA- Metered	\$1.85	14,430
14	Over 25 kVA- Unmetered	\$1.85	16,139
15			<u>30,569</u>
16	Distribution Charge Revenue		<u><u>25,625,041</u></u>
17			
18	Total Revenue		<u><u>\$33,728,639</u></u>
19			
20	Difference		(\$2,299)
21			
22	Customer costs per month	Sch. HSG-1C-1, Line 23	\$13.78
23	Demand costs per kW-month	Sch. HSG-1C-1, Line 10	\$11.63
24	Use kW X	0.25	\$2.91
25	Total		\$16.69
26	Use		\$13.00
27			
28	<u>Item</u>	<u>Source</u>	
29	Line 1	Schedule HSG-3, Line 47	
30	Lines 4-5, Column (a)	Schedule HSG-4L, Lines 14-15	
31	Lines 9-10, Column (a)	Schedule HSG-4L, Line 32, Line 36	
32	Lines 13-14, Column (a)	Schedule HSG-4L, Line 33, Line 37	
33	Lines 4-5, Column (b)	Proposed	
34	Lines 13-14, Column (b)	Proposed (same as present)	
35	Lines 9-10, Columns (b)	Proposed, to produce revenue allocation	

**The Narragansett Electric Company
Rate Design for General C&I - Rate G-02**

Line	Billing Units	Proposed Rates	Revenue
	(a)	(b)	(c)
1	Revenue Allocation		<u><u>\$46,371,963</u></u>
2			
3	<u>Customer Charge:</u>		
4	Monthly Bills	104,935	\$145.00
5	Customer Charge Revenue		<u><u>15,215,642</u></u>
6			
7	<u>Usage-based Charges:</u>		
8	kWh Sales	1,290,927,306	0.00608
9			7,848,838
10	Demand Billing Units (in excess of 10kW)	3,594,077	\$6.50
11			23,361,497
12	HVD Billing Credit Units	64,848	(\$0.42)
13			(27,236)
14	HVM Discount	46,425,977	(0.050%)
15	Distribution Charge Revenue		<u><u>31,159,907</u></u>
16	Total Revenue		<u><u>\$46,375,549</u></u>
17			
18	Difference		\$3,586
19			
20	Customer costs per month	Sch. HSG-1C-1, Line 23	\$28.46
21	Demand costs per kW-month	Sch. HSG-1C-1, Line 10	\$11.84
22	Demand costs included		10
23	Fixed charge indicated		\$146.87
24	Use		\$145.00
25			
26	<u>Item</u>	<u>Source</u>	
27	Line 1	Schedule HSG-3, Line 47	
28	Lines 4, 8, 10, 12, 14, Column (a)	Schedule HSG-4L, Line 16	
29	Line 4, Column (b)	Proposed	
30	Line 10, Column (b)	Proposed	
31	Line 12, Column (b)	Schedule HSG-1C-4	
32	Line 14, Column (b)	Same % as present	
33	Line 8, Column (b)	Proposed, to produce revenue allocation	

The Narragansett Electric Company
Rate Design for Large Demand - Rate G-32 / G-62 (includes Back-up Rate B-32 / B-62)

Line		Billing Units	Proposed Rates	Revenue
		(a)	(b)	(c)
1	Revenue Allocation- G-32	\$38,949,805		<u><u>\$47,136,311</u></u>
2	Revenue Allocation- G-62	\$8,186,505		
3	<u>Customer Charge:</u>			
4	Monthly Bills	B-32 60	\$1,100.00	\$66,172
5		G-32 / G-62 13,403	\$1,100.00	\$14,743,034
6	Customer Charge Revenue	<u>13,463</u>		<u>14,809,206</u>
7	/			
8	<u>Energy-based Charge:</u>			
9	kWh Sales	B-32 Supplemental 13,230,918	\$0.00631	83,487
10	kWh Sales	G-32 / G-62 2,359,849,091	\$0.00631	14,890,648
11		<u>2,373,080,009</u>		<u>14,974,135</u>
12	<u>Demand Charge (Over 200 kW)</u>			
13	Demand Billing Units	B-32 Back-up 95,646	\$0.92	\$87,995
14		B-32 Supplemental 31,317	\$5.00	\$156,586
15		G-32 3,512,410	\$5.00	\$17,562,051
16		<u>3,639,374</u>		<u>\$17,806,632</u>
17	/			
18	HVD Billing Credit Units	B-32 0	(\$0.42)	0
19		G-32 2,286,043	(\$0.42)	(960,138)
20		<u>2,286,043</u>		<u>(960,138)</u>
21	/			
22	HVM Discount	\$48,559,764	(0.942%)	(\$457,243)
23	Second Feeder Service	295,668	\$3.28	969,791
24	Distribution Charge Revenue			<u>32,333,176</u>
25	/			
26	Total Revenue			<u>\$47,142,382</u>
27	/			
28	<u>Design of Back-up Demand Charge</u>			
29	Revenue Requirement (Demand and Energy Based Charges)			\$32,692,772
30	Demand billing Units (Supplemental and G-32 Demands in excess of 200 kW)			3,543,727
31	Back-up Demand Charge before Discount			\$9.22
32	Back-up Demand Charge after Discount of	90.0%		\$0.92
33	/			
34	Difference			\$6,071
35			<u>G-32</u>	<u>G-62</u>
36	Customer costs per month	Sch. HSG-1C-1, Line 23	\$127.23	\$2,105.13
37	Demand costs per kW-month	Sch. HSG-1C-1, Line 10	\$8.30	\$7.91
38	Demand costs included	200	\$1,660.21	
39	Fixed charge indicated		\$1,787.44	\$2,105.13
40	Use		\$1,100.00	
41	/			
42	<u>Item</u>		<u>Source</u>	
43	Line 1		Schedule HSG-3, Line 47	
44	Lines 4-5, 9-10, 18-19 and 23, Column (a)		Schedule HSG-4L, Line 12 and Line 17	
45	Lines 13-15, Column (a)		Schedule HSG-4L, Line 26-Line 27, Line 17	
46	Lines 4-5, 14-15, Column (b)		Proposed	
47	Lines 18-19 and Line 23, Column (b)		Schedule HSG-1C-4	
48	Lines 9-10, Column (b)		Proposed, to produce revenue allocation	
49	Line 13, Column (b)		Line 32	

**The Narragansett Electric Company
Rate Design for Propulsion - Rate X-01**

Line	Billing Units	Proposed Rates	Revenue
	(a)	(b)	(c)
1	Revenue Allocation		<u><u>\$692,345</u></u>
2			
3	<u>Customer Charge:</u>		
4	Monthly Bills	12 \$21,000.00	\$256,954
5	Customer Charge Revenue		<u><u>256,954</u></u>
6			
7	<u>Energy-based Charge:</u>		
8	kWh Sales	23,962,704 \$0.01816	435,163
9	Distribution Charge Revenue		<u><u>435,163</u></u>
10			
11	Total Revenue		<u><u>\$692,117</u></u>
12			
13	Difference		(\$228)
14			
15	Customer costs per month	Sch. HSG-1C-1, Line 23	\$1,175.39
16			
17	<u>Item</u>	<u>Source</u>	
18	Line 1	Schedule HSG-3, Line 47	
19	Lines 4 and 8, Column (a)	Schedule HSG-4L, Line 23	
20	Line 4, Column (b)	Proposed	
21	Line 8, Column (b)	Proposed, to produce revenue allocation	

**The Narragansett Electric Company
Rate Design for Street and Area Lighting**

Line	Type	Lumens Description	<i>ISR Cap Ex Factor</i> \$0.01422			Current Annual Price w/ ISR	Replace- ment Cost Annual Price	Proposed Annual Price	Annual Revenue	Note	
			S-10 Units	S-14 Units	Annual kWh / unit						
			(a)	(b)	(c)	(d)	(e)	(f)	(g)		
1	Revenue Allocation								\$8,290,730		
2											
3	Incan- descent	LUM INC RWY 105W	6	236	443	\$83.73		\$83.49	\$20,205	(1)	
4		LUM INC RWY 205W (S-14 Only)			27	860	\$89.66		\$83.49	\$2,254	(1)
5			6	263					\$22,459		
6											
7	Mercury Vapor Fixtures	LUM MV RWY 100W	100	2,355	543	\$85.78		\$87.62	\$215,107	(1)	
8		LUM MV RWY 175W	115	239	881	\$90.59		\$87.62	\$31,017	(1)	
9		LUM MV RWY 250W (S-14 Only)			57	1,282	\$138.62		\$142.59	\$8,128	(1)
10		LUM MV RWY 400W	34	716	1,991	\$191.77		\$197.09	\$147,818	(1)	
11		LUM MV RWY 1000W	4	7	4,572	\$228.47		\$197.09	\$2,168	(1)	
12		LUM MV FLD 400W	412	28	1,991	\$209.68		\$225.81	\$99,356	(1)	
13		LUM MV FLD 1000W	207	3	4,572	\$246.38		\$225.81	\$47,420	(1)	
14		LUM MV POST 175W (S-14 Only)			2	881	\$169.33		\$168.72	\$337	(1)
15			872	3,407					\$551,352		
16											
17	High Pressure Sodium Vapor Fixtures	LUM HPS RWY 50W	116	25,601	255	\$81.06		\$83.49	\$2,147,112	(2)	
18		LUM HPS RWY 70W	271	9,152	359	\$82.01		\$84.46	\$795,867	(2)	
19		LUM HPS RWY 100W	192	5,957	493	\$85.07		\$87.62	\$538,775	(2)	
20		LUM HPS RWY 150W	16	8	722	\$88.85		\$91.51	\$2,196	(2)	
21		LUM HPS RWY 250W	185	4,534	1,269	\$138.44		\$142.59	\$672,882	(2)	
22		LUM HPS RWY 400W	41	180	1,962	\$191.36		\$197.09	\$43,557	(2)	
23		WALL HPS 250W 24 HR				2,663	\$210.08		\$216.38	\$0	(2)
24		LUM HPS FLD 250W	1,013	243	1,269	\$164.16		\$169.08	\$212,364	(2)	
25		LUM HPS FLD 400W	1,977	574	2,663	\$219.24		\$225.81	\$576,041	(2)	
26		LUM HPS POST 50W	43	50	255	\$159.12		\$163.89	\$15,242	(2)	
27		LUM HPS POST 100W	40	851	493	\$163.81		\$168.72	\$150,330	(2)	
28	LUM HPS REC 100W-C1				493	\$106.00		\$109.17	\$0	(2)	
29			3,894	47,150					\$5,154,367		
30											
31	Metal Halide	LUM MH FLD 400W	21		1,883	\$208.15		\$214.39	\$4,502	(2)	
32		LUM MH FLD 1000W				4,502	\$245.39		\$252.75	\$0	(2)
33			21	0					\$4,502		
34											
35	Light Emitting Diode ("LED")	LED RWY 20W			88	\$91.86	\$99.30	\$99.30	\$0	(3)	
36		LED RWY 30W			130	\$91.62	\$100.90	\$100.90	\$0	(3)	
37		LED RWY 60W			255	\$102.78	\$108.19	\$108.19	\$0	(3)	
38		LED RWY 140W			589	\$163.41	\$143.81	\$143.81	\$0	(3)	
39		LED RWY 275W			1,153	\$214.67	\$213.81	\$213.81	\$0	(3)	
40		LED POST Top 60W				255	\$151.32	\$173.37	\$173.37	\$0	(3)
41			0	0					\$0		

The Narragansett Electric Company
Rate Design for Street and Area Lighting

Line	Type	Lumens Description	S-10 Units	S-14 Units	Annual kWh / unit	ISR Cap Ex Factor	Current Annual Price w/ ISR	Replace-ment Cost Annual Price	Proposed Annual Price	Annual Revenue	Note
						\$0.01422					
42											
43	Temp-Off	LUM INC RWY 105W TT		1			\$46.46		\$44.34	\$44	(4)
44		LUM MV RWY 400W TT		1			\$98.08		\$104.00	\$104	(4)
45		LUM HPS RWY 50W TT			785		\$46.46		\$44.34	\$34,807	(4)
46		LUM HPS RWY 70W TT			23		\$46.15		\$44.85	\$1,032	(4)
47		LUM HPS RWY 100W TT			183		\$46.84		\$46.53	\$8,515	(4)
48		LUM HPS RWY 250W TT			296		\$72.23		\$75.72	\$22,413	(4)
49		LUM HPS RWY 400W TT			17		\$98.08		\$104.67	\$1,779	(4)
50		LUM HPS POST 100W TT					\$94.08		\$89.60	\$0	(4)
51		LUM HPS FLD 250W TT			1		\$87.67		\$89.79	\$90	(4)
52		LUM HPS FLD 400W TT			3		\$108.82		\$119.92	\$360	(4)
53	LUM MH FLD 400W TT					\$108.82		\$113.86	\$0	(4)	
54				1,310					\$69,144		
55		Total Luminaires	4,793	52,130					\$5,801,823		
56											
57	Standards	POLE-WOOD	178	258			\$133.71		\$137.72	\$60,046	(2)
58		POLE FIBER PT EMB <25' w/out fou	97	455			\$260.22		\$268.02	\$147,947	(2)
59		POLE FIBER RWY <25 w/ foundation	18	628			\$424.14		\$436.86	\$282,212	(2)
60		POLE FIBER RWY => 25 w/ foundation		52			\$473.53		\$487.73	\$25,362	(2)
61		POLE METAL=>25FT (with foundatic	38	1,588			\$484.72		\$499.25	\$811,781	(2)
62		POLE METAL EMBEDDED (S-14 Only)		2			\$405.16		\$417.31	\$835	(2)
63		Total Standards	331	2,983					\$1,328,182		
64											
65	S-10		5,124				Average per unit		\$188.38	\$965,275	
66	S-14			55,113			Average per unit		\$111.86	\$6,164,729	
67									\$7,130,005		
68											
69	S-06 (Decorative)	DEC HPS AG 50W			255		\$295.97	\$250.07	\$250.07	\$0	(3)
70		DEC HPS AG 100W			493		\$287.78	\$250.05	\$250.05	\$0	(3)
71		DEC HPS WL 50W			255		\$328.98	\$277.29	\$277.29	\$0	(3)
72		DEC HPS WL 100W			493		\$332.31	\$289.92	\$289.92	\$0	(3)
73		DEC HPS TR-TW 50W			510		\$513.54	\$389.42	\$389.42	\$0	(3)
74		DEC HPS TR-TW 100W			986		\$523.48	\$408.04	\$408.04	\$0	(3)
75		DEC HPS AG-TW 50W			510		\$701.09	\$545.48	\$545.48	\$0	(3)
76		DEC HPS AG-TW 100W			986		\$684.73	\$545.43	\$545.43	\$0	(3)
77		DEC HPS WL-TW 50W			510		\$767.12	\$599.91	\$599.91	\$0	(3)
78		DEC HPS WL-TW 100W		7		986	\$773.79	\$625.17	\$625.17	\$4,376	(3)
79	DEC LED TR 60W				255	\$151.32	\$173.37	\$173.37	\$0	(3)	
80	DEC LED TR-TW 60W				510	\$405.15	\$346.74	\$346.74	\$0	(3)	
81		Total Luminaires	7						\$4,376		
82											
83	S-06	DEC VILL PT/FDN					\$566.70	\$391.23	\$391.23	\$0	(3)
84	Standards	DEC WASH PT/FDN	7				\$575.78	\$520.32	\$520.32	\$3,642	(3)
85											
86		Total Standards	7						\$3,642		
87		Total Luminaires and Standards	14				Average per unit		\$572.75	\$8,018	
88											
89		TOTAL LIGHTS & STANDARDS	5,138	55,113					\$7,138,023		

The Narragansett Electric Company
Rate Design for Street and Area Lighting

Line	Type	Lumens Description	S-10 Units	S-14 Units	Annual kWh / unit	Current Annual Price w/ ISR	Replace- ment Cost Annual Price	Proposed Annual Price	Annual Revenue	Note
90										
91	S-05									
92	Annual kWh X 1000			30,303,659	MWh	Rate		\$0.03804	\$1,152,751	
93										
94									<u>\$8,290,774</u>	
95										
96								Difference	\$44	
97										
98	Notes:									
99	(1) Proposed = Equivalent Sodium Vapor replacement luminaire									
100	(2) Proposed = [Current X 103.00%]									
101	(3) Proposed = Replacement cost									
102	(4) Proposed Temp-off = Full price X 53.11%									

The Narragansett Electric Company
Rate Design for Station Power- Rate M-1

Line	Billing Units	Proposed Rates	Revenue
	(a)	(b)	(c)
1	Current Customer Charge	\$3,959.09	
2	System Average Percentage Increase	15.2%	
3			
4	<u>Customer Charge:</u>		
5	Monthly Bills	36 \$4,562.82	<u>\$164,262</u>
6			
7			
8			
9			
10			

The Narragansett Electric Company
2.4 kV Discount and High Voltage Delivery (115 kV) Discount

Line	Soruce	Rate
1		
<hr/>		
2	Transformer Billing Credit per kW-month	Sch. HSG-1C-4 (\$0.42)
3		
4		
<hr/>		
4	High Voltage Delivery (115kV) Discount	
5	Incremental Discount - High Voltage Delivery (115kV) per kW-month	- (Line 7+- Line 2) (\$2.86)
6		
7	Second Feeder Service Rate per kW-month	Sch. HSG-1C-1 <u>\$3.28</u>
8		
9		

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC Docket No. 4770
Schedule HSG-4-I
Sheet 1 of 1

The Narragansett Electric Company
Summary of Proposed Electric Service Rates

Line	A-16	A-60	C-06	G-02	B-32 / G-32	X-01	M-1
<i>Source:</i>	(a) <i>Sch. HSG-4-A</i>	(b) <i>Sch. HSG-4-A</i>	(c) <i>Sch. HSG-4-B</i>	(d) <i>Sch. HSG-4-C</i>	(e) <i>Sch. HSG-4-D</i>	(g) <i>Sch. HSG-4-E</i>	(i) <i>Sch. HSG-4-G</i>
1	<u>Customer Charges (per month)</u>		<i>Nominal</i>				
2	\$8.50	\$8.50	\$13.00	\$145.00	\$1,100.00	\$21,000.00	\$4,562.82
3			\$8.75				
4		\$2.75					
5		\$5.50					
6		\$8.50					
7							
8	<u>Distribution per kWh Charge</u>						
9	\$0.04438	\$0.04438	\$0.04273	\$0.00608	\$0.00631	\$0.01816	
10	\$0.04438	\$0.04438					
11	\$0.04438	\$0.04438					
12							
13	<u>Distribution Demand Charges (per kW)</u>						
14				\$6.50			
15					\$5.00		
16							
17					\$0.92		
18							
19							
20	<u>Other Charges and Credits</u>						
21			\$1.85				
22				(\$0.42)	(\$0.42)		
23				(1.0%)	(1.0%)		
24					(\$2.86)		
25					\$2.86		
26					\$0.42		
27							
28	<u>Other Proposed Charges</u>						
29	\$0.00087	\$0.00087	\$0.00087	\$0.00087	\$0.00087	\$0.00087	
30							
31							
32	2,723,229	223,497	598,981	1,290,927	2,373,080	23,963	
33							62,050
34							7,295,727
35							
36	Bills	437,171		kW billed	3,639,374		

The Narragansett Electric Company
Summary of Proposed Electric Service Rates- Street and Area Lighting
S-06, S-10 & S-14

Line	Source:	Lumens	Description	Annual Charge per Fixture	
				Full Service	Temp off
1		S-10/S-14 Luminaires			
2	Incandescent	1,000	LUM INC RWY 105W	\$83.49	\$44.34
3		2,500	LUM INC RWY 205W (S-14 Only)	\$83.49	\$44.34
4					
5	Mercury Vapor	4,400	LUM MV RWY 100W	\$87.62	\$46.53
6		8,500	LUM MV RWY 175W	\$87.62	\$46.53
7		13,000	LUM MV RWY 250W (S-14 Only)	\$142.59	\$75.72
8		23,000	LUM MV RWY 400W	\$197.09	\$104.67
9		63,000	LUM MV RWY 1000W	\$197.09	\$104.67
10		23,000	LUM MV FLD 400W	\$225.81	\$119.92
11		63,000	LUM MV FLD 1000W	\$225.81	\$119.92
12		8,500	LUM MV POST 175W (S-14 Only)	\$168.72	\$89.60
13					
14	Sodium Vapor	4,000	LUM HPS RWY 50W	\$83.49	\$44.34
15		6,300	LUM HPS RWY 70W	\$84.46	\$44.85
16		9,600	LUM HPS RWY 100W	\$87.62	\$46.53
17		16,000	LUM HPS RWY 150W	\$91.51	\$48.60
18		27,500	LUM HPS RWY 250W	\$142.59	\$75.72
19		50,000	LUM HPS RWY 400W	\$197.09	\$104.67
20		27,500	WALL HPS 250W 24 HR	\$216.38	\$114.91
21		27,500	LUM HPS FLD 250W	\$169.08	\$89.79
22		50,000	LUM HPS FLD 400W	\$225.81	\$119.92
23		4,000	LUM HPS POST 50W	\$163.89	\$87.04
24	9,600	LUM HPS POST 100W	\$168.72	\$89.60	
25	9,600	LUM HPS REC 100W-C1	\$109.17	\$57.98	
26					
27	Metal Halide	32,000	LUM MH FLD 400W	\$214.39	\$113.86
28		107,800	LUM MH FLD 1000W	\$252.75	\$134.23
29					
30	Light Emitting Diode	2,000	LED RWY 20W	\$99.30	\$52.73
31		2,700	LED RWY 30W	\$100.90	\$53.58
32		5,000	LED RWY 60W	\$108.19	\$57.45
33		13,000	LED RWY 140W	\$143.81	\$76.37
34		25,000	LED RWY 275W	\$213.81	\$113.55
35		5,000	LED POST Top 60W	\$173.37	\$92.07
36					
37	S-10/S-14 Standards		POLE-WOOD	\$137.72	\$73.14
38			POLE FIBER PT EMB <25' w/out foundati	\$268.02	\$142.34
39			POLE FIBER RWY <25 w/ foundation	\$436.86	\$232.01
40			POLE FIBER RWY => 25 w/ foundation	\$487.73	\$259.03
41			POLE METAL=>25FT (with foundation)	\$499.25	\$265.15
42			POLE METAL EMBEDDED (S-14 Only)	\$417.31	\$221.63
43					
44	S-06 (Decorative) Luminaires	4,000	DEC HPS TR 50W	\$163.89	
45		9,600	DEC HPS TR 100W	\$168.72	
46		4,000	DEC HPS AG 50W	\$250.07	
47		9,600	DEC HPS AG 100W	\$250.05	
48		4,000	DEC HPS WL 50W	\$277.29	
49		9,600	DEC HPS WL 100W	\$289.92	
50		4,000	DEC HPS TR-TW 50W	\$389.42	
51		9,600	DEC HPS TR-TW 100W	\$408.04	
52		4,000	DEC HPS AG-TW 50W	\$545.48	
53		9,600	DEC HPS AG-TW 100W	\$545.43	
54		4,000	DEC HPS WL-TW 50W	\$599.91	
55		9,600	DEC HPS WL-TW 100W	\$625.17	
56		5,000	DEC LED TR 60W	\$173.37	
57		10,000	DEC LED TR-TW 60W	\$346.74	
58					
59	S-0 (Decorative) Standards		DEC VILL PT/FDN	\$391.23	
60			DEC WASH PT/FDN	\$520.32	

The Narragansett Electric Company
Rate Year Proof of Revenue at PROPOSED Rates

Line	Code	Description	Includes	Annual Bills/Fixtures	Customer/Fixture Charge per Month	Customer Charge Revenue	Billing Demand	Demand Charge	Demand Revenue	kWh Deliveries	kWh Charge	kWh Charge Revenue
				(a)	(b)	(c)	(e)	(f)	(g)	(h)	(i)	(j)
1	A-16	Residential	A-16,A-60	5,284,666		\$44,919,663				2,946,725,332		\$130,775,670
2	C-06	Small C&I	C-06,C-08	626,592		\$8,103,598				598,981,304		\$25,625,041
3	G-02	General C&I	G-02	104,935		\$15,215,642	3,594,077		\$23,361,497	1,290,927,306		\$7,848,838
4	G-32	200 kW Demand	B-32,G-32	13,463		\$14,809,206	3,639,374		\$17,806,632	2,373,080,009		\$14,974,135
5	G-62	5000 kW Demand	B-62,G-62									
6	SL	Lighting	S-05,S-06,S-10,S-14	60,254		\$7,138,359				62,049,950		\$1,152,751
7	X-01	Propulsion	X-01	12		\$256,954				23,962,704		\$435,163
8				6,089,923		\$90,443,422	7,233,450		\$41,168,129	7,295,726,605		\$180,811,598
9												
10	A-16	Residential Basic		4,847,495	\$8.50	\$41,203,708			\$0	2,723,228,532	\$0.04438	\$120,856,882
11	A-60	Resid. Low Income		437,171	\$8.50	\$3,715,955			\$0	223,496,800	\$0.04438	\$9,918,788
12	B-32	C&I Back-up		60	\$1,100.00	\$66,172	126,964	See below	244,581	13,230,918	\$0.00631	\$83,487
13	B-32	5000 kW Back-up	Was B-62	-	\$1,100.00	\$0				-	\$0.00631	\$0
14	C-06	Small C&I		616,686	\$13.00	\$8,016,920			\$0	595,486,038	See below	\$25,459,548
15	C-06	Small C&I Unmetrd		9,906	\$8.75	\$86,678			\$0	3,495,266	See below	\$165,492
16	G-02	General C&I		104,935	\$145.00	\$15,215,642	3,594,077	\$6.50	\$23,361,497	1,290,927,306	\$0.00608	\$7,848,838
17	G-32	200 kW Demand		13,246	\$1,100.00	\$14,571,015	2,869,062	\$5.00	\$14,345,311	1,939,578,858	\$0.00631	\$12,238,743
18	G-32	5000 kW Demand	Was G-62	156	\$1,100.00	\$172,019	643,348	See below	\$3,216,740	420,270,233	\$0.00631	\$2,651,905
19	S-05	SL Customer-owned		-		\$0			\$0	30,303,659	\$0.03804	\$1,152,751
20	S-06	SL Decorative		14	\$572.75	\$8,018			\$0	3,451		\$0
21	S-10	SL Private		5,124	\$188.38	\$965,275			\$0	7,793,834		\$0
22	S-14	SL Street		55,116	\$111.86	\$6,165,065			\$0	23,949,006		\$0
23	X-01	X-01		12	\$21,000.00	\$256,954			\$0	23,962,704	\$0.01816	\$435,163
24				6,089,923		\$90,443,422	7,233,450		\$41,168,129	7,295,726,605		\$180,811,598
25												
26	B-32	C&I Back-up	Back-up				95,646	\$0.92	\$87,995			
27			Supplemental				31,317	\$5.00	\$156,586			
28							126,964		\$244,581			
29	B-62	3000 kW Back-Back-up	Back-up					\$0.92	\$0			
30			Supplemental					\$5.00	\$3,216,740			
31							643,348		\$3,216,740			
32	C-06	Small C&I	kWh				643,348		\$3,216,740			
33			Over 25 kVA							595,486,038	\$0.04273	\$25,445,118
34										7,800	\$1.85	\$14,430
35										595,493,838		\$25,459,548
36	C-08	Small C&I Unn	kWh									
37			Over 25 kVA							3,495,266	\$0.04273	\$149,353
38										8,724	\$1.85	\$16,139
39	M-1	Station Power		36	\$4,562.82	164,262				3,503,990		\$165,492

The Narragansett Electric Company
Rate Year Proof of Revenue at PROPOSED Rates

R

Line	Code	Description	Includes	HVD Billing Units (k)	HVD Credit Revenue (l)	HVM Billing Units (m)	HVM Credit Revenue (n)	2nd Feeder Service Billing Units (o)	2nd Feeder Service Revenue (p)	Rate Year Revenue (q)	Revenue Targets (r)	Difference (s)
1	A-16	Residential	A-16,A-60							\$175,695,333	\$175,713,761	(\$18,428)
2	C-06	Small C&I	C-06,C-08							\$33,728,639	\$33,730,938	(\$2,299)
3	G-02	General C&I	G-02	64,848	(\$27,236)	46,425,977	(\$23,192)			\$46,375,549	\$46,371,963	\$3,586
4	G-32	200 kW Demand	B-32,G-32	2,286,043	(\$960,138)	48,559,764	(\$457,243)	295,668	\$969,791	\$47,142,382	\$47,136,311	\$6,071
5	G-62	5000 kW Demand	B-62,G-62							\$8,291,110	\$8,290,730	\$380
6	SL	Lighting	S-05,S-06,S-10,S-14							\$692,117	\$692,345	(\$228)
7	X-01	Propulsion	X-01							\$311,925,130	\$311,936,048	(\$10,918)
8				2,350,891	(\$987,374)	94,985,741	(\$480,435)	295,668	\$969,791	\$311,925,130	\$311,936,048	(\$10,918)
9												
10	A-16	Residential Basic								\$162,060,591		
11	A-60	Resid. Low Income								\$13,634,743		
12	B-32	C&I Back-up				394,239	(\$3,712)			\$390,527		
13	B-32	5000 kW Back-up	Was B-62				\$0			\$0		
14	C-06	Small C&I								\$33,476,468		
15	C-06	Small C&I Unmetrd								\$252,171		
16	G-02	General C&I		64,848	(\$27,236)	46,425,977	(\$23,192)			\$46,375,549		
17	G-32	200 kW Demand		1,392,345	(\$584,785)	42,124,859	(\$396,652)	295,668	\$969,791	\$41,143,423		
18	G-32	5000 kW Demand	Was G-62	893,698	(\$375,353)	6,040,665	(\$56,879)			\$5,608,432		
19	S-05	SL Customer-owned								\$1,152,751		
20	S-06	SL Decorative								\$8,018		
21	S-10	SL Private								\$965,275		
22	S-14	SL Street								\$6,165,065		
23	X-01	X-01								\$692,117		
24				2,350,891	(\$987,374)	94,985,741	(\$480,435)	295,668	\$969,791	\$311,925,130		
25				Rate	(\$0.42)	Rate		Rate	\$3.28			
26	B-32	C&I Back-up	Back-up							\$311,958,048	Requirement	
27			Supplemental							(\$22,000)	MI Increase	
28										\$311,936,048		
29	B-62	3000 kW Back-up	Back-up									
30			Supplemental									
31	C-06	Small C&I	kWh									
32			Over 25 kVA									
33												
34												
35												
36	C-08	Small C&I Unm	kWh									
37			Over 25 kVA									
38												
39	M-1	Station Power										

Schedule HSG-5

Typical Bills and Street and Area Lighting Bill Impacts

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates

Schedule Title	Reference
Index	HSG-5-Index
Rates Applicable to A-16 Rate Customers	HSG-5-A
Rates Applicable to A-60 Rate Customers, Year 1	HSG-5-B
Rates Applicable to A-60 Rate Customers, Year 2	HSG-5-B1
Rates Applicable to A-60 Rate Customers, Year 3	HSG-5-B2
Rates Applicable to C-06 Rate Customers	HSG-5-C
Rates Applicable to G-02 Rate Customers, 200 Hours of Use	HSG-5-D
Rates Applicable to G-02 Rate Customers, 300 Hours of Use	HSG-5-D1
Rates Applicable to G-02 Rate Customers, 400 Hours of Use	HSG-5-D2
Rates Applicable to G-02 Rate Customers, 500 Hours of Use	HSG-5-D3
Rates Applicable to G-02 Rate Customers, 600 Hours of Use	HSG-5-D4
Rates Applicable to G-32 / Former G-62 Rate Customers, 200 Hours of Use	HSG-5-E
Rates Applicable to G-32 / Former G-62 Rate Customers, 300 Hours of Use	HSG-5-E1
Rates Applicable to G-32 / Former G-62 Rate Customers, 400 Hours of Use	HSG-5-E2
Rates Applicable to G-32 / Former G-62 Rate Customers, 500 Hours of Use	HSG-5-E3
Rates Applicable to G-32 / Former G-62 Rate Customers, 600 Hours of Use	HSG-5-E4
Rates Applicable to G-62 Rate Customers Transferring to G-32	HSG-5-E5
Streetlights Annual Bill Impacts	HSG-5-F

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to A-16 Rate Customers

Monthly kWh	Rates Effective November 1, 2017				Proposed Rates				Increase (Decrease)				Percentage of Customers				
	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total					
	\$				\$				% of Total Bill								
150	\$20.66	\$14.27	\$1.46	\$36.39	\$25.03	\$14.28	\$1.64	\$40.95	\$4.37	\$0.01	\$0.18	\$4.56	12.0%	0.0%	0.5%	12.5%	30.1%
300	\$34.72	\$28.55	\$2.64	\$65.91	\$39.96	\$28.55	\$2.85	\$71.36	\$5.24	\$0.00	\$0.21	\$5.45	8.0%	0.0%	0.3%	8.3%	12.9%
400	\$44.10	\$38.06	\$3.42	\$85.58	\$49.91	\$38.07	\$3.67	\$91.65	\$5.81	\$0.01	\$0.25	\$6.07	6.8%	0.0%	0.3%	7.1%	11.6%
500	\$53.48	\$47.58	\$4.21	\$105.27	\$59.86	\$47.59	\$4.48	\$111.93	\$6.38	\$0.01	\$0.27	\$6.66	6.1%	0.0%	0.3%	6.3%	9.6%
600	\$62.85	\$57.09	\$5.00	\$124.94	\$69.81	\$57.11	\$5.29	\$132.21	\$6.96	\$0.02	\$0.29	\$7.27	5.6%	0.0%	0.2%	5.8%	7.7%
700	\$72.23	\$66.61	\$5.79	\$144.63	\$79.76	\$66.63	\$6.10	\$152.49	\$7.53	\$0.02	\$0.31	\$7.86	5.2%	0.0%	0.2%	5.4%	19.0%
1,200	\$119.11	\$114.18	\$9.72	\$243.01	\$129.52	\$114.22	\$10.16	\$253.90	\$10.41	\$0.04	\$0.44	\$10.89	4.3%	0.0%	0.2%	4.5%	6.8%
2,000	\$194.13	\$190.30	\$16.02	\$400.45	\$209.14	\$190.36	\$16.65	\$416.15	\$15.01	\$0.06	\$0.63	\$15.70	3.7%	0.0%	0.2%	3.9%	2.3%

	(1) Present Rates	(2) Proposed Rates
Customer Charge	\$5.00	\$8.50
RE Growth Factor	\$0.78	\$0.79
LJHEAP Charge	\$0.81	\$0.81
Transmission Energy Charge	kWh x \$0.03179	\$0.03180
Base Distribution Energy Charge	kWh x \$0.03664	\$0.04438
Other Distribution Energy Charges	kWh x \$0.00636	\$0.00435
Transition Energy Charge	kWh x \$0.00057	\$0.00057
Energy Efficiency Program Charge	kWh x \$0.01154	\$0.01154
Renewable Energy Distribution Charge	kWh x \$0.00687	\$0.00688
Gross Earnings Tax	4%	4%
Standard Offer Charge	kWh x \$0.09515	\$0.09518

(1) Workpaper HSG-5, Page 1, Column (a)
(2) Workpaper HSG-5, Page 1, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to A-60 Rate Customers, Year 1

Monthly kWh	Rates Effective November 1, 2017					Proposed Rates					Increase (Decrease)					Percentage of Customers			
	Delivery	SOS	GET	Total	Discounted Total	Delivery	SOS	Discount	GET	Total	\$			% of Total Bill					
											Delivery	SOS	GET	Delivery	SOS		GET	Total	
150	\$13.64	\$14.27	\$1.16	\$29.07	\$28.42	\$19.15	\$14.28	(\$5.01)	\$1.18	\$29.60	\$0.50	(\$0.01)	\$0.02	\$0.51	1.7%	0.0%	0.1%	1.8%	32.1%
300	\$25.68	\$28.55	\$2.26	\$56.49	\$53.12	\$33.95	\$28.55	(\$9.38)	\$2.21	\$55.33	(\$1.11)	\$0.00	(\$0.05)	(\$1.16)	-2.0%	0.0%	-0.1%	-2.1%	15.4%
400	\$33.71	\$38.06	\$2.99	\$74.76	\$69.60	\$43.81	\$38.07	(\$12.28)	\$2.90	\$72.50	(\$2.18)	(\$0.01)	(\$0.09)	(\$2.28)	-2.9%	0.0%	-0.1%	-3.0%	12.5%
500	\$41.74	\$47.58	\$3.72	\$93.04	\$86.08	\$53.68	\$47.59	(\$15.19)	\$3.59	\$89.67	(\$3.25)	(\$0.01)	(\$0.13)	(\$3.39)	-3.5%	0.0%	-0.1%	-3.6%	9.6%
600	\$49.77	\$57.09	\$4.45	\$111.31	\$102.55	\$63.54	\$57.11	(\$18.10)	\$4.27	\$106.82	(\$4.33)	(\$0.02)	(\$0.18)	(\$4.53)	-3.9%	0.0%	-0.2%	-4.1%	7.2%
700	\$57.80	\$66.61	\$5.18	\$129.59	\$119.03	\$73.41	\$66.63	(\$21.01)	\$4.96	\$123.99	(\$5.40)	(\$0.02)	(\$0.22)	(\$5.64)	-4.2%	0.0%	-0.2%	-4.4%	16.4%
1,200	\$97.95	\$114.18	\$8.84	\$220.97	\$201.41	\$122.73	\$114.22	(\$35.54)	\$8.39	\$209.80	(\$10.76)	(\$0.04)	(\$0.45)	(\$11.25)	-4.9%	0.0%	-0.2%	-5.1%	5.2%
2,000	\$162.19	\$190.30	\$14.69	\$367.18	\$333.21	\$201.65	\$190.36	(\$58.80)	\$13.88	\$347.09	(\$19.34)	(\$0.06)	(\$0.81)	(\$20.21)	-5.3%	0.0%	-0.2%	-5.5%	1.6%

	(1) Present Rates	(2) Proposed Rates
Customer Charge	\$0.00	\$2.75
RE Growth Factor	\$0.78	\$0.79
LIHEAP Charge	\$0.81	\$0.81
Transmission Energy Charge	kWh x \$0.03179	\$0.180
Base Distribution Energy Charge	kWh x \$0.02317	\$0.04438
Other Distribution Energy Charges	kWh x \$0.00636	\$0.00348
Transition Energy Charge	kWh x \$0.00057	\$0.00057
Energy Efficiency Program Charge	kWh x \$0.01154	\$0.01154
Renewable Energy Distribution Charge	kWh x \$0.00687	\$0.00688
Low Income Discount	4%	15%
Gross Earnings Tax	4%	4%
Standard Offer Charge	kWh x \$0.09515	\$0.09518

(1) Workpaper HSG-5, Page 2, Column (a)
(2) Workpaper HSG-5, Page 2, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to A-60 Rate Customers, Year 2

Monthly kWh	Year 1 Proposed Rates						Year 2 Proposed Rates						Increase (Decrease)						Percentage of Customers		
	Discounted			Total	Discounted			Total	%			%			Total						
	Delivery	SOS	Discount		Delivery	SOS	Discount		GET	Delivery	SOS	GET	Delivery	SOS		GET					
150	\$19.15	\$14.28	(\$5.01)	\$28.42	\$1.18	\$29.60	\$21.90	\$14.28	(\$5.43)	\$30.75	\$1.28	\$32.03	\$2.33	\$0.00	\$0.10	\$2.43	7.9%	0.0%	0.3%	8.2%	32.1%
300	\$33.95	\$28.55	(\$9.38)	\$53.12	\$2.21	\$55.33	\$36.70	\$28.55	(\$9.79)	\$55.46	\$2.31	\$57.77	\$2.34	\$0.00	\$0.10	\$2.44	4.2%	0.0%	0.2%	4.4%	15.4%
400	\$43.81	\$38.07	(\$12.28)	\$69.60	\$2.90	\$72.50	\$46.56	\$38.07	(\$12.69)	\$71.94	\$3.00	\$74.94	\$2.34	\$0.00	\$0.10	\$2.44	3.2%	0.0%	0.1%	3.4%	12.5%
500	\$53.68	\$47.59	(\$15.19)	\$86.08	\$3.59	\$89.67	\$56.43	\$47.59	(\$15.60)	\$88.42	\$3.68	\$92.10	\$2.34	\$0.00	\$0.09	\$2.43	2.6%	0.0%	0.1%	2.7%	9.6%
600	\$63.54	\$57.11	(\$18.10)	\$102.55	\$4.27	\$106.82	\$66.29	\$57.11	(\$18.51)	\$104.89	\$4.37	\$109.26	\$2.34	\$0.00	\$0.10	\$2.44	2.2%	0.0%	0.1%	2.3%	7.2%
700	\$73.41	\$66.63	(\$21.01)	\$119.03	\$4.96	\$123.99	\$76.16	\$66.63	(\$21.42)	\$121.37	\$5.06	\$126.43	\$2.34	\$0.00	\$0.10	\$2.44	1.9%	0.0%	0.1%	2.0%	16.4%
1,200	\$122.73	\$114.22	(\$35.54)	\$201.41	\$8.39	\$209.80	\$125.48	\$114.22	(\$35.96)	\$203.74	\$8.49	\$212.23	\$2.33	\$0.00	\$0.10	\$2.43	1.1%	0.0%	0.0%	1.2%	5.2%
2,000	\$201.65	\$190.36	(\$58.80)	\$333.21	\$13.88	\$347.09	\$204.40	\$190.36	(\$59.21)	\$335.55	\$13.98	\$349.53	\$2.34	\$0.00	\$0.10	\$2.44	0.7%	0.0%	0.0%	0.7%	1.6%

	Year 1 Proposed Rates	Year 2 Proposed Rates
Customer Charge	\$2.75	\$5.50 (1)
RE Growth Factor	\$0.79	\$0.79
LIHEAP Charge	\$0.81	\$0.81
Transmission Energy Charge	kWh x \$0.03180	\$0.03180
Base Distribution Energy Charge	kWh x \$0.04438	\$0.04438
Other Distribution Energy Charges	kWh x \$0.00348	\$0.00348
Transition Energy Charge	kWh x \$0.00057	\$0.00057
Energy Efficiency Program Charge	kWh x \$0.01154	\$0.01154
Renewable Energy Distribution Charge	kWh x \$0.00688	\$0.00688
Low Income Discount	15%	15%
Gross Earnings Tax	4%	4%
Standard Offer Charge	kWh x \$0.09518	\$0.09518

(1) Proposed Year 2 Customer Charge

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to A-60 Rate Customers, Year 3

Monthly kWh	Year 2 Proposed Rates						Year 3 Proposed Rates						Increase (Decrease)						Percentage of Customers					
	Delivery			Discounted Total			Delivery			Discounted Total			Delivery			% of Total Bill								
	SOS	GET	Total	SOS	Discount	Total	SOS	Discount	Total	SOS	Discount	Total	SOS	GET	Total	SOS	GET	Total						
150	\$21.90	\$14.28	\$30.75	\$1.28	(\$5.43)	\$30.75	\$24.90	\$14.28	(\$5.88)	\$33.30	\$1.39	\$34.69	\$2.55	\$0.00	\$0.11	\$2.66	\$0.00	\$0.11	\$2.66	8.0%	0.0%	0.3%	8.3%	32.1%
300	\$36.70	\$28.55	\$55.46	\$2.31	(\$9.79)	\$55.46	\$39.70	\$28.55	(\$10.24)	\$58.01	\$2.42	\$60.43	\$2.55	\$0.00	\$0.11	\$2.66	\$0.00	\$0.11	\$2.66	4.4%	0.0%	0.2%	4.6%	15.4%
400	\$46.56	\$38.07	\$71.94	\$3.00	(\$12.69)	\$71.94	\$49.56	\$38.07	(\$13.14)	\$74.49	\$3.10	\$77.59	\$2.55	\$0.00	\$0.10	\$2.65	\$0.00	\$0.10	\$2.65	3.4%	0.0%	0.1%	3.5%	12.5%
500	\$56.43	\$47.59	\$88.42	\$3.68	(\$15.60)	\$88.42	\$59.43	\$47.59	(\$16.05)	\$90.97	\$3.79	\$94.76	\$2.55	\$0.00	\$0.11	\$2.66	\$0.00	\$0.11	\$2.66	2.8%	0.0%	0.1%	2.9%	9.6%
600	\$66.29	\$57.11	\$104.89	\$4.37	(\$18.51)	\$104.89	\$69.29	\$57.11	(\$18.96)	\$107.44	\$4.48	\$111.92	\$2.55	\$0.00	\$0.11	\$2.66	\$0.00	\$0.11	\$2.66	2.3%	0.0%	0.1%	2.4%	7.2%
700	\$76.16	\$66.63	\$126.43	\$5.06	(\$21.42)	\$126.43	\$79.16	\$66.63	(\$21.87)	\$123.92	\$5.16	\$129.08	\$2.55	\$0.00	\$0.10	\$2.65	\$0.00	\$0.10	\$2.65	2.0%	0.0%	0.1%	2.1%	16.4%
1,200	\$125.48	\$114.22	\$203.74	\$8.49	(\$35.96)	\$203.74	\$128.48	\$114.22	(\$36.41)	\$206.29	\$8.60	\$214.89	\$2.55	\$0.00	\$0.11	\$2.66	\$0.00	\$0.11	\$2.66	1.2%	0.0%	0.1%	1.3%	5.2%
2,000	\$204.40	\$190.36	\$335.55	\$13.98	(\$59.21)	\$335.55	\$207.40	\$190.36	(\$59.66)	\$338.10	\$14.09	\$352.19	\$2.55	\$0.00	\$0.11	\$2.66	\$0.00	\$0.11	\$2.66	0.7%	0.0%	0.0%	0.8%	1.6%

	Year 2 Proposed Rates	Year 3 Proposed Rates
Customer Charge	\$5.50	\$8.50 (1)
RE Growth Factor	\$0.79	\$0.79
LIHEAP Charge	\$0.81	\$0.81
Transmission Energy Charge	kWh x \$0.03180	\$0.03180
Base Distribution Energy Charge	kWh x \$0.04438	\$0.04438
Other Distribution Energy Charges	kWh x \$0.00348	\$0.00348
Transition Energy Charge	kWh x \$0.00057	\$0.00057
Energy Efficiency Program Charge	kWh x \$0.01154	\$0.01154
Renewable Energy Distribution Charge	kWh x \$0.00688	\$0.00688
Low Income Discount	15%	15%
Gross Earnings Tax	4%	4%
Standard Offer Charge	kWh x \$0.09518	\$0.09518

(1) Proposed Year 3 Customer Charge

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to C-06 Rate Customers

Monthly kWh	Rates Effective November 1, 2017					Proposed Rates					Increase (Decrease)					Percentage of Customers		
	Delivery	SOS	GET	Total	Total	Delivery	SOS	GET	Total	Total	% of Total Bill			Total				
											Delivery	SOS	GET		Delivery		SOS	GET
250	\$33.64	\$23.38	\$2.38	\$59.40	\$64.71	\$38.74	\$23.38	\$2.59	\$64.71	\$5.10	\$0.00	\$0.21	\$5.31	8.6%	0.0%	0.4%	8.9%	56.3%
500	\$55.21	\$46.75	\$4.25	\$106.21	\$113.73	\$62.41	\$46.77	\$4.55	\$113.73	\$7.20	\$0.02	\$0.30	\$7.52	6.8%	0.0%	0.3%	7.1%	16.9%
1,000	\$98.35	\$93.50	\$7.99	\$199.84	\$211.75	\$109.75	\$93.53	\$8.47	\$211.75	\$11.40	\$0.03	\$0.48	\$11.91	5.7%	0.0%	0.2%	6.0%	8.1%
1,500	\$141.49	\$140.25	\$11.74	\$293.48	\$309.78	\$157.09	\$140.30	\$12.39	\$309.78	\$15.60	\$0.05	\$0.65	\$16.30	5.3%	0.0%	0.2%	5.6%	5.0%
2,000	\$184.63	\$187.00	\$15.48	\$387.11	\$407.80	\$204.43	\$187.06	\$16.31	\$407.80	\$19.80	\$0.06	\$0.83	\$20.69	5.1%	0.0%	0.2%	5.3%	13.6%

(2) Proposed Rates

(1) Present Rates

Customer Charge				\$10.00					\$13.00
RE Growth Factor				\$1.26					\$1.26
LJHEAP Charge				\$0.81					\$0.81
Transmission Energy Charge	kWh x			\$0.02838					\$0.02839
Base Distribution Charge	kWh x			\$0.03253					\$0.04273
Other Distribution Energy Charges	kWh x			\$0.00639					\$0.00457
Transition Energy Charge	kWh x			\$0.00057					\$0.00057
Energy Efficiency Program Charge	kWh x			\$0.01154					\$0.01154
Renewable Energy Distribution Charge	kWh x			\$0.00687					\$0.00688
Gross Earnings Tax				4%					4%
Standard Offer Charge				\$0.09350					\$0.09353

(1) Workpaper HSG-5, Page 3, Column (a)
(2) Workpaper HSG-5, Page 3, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-02 Rate Customers, 200 Hours of Use

Hours Use: 200	Monthly Power kW	Rates Effective November 1, 2017				Proposed Rates				Increase (Decrease)							
		Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total				
		\$				\$				% of Total Bill							
20	4,000	\$442.50	\$374.00	\$34.02	\$850.52	\$471.46	\$374.12	\$35.23	\$880.81	\$28.96	\$0.12	\$1.21	\$30.29	3.4%	0.0%	0.1%	3.6%
50	10,000	\$967.56	\$935.00	\$79.27	\$1,981.83	\$1,039.66	\$935.30	\$82.29	\$2,057.25	\$72.10	\$0.30	\$3.02	\$75.42	3.6%	0.0%	0.2%	3.8%
100	20,000	\$1,842.66	\$1,870.00	\$154.69	\$3,867.35	\$1,986.66	\$1,870.60	\$160.72	\$4,017.98	\$144.00	\$0.60	\$6.03	\$150.63	3.7%	0.0%	0.2%	3.9%
150	30,000	\$2,717.76	\$2,805.00	\$230.12	\$5,752.88	\$2,933.66	\$2,805.90	\$239.15	\$5,978.71	\$215.90	\$0.90	\$9.03	\$225.83	3.8%	0.0%	0.2%	3.9%

	(1) Present Rates	(2) Proposed Rates
Customer Charge	\$135.00	\$145.00
RE Growth Factor	\$11.85	\$11.85
LIHEAP Charge	\$0.81	\$0.81
Transmission Demand Charge	\$4.37	\$4.37
Transmission Energy Charge	\$0.01096	\$0.01097
Base Distribution Demand Charge-xcs 10 kW	\$4.85	\$6.50
CapEx Factor	\$0.67	\$0.00
Base Distribution Energy Charge	\$0.00468	\$0.00608
Other Distribution Energy Charges	\$0.00344	\$0.00431
Transition Energy Charge	\$0.00057	\$0.00057
Energy Efficiency Program Charge	\$0.01154	\$0.01154
Renewable Energy Distribution Charge	\$0.00687	\$0.00688
Gross Earnings Tax	4%	4%
Standard Offer Charge	\$0.09350	\$0.09353

(1) Workpaper HSG-5, Page 4, Column (a)
(2) Workpaper HSG-5, Page 4, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-02 Rate Customers, 300 Hours of Use

Hours Use: 300	Monthly Power kW	Rates Effective November 1, 2017				Proposed Rates				Increase (Decrease)							
		Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total				
20	6,000	\$518.62	\$561.00	\$44.98	\$1,124.60	\$552.16	\$561.18	\$46.39	\$1,159.73	\$33.54	\$0.18	\$1.41	\$35.13	3.0%	0.0%	0.1%	3.1%
50	15,000	\$1,157.86	\$1,402.50	\$106.68	\$2,667.04	\$1,241.41	\$1,402.95	\$110.18	\$2,754.54	\$83.55	\$0.45	\$3.50	\$87.50	3.1%	0.0%	0.1%	3.3%
100	30,000	\$2,223.26	\$2,805.00	\$209.51	\$5,237.77	\$2,390.16	\$2,805.90	\$216.50	\$5,412.56	\$166.90	\$0.90	\$6.99	\$174.79	3.2%	0.0%	0.1%	3.3%
150	45,000	\$3,288.66	\$4,207.50	\$312.34	\$7,808.50	\$3,538.91	\$4,208.85	\$322.82	\$8,070.58	\$250.25	\$1.35	\$10.48	\$262.08	3.2%	0.0%	0.1%	3.4%

	(1) Present Rates	(2) Proposed Rates
Customer Charge	\$135.00	\$145.00
RE Growth Factor	\$11.85	\$11.85
LIHEAP Charge	\$0.81	\$0.81
Transmission Demand Charge	kW x \$4.37	\$4.37
Transmission Energy Charge	kWh x \$0.01096	\$0.01097
Base Distribution Demand Charge-xcs 10 kW	kW x \$4.85	\$6.50
CapEx Factor	kW x \$0.67	\$0.00
Base Distribution Energy Charge	kWh x \$0.00468	\$0.00608
Other Distribution Energy Charges	kWh x \$0.00344	\$0.00431
Transition Energy Charge	kWh x \$0.00057	\$0.00057
Energy Efficiency Program Charge	kWh x \$0.01154	\$0.01154
Renewable Energy Distribution Charge	kWh x \$0.00687	\$0.00688
Gross Earnings Tax	4%	4%
Standard Offer Charge	kWh x \$0.09350	\$0.09353

(1) Workpaper HSG-5, Page 4, Column (a)
(2) Workpaper HSG-5, Page 4, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-02 Rate Customers, 400 Hours of Use

Hours Use: 400	Monthly Power kW	Rates Effective November 1, 2017				Proposed Rates				Increase (Decrease)							
		Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total				
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				
20	8,000	\$594.74	\$748.00	\$55.95	\$1,398.69	\$632.86	\$748.24	\$57.55	\$1,438.65	\$38.12	\$0.24	\$1.60	\$39.96	2.7%	0.0%	0.1%	2.9%
50	20,000	\$1,348.16	\$1,870.00	\$134.09	\$3,352.25	\$1,443.16	\$1,870.60	\$138.07	\$3,451.83	\$95.00	\$0.60	\$3.98	\$99.58	2.8%	0.0%	0.1%	3.0%
100	40,000	\$2,603.86	\$3,740.00	\$264.33	\$6,608.19	\$2,793.66	\$3,741.20	\$272.29	\$6,807.15	\$189.80	\$1.20	\$7.96	\$198.96	2.9%	0.0%	0.1%	3.0%
150	60,000	\$3,859.56	\$5,610.00	\$394.57	\$9,864.13	\$4,144.16	\$5,611.80	\$406.50	\$10,162.46	\$284.60	\$1.80	\$11.93	\$298.33	2.9%	0.0%	0.1%	3.0%

	(1) Present Rates	(2) Proposed Rates
Customer Charge	\$135.00	\$145.00
RE Growth Factor	\$11.85	\$11.85
LJHEAP Charge	\$0.81	\$0.81
Transmission Demand Charge	kW x \$4.37	\$4.37
Transmission Energy Charge	kWh x \$0.01096	\$0.01097
Base Distribution Demand Charge-xcs 10 kW	kW x \$4.85	\$6.50
CapEx Factor	kW x \$0.67	\$0.00
Base Distribution Energy Charge	kWh x \$0.00468	\$0.00608
Other Distribution Energy Charges	kWh x \$0.00344	\$0.00431
Transition Energy Charge	kWh x \$0.00057	\$0.00057
Energy Efficiency Program Charge	kWh x \$0.01154	\$0.01154
Renewable Energy Distribution Charge	kWh x \$0.00687	\$0.00688
Gross Earnings Tax	4%	4%
Standard Offer Charge	kWh x \$0.09350	\$0.09353

(1) Workpaper HSG-5, Page 4, Column (a)
(2) Workpaper HSG-5, Page 4, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-02 Rate Customers, 500 Hours of Use

Monthly Power kW	Rates Effective November 1, 2017					Proposed Rates					Increase (Decrease)						
	kWh	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total
			\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
20	10,000	\$670.86	\$935.00	\$66.91	\$1,672.77	\$713.56	\$935.30	\$68.70	\$1,717.56	\$42.70	\$0.30	\$1.79	\$44.79	2.6%	0.0%	0.1%	2.7%
50	25,000	\$1,538.46	\$2,337.50	\$161.50	\$4,037.46	\$1,644.91	\$2,338.25	\$165.97	\$4,149.13	\$106.45	\$0.75	\$4.47	\$111.67	2.6%	0.0%	0.1%	2.8%
100	50,000	\$2,984.46	\$4,675.00	\$319.14	\$7,978.60	\$3,197.16	\$4,676.50	\$328.07	\$8,201.73	\$212.70	\$1.50	\$8.93	\$223.13	2.7%	0.0%	0.1%	2.8%
150	75,000	\$4,430.46	\$7,012.50	\$476.79	\$11,919.75	\$4,749.41	\$7,014.75	\$490.17	\$12,254.33	\$318.95	\$2.25	\$13.38	\$334.58	2.7%	0.0%	0.1%	2.8%

Hours Use: 500

	(1) Present Rates	(2) Proposed Rates
Customer Charge	\$135.00	\$145.00
RE Growth Factor	\$11.85	\$11.85
LIHEAP Charge	\$0.81	\$0.81
Transmission Demand Charge	kW x \$4.37	\$4.37
Transmission Energy Charge	kWh x \$0.01096	\$0.01097
Base Distribution Demand Charge-xcs 10 kW	kW x \$4.85	\$6.50
CapEx Factor	kW x \$0.67	\$0.00
Base Distribution Energy Charge	kWh x \$0.00468	\$0.00608
Other Distribution Energy Charges	kWh x \$0.00344	\$0.00431
Transition Energy Charge	kWh x \$0.00057	\$0.00057
Energy Efficiency Program Charge	kWh x \$0.01154	\$0.01154
Renewable Energy Distribution Charge	kWh x \$0.00687	\$0.00688
Gross Earnings Tax	4%	4%
Standard Offer Charge	kWh x \$0.09350	\$0.09353

- (1) Workpaper HSG-5, Page 4, Column (a)
- (2) Workpaper HSG-5, Page 4, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-02 Rate Customers, 600 Hours of Use

Monthly Power kW	Rates Effective November 1, 2017				Proposed Rates				Increase (Decrease)				
	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	
20	12,000	\$746.98	\$1,122.00	\$77.87	\$1,946.85	\$794.26	\$1,122.36	\$79.86	\$1,996.48	\$47.28	\$0.36	\$1.99	\$49.63
50	30,000	\$1,728.76	\$2,805.00	\$188.91	\$4,722.67	\$1,846.66	\$2,805.90	\$193.86	\$4,846.42	\$117.90	\$0.90	\$4.95	\$123.75
100	60,000	\$3,365.06	\$5,610.00	\$373.96	\$9,349.02	\$3,600.66	\$5,611.80	\$383.85	\$9,596.31	\$235.60	\$1.80	\$9.89	\$247.29
150	90,000	\$5,001.36	\$8,415.00	\$559.02	\$13,975.38	\$5,354.66	\$8,417.70	\$573.85	\$14,346.21	\$353.30	\$2.70	\$14.83	\$370.83

Hours Use: 600

	(1) Present Rates	(2) Proposed Rates
Customer Charge	\$135.00	\$145.00
RE Growth Factor	\$11.85	\$11.85
LIHEAP Charge	\$0.81	\$0.81
Transmission Demand Charge	kW x \$4.37	\$4.37
Transmission Energy Charge	kWh x \$0.01096	\$0.01097
Base Distribution Demand Charge-xcs 10 kW	kW x \$4.85	\$6.50
CapEx Factor	kW x \$0.67	\$0.00
Base Distribution Energy Charge	kWh x \$0.00468	\$0.00608
Other Distribution Energy Charges	kWh x \$0.00344	\$0.00431
Transition Energy Charge	kWh x \$0.00057	\$0.00057
Energy Efficiency Program Charge	kWh x \$0.01154	\$0.01154
Renewable Energy Distribution Charge	kWh x \$0.00687	\$0.00688
Gross Earnings Tax	4%	4%
Standard Offer Charge	kWh x \$0.09350	\$0.09353

- (1) Workpaper HSG-5, Page 4, Column (a)
- (2) Workpaper HSG-5, Page 4, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-32 / Former G-62 Rate Customers, 200 Hours of Use

Hours Use: 200

Monthly Power kW	Rates Effective November 1, 2017					Proposed Rates					Increase (Decrease)							
	Delivery	SOS	GET	Total	Total	Delivery	SOS	GET	Total	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total
200	\$3,419.07	\$2,576.00	\$249.79	\$6,244.86	\$6,605.79	\$3,764.36	\$2,577.20	\$264.23	\$6,605.79	\$360.93	\$345.29	\$1.20	\$14.44	\$360.93	5.5%	0.0%	0.2%	5.8%
750	\$12,737.17	\$9,660.00	\$933.22	\$23,330.39	\$24,174.85	\$13,543.36	\$9,664.50	\$966.99	\$24,174.85	\$844.46	\$806.19	\$4.50	\$33.77	\$844.46	3.5%	0.0%	0.1%	3.6%
1,000	\$16,972.67	\$12,880.00	\$1,243.86	\$31,096.53	\$32,160.79	\$17,988.36	\$12,886.00	\$1,286.43	\$32,160.79	\$1,064.26	\$1,015.69	\$6.00	\$42.57	\$1,064.26	3.3%	0.0%	0.1%	3.4%
1,500	\$25,443.67	\$19,320.00	\$1,865.15	\$46,628.82	\$48,132.67	\$26,878.36	\$19,329.00	\$1,925.31	\$48,132.67	\$1,503.85	\$1,434.69	\$9.00	\$60.16	\$1,503.85	3.1%	0.0%	0.1%	3.2%
2,500	\$42,385.67	\$32,200.00	\$3,107.74	\$77,693.41	\$80,076.42	\$44,658.36	\$32,215.00	\$3,203.06	\$80,076.42	\$2,383.01	\$2,272.69	\$15.00	\$95.32	\$2,383.01	2.9%	0.0%	0.1%	3.1%

Present G-32 Rates (1)

Customer Charge	\$825.00	
RE Growth Factor	\$86.86	
LIHEAP Charge	\$0.81	
Transmission Demand Charge	\$4.69	kW x
Transmission Energy Charge	\$0.01123	kWh x
Base Distribution Demand Charge - > 200 kW	\$3.70	kW x
CapEx Factor - > 200 kW	\$0.71	kW x
Base Distribution Energy Charge	\$0.00551	kWh x
Other Distribution Energy Charges	\$0.00349	kWh x
Transition Energy Charge	\$0.00057	kWh x
Energy Efficiency Program Charge	\$0.01154	kWh x
Renewable Energy Distribution Charge	\$0.00687	kWh x
Gross Earnings Tax	4%	
Standard Offer Charge	\$0.06440	kWh x

Proposed G-32 Rates (2)

Customer Charge	\$1,100.00	
RE Growth Factor	\$107.55	
LIHEAP Charge	\$0.81	
Transmission Demand Charge	\$4.43	kW x
Transmission Energy Charge	\$0.01206	kWh x
Base Distribution Demand Charge - > 200 kW	\$5.00	kW x
CapEx Factor - > 200 kW	\$0.00	kW x
Base Distribution Energy Charge	\$0.00631	kWh x
Other Distribution Energy Charges	\$0.00439	kWh x
Transition Energy Charge	\$0.00057	kWh x
Energy Efficiency Program Charge	\$0.01154	kWh x
Renewable Energy Distribution Charge	\$0.00688	kWh x
Gross Earnings Tax	4%	
Standard Offer Charge	\$0.06443	kWh x

- (1) Workpaper HSG-5, Page 5, Column (a)
- (2) Workpaper HSG-5, Page 5, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-32 / Former G-62 Rate Customers, 300 Hours of Use

Hours Use: 300

Monthly Power kW	Rates Effective November 1, 2017					Proposed Rates					Increase (Decrease)							
	Delivery	SOS	GET	Total	Total	Delivery	SOS	GET	Total	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
200	\$4,203.27	\$3,864.00	\$336.14	\$8,403.41	\$8,817.88	\$4,599.36	\$3,865.80	\$352.72	\$8,817.88	\$414.47	\$396.09	\$1.80	\$16.58	\$414.47	4.7%	0.0%	0.2%	4.9%
750	\$15,677.92	\$14,490.00	\$1,257.00	\$31,424.92	\$32,470.17	\$16,674.61	\$14,496.75	\$1,298.81	\$32,470.17	\$1,045.25	\$996.69	\$6.75	\$41.81	\$1,045.25	3.2%	0.0%	0.1%	3.3%
1,000	\$20,893.67	\$19,320.00	\$1,675.57	\$41,889.24	\$43,221.21	\$22,163.36	\$19,329.00	\$1,728.85	\$43,221.21	\$1,331.97	\$1,269.69	\$9.00	\$53.28	\$1,331.97	3.0%	0.0%	0.1%	3.2%
1,500	\$31,325.17	\$28,980.00	\$2,512.72	\$62,817.89	\$64,723.29	\$33,140.86	\$28,993.50	\$2,588.93	\$64,723.29	\$1,905.40	\$1,815.69	\$13.50	\$76.21	\$1,905.40	2.9%	0.0%	0.1%	3.0%
2,500	\$52,188.17	\$48,300.00	\$4,187.01	\$104,675.18	\$107,727.46	\$55,095.86	\$48,322.50	\$4,309.10	\$107,727.46	\$3,052.28	\$2,907.69	\$22.50	\$122.09	\$3,052.28	2.8%	0.0%	0.1%	2.9%

	Present G-32 Rates (1)	Proposed G-32 Rates (2)
Customer Charge	\$825.00	\$1,100.00
RE Growth Factor	\$86.86	\$107.55
LJHEAP Charge	\$0.81	\$0.81
Transmission Demand Charge	\$4.69	\$4.43
Transmission Energy Charge	\$0.01123	\$0.01206
Base Distribution Demand Charge - > 200 kW	\$3.70	\$5.00
CapEx Factor - > 200 kW	\$0.71	\$0.00
Base Distribution Energy Charge	\$0.00551	\$0.00631
Other Distribution Energy Charges	\$0.00349	\$0.00439
Transition Energy Charge	\$0.00057	\$0.00057
Energy Efficiency Program Charge	\$0.01154	\$0.01154
Renewable Energy Distribution Charge	\$0.00687	\$0.00688
Gross Earnings Tax	4%	4%
Standard Offer Charge	\$0.06440	\$0.06443

- (1) Workpaper HSG-5, Page 5, Column (a)
- (2) Workpaper HSG-5, Page 5, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-32 / Former G-62 Rate Customers, 400 Hours of Use

Hours Use: 400

Monthly Power kW	Rates Effective November 1, 2017				Proposed Rates				Increase (Decrease)							
	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total
200	\$4,987.47	\$5,152.00	\$422.48	\$10,561.95	\$5,434.36	\$5,154.40	\$441.20	\$11,029.96	\$446.89	\$2.40	\$18.72	\$468.01	4.2%	0.0%	0.2%	4.4%
750	\$18,618.67	\$19,320.00	\$1,580.78	\$39,519.45	\$19,805.86	\$19,329.00	\$1,630.62	\$40,765.48	\$1,187.19	\$9.00	\$49.84	\$1,246.03	3.0%	0.0%	0.1%	3.2%
1,000	\$24,814.67	\$25,760.00	\$2,107.28	\$52,681.95	\$26,338.36	\$25,772.00	\$2,171.27	\$54,281.63	\$1,523.69	\$12.00	\$63.99	\$1,599.68	2.9%	0.0%	0.1%	3.0%
1,500	\$37,206.67	\$38,640.00	\$3,160.28	\$79,006.95	\$39,403.36	\$38,658.00	\$3,252.56	\$81,313.92	\$2,196.69	\$18.00	\$92.28	\$2,306.97	2.8%	0.0%	0.1%	2.9%
2,500	\$61,990.67	\$64,400.00	\$5,266.28	\$131,656.95	\$65,533.36	\$64,430.00	\$5,415.14	\$135,378.50	\$3,542.69	\$30.00	\$148.86	\$3,721.55	2.7%	0.0%	0.1%	2.8%

Present G-32 Rates (1)

Customer Charge	\$825.00
RE Growth Factor	\$86.86
LIHEAP Charge	\$0.81
Transmission Demand Charge	\$4.69
Transmission Energy Charge	\$0.01123
Base Distribution Demand Charge - > 200 kW	\$3.70
CapEx Factor - > 200 kW	\$0.71
Base Distribution Energy Charge	\$0.00551
Other Distribution Energy Charges	\$0.00349
Transition Energy Charge	\$0.00057
Energy Efficiency Program Charge	\$0.01154
Renewable Energy Distribution Charge	\$0.00687

Proposed G-32 Rates (2)

Customer Charge	\$1,100.00
RE Growth Factor	\$107.55
LIHEAP Charge	\$0.81
Transmission Demand Charge	\$4.43
Transmission Energy Charge	\$0.01206
Base Distribution Demand Charge - > 200 kW	\$5.00
CapEx Factor - > 200 kW	\$0.00
Base Distribution Energy Charge	\$0.00631
Other Distribution Energy Charges	\$0.00439
Transition Energy Charge	\$0.00057
Energy Efficiency Program Charge	\$0.01154
Renewable Energy Distribution Charge	\$0.00688

Gross Earnings Tax	4%
Standard Offer Charge	\$0.06440

- (1) Workpaper HSG-5, Page 5, Column (a)
- (2) Workpaper HSG-5, Page 5, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-32 / Former G-62 Rate Customers, 600 Hours of Use

Hours Use: 600	Monthly Power kW	Rates Effective November 1, 2017				Proposed Rates				Increase (Decrease)							
		Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total				
		\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$				
200	120,000	\$6,555.87	\$7,728.00	\$995.16	\$14,879.03	\$7,104.36	\$7,731.60	\$618.17	\$15,454.13	\$548.49	\$3.60	\$23.01	\$575.10	3.7%	0.0%	0.2%	3.9%
750	450,000	\$24,500.17	\$28,980.00	\$2,228.34	\$55,708.51	\$26,068.36	\$28,993.50	\$2,294.24	\$57,356.10	\$1,568.19	\$13.50	\$65.90	\$1,647.59	2.8%	0.0%	0.1%	3.0%
1,000	600,000	\$32,656.67	\$38,640.00	\$2,970.69	\$74,267.36	\$34,688.36	\$38,658.00	\$3,056.10	\$76,402.46	\$2,031.69	\$18.00	\$85.41	\$2,135.10	2.7%	0.0%	0.1%	2.9%
1,500	900,000	\$48,969.67	\$57,960.00	\$4,455.40	\$111,385.07	\$51,928.36	\$57,987.00	\$4,579.81	\$114,495.17	\$2,958.69	\$27.00	\$124.41	\$3,110.10	2.7%	0.0%	0.1%	2.8%
2,500	1,500,000	\$81,595.67	\$96,600.00	\$7,424.82	\$185,620.49	\$86,408.36	\$96,645.00	\$7,627.22	\$190,680.58	\$4,812.69	\$45.00	\$202.40	\$5,060.09	2.6%	0.0%	0.1%	2.7%

	Present G-32 Rates (1)	Proposed G-32 Rates (2)
Customer Charge	\$825.00	\$1,100.00
RE Growth Factor	\$86.86	\$107.55
LIHEAP Charge	\$0.81	\$0.81
Transmission Demand Charge	\$4.69	\$4.43
Transmission Energy Charge	\$0.01123	\$0.01206
Base Distribution Demand Charge - > 200 kW	\$3.70	\$5.00
CapEx Factor - > 200 kW	\$0.71	\$0.00
Base Distribution Energy Charge	\$0.00551	\$0.00631
Other Distribution Energy Charges	\$0.00349	\$0.00439
Transition Energy Charge	\$0.00057	\$0.00057
Energy Efficiency Program Charge	\$0.01154	\$0.01154
Renewable Energy Distribution Charge	\$0.00687	\$0.00688
Gross Earnings Tax	4%	4%
Standard Offer Charge	\$0.06440	\$0.06443

(1) Workpaper HSG-5, Page 5, Column (a)
(2) Workpaper HSG-5, Page 5, Column (b)

The Narragansett Electric Company
Calculation of Monthly Typical Bill
Total Bill Impact of Proposed Rates
Rates Applicable to G-62 Rate Customers Transferring to G-32

Monthly Power kW	Rates Effective November 1, 2017				G-32 Proposed Rates				Increase (Decrease)								
	G-62		G-32		G-62		G-32		\$		% of Total Bill						
	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total	Delivery	SOS	GET	Total					
8,129	4,393,558	\$241,005	\$282,945	\$21,831	\$545,781	\$260,292	\$283,077	\$22,640	\$566,009	\$19,287	\$132	\$809	\$20,228	3.5%	0.0%	0.1%	3.7%
14,888	7,689,290	\$412,420	\$495,190	\$37,817	\$945,427	\$461,627	\$495,421	\$39,877	\$996,925	\$49,207	\$231	\$2,060	\$51,497	5.2%	0.0%	0.2%	5.4%
11,828	6,040,116	\$328,996	\$388,983	\$29,916	\$747,895	\$363,917	\$389,165	\$31,378	\$784,460	\$34,921	\$181	\$1,463	\$36,565	4.7%	0.0%	0.2%	4.9%
10,615	5,313,608	\$293,237	\$342,196	\$26,476	\$661,910	\$322,155	\$342,356	\$27,688	\$692,199	\$28,917	\$159	\$1,212	\$30,288	4.4%	0.0%	0.2%	4.6%
7,618	3,433,890	\$87,274	\$22,147	\$4,559	\$113,980	\$86,399	\$22,157	\$4,523	\$113,079	(\$876)	\$10	(\$36)	(\$901)	-0.8%	0.0%	0.0%	-0.8%
6,906	3,830,594	\$211,231	\$246,690	\$19,080	\$477,001	\$225,263	\$246,805	\$19,670	\$491,738	\$14,032	\$115	\$589	\$14,737	2.9%	0.0%	0.1%	3.1%
6,060	1,989,712	\$136,862	\$128,137	\$11,042	\$276,041	\$140,420	\$128,197	\$11,192	\$279,809	\$3,558	\$60	\$151	\$3,768	1.3%	0.0%	0.1%	1.4%
4,771	2,449,635	\$144,490	\$157,756	\$12,594	\$314,840	\$147,469	\$157,830	\$12,721	\$318,020	\$2,979	\$73	\$127	\$3,180	0.9%	0.0%	0.0%	1.0%
3,375	1,481,599	\$98,442	\$95,415	\$8,077	\$201,935	\$93,888	\$95,459	\$7,889	\$197,237	(\$4,554)	\$44	(\$188)	(\$4,698)	-2.3%	0.0%	-0.1%	-2.3%
2,915	933,454	\$74,785	\$60,114	\$5,621	\$140,520	\$66,670	\$60,142	\$5,284	\$132,096	(\$8,115)	\$28	(\$337)	(\$8,424)	-5.8%	0.0%	-0.2%	-6.0%
2,504	1,296,338	\$85,224	\$83,484	\$7,030	\$175,738	\$77,943	\$83,523	\$6,728	\$168,194	(\$7,281)	\$39	(\$302)	(\$7,544)	-4.1%	0.0%	-0.2%	-4.3%
448	178,298	\$28,800	\$11,482	\$1,678	\$41,961	\$11,873	\$11,488	\$973	\$24,334	(\$16,927)	\$5	(\$705)	(\$17,627)	-40.3%	0.0%	-1.7%	-42.0%
154	34,286	\$21,325	\$2,208	\$981	\$24,514	\$3,095	\$2,209	\$221	\$5,525	(\$18,230)	\$1	(\$760)	(\$18,989)	-74.4%	0.0%	-3.1%	-77.5%

	G-62		G-32	
	(1) Present Rates	(2) Proposed Rates	(1) Present Rates	(2) Proposed Rates
Customer Charge	\$17,000.00	\$1,100.00		
RE Growth Factor	\$1,928.08	\$107.55		
LIHEAP Charge	\$0.81	\$0.81		
Transmission Demand Charge	kW x \$3.40	\$4.43		
Transmission Energy Charge	kWh x \$0.01524	\$0.01206		
Base Distribution Demand Charge - > 200 kW	kW x \$2.99	\$5.00		
O&M kW Charge	kW x \$0.36	\$0.00		
CapEx Factor - > 200 kW	kWh x \$0.55	\$0.00		
Base Distribution Energy Charge	kWh x \$0.00	\$0.00631		
Other Distribution Energy Charges	kWh x \$0.00282	\$0.00439		
Transition Energy Charge	kWh x \$0.00057	\$0.00057		
Energy Efficiency Program Charge	kWh x \$0.01154	\$0.01154		
Renewable Energy Distribution Charge	kWh x \$0.00687	\$0.00688		
Gross Earnings Tax	4%	4%		
Standard Offer Charge	\$0.06440	\$0.06443		

(1) Workpaper HSG-5, Page 6, Column (a)
(2) Workpaper HSG-5, Page 6, Column (b)

The Narragansett Electric Company
Streetlights Annual Bill Impacts

Per kWh
\$0.16361

Per kWh
\$0.15031

Line	Luminaire/ Standard Type	Lumens Description	Annual kWh	Current Lum / Std Price	RE Growth Charge	Current Annual Revenue	Proposed Current Lum / Std Price	Proposed Annual Revenue	Annual Bill Impact	Annual % Impact
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Incan- descent	LUM INC RWY 105W	443	\$77.43	\$4.68	\$154.59	\$83.49	\$154.76	\$0.17	0.1%
2		LUM INC RWY 205W (S-14 Only)	860	\$77.43	\$4.68	\$222.81	\$83.49	\$217.44	(\$5.38)	(2.4%)
3										
4	Mercury Vapor	LUM MV RWY 100W	543	\$78.06	\$4.68	\$171.58	\$87.62	\$173.92	\$2.34	1.4%
5		LUM MV RWY 175W	881	\$78.06	\$4.68	\$226.88	\$87.62	\$224.72	(\$2.16)	(1.0%)
6		LUM MV RWY 250W (S-14 Only)	1,282	\$120.39	\$4.68	\$334.82	\$142.59	\$339.97	\$5.15	1.5%
7		LUM MV RWY 400W	1,991	\$163.46	\$4.68	\$493.89	\$197.09	\$501.04	\$7.15	1.4%
8		LUM MV RWY 1000W	4,572	\$163.46	\$4.68	\$916.16	\$197.09	\$888.99	(\$27.18)	(3.0%)
9		LUM MV FLD 400W	1,991	\$181.37	\$4.68	\$511.80	\$225.81	\$529.76	\$17.96	3.5%
10		LUM MV FLD 1000W	4,572	\$181.37	\$4.68	\$934.07	\$225.81	\$917.71	(\$16.37)	(1.8%)
11	LUM MV POST 175W (S-14 Only)	881	\$156.80	\$4.68	\$305.62	\$168.72	\$305.82	\$0.20	0.1%	
12										
13	High Pressure Sodium Vapor Fixtures	LUM HPS RWY 50W	255	\$77.43	\$4.68	\$123.83	\$83.49	\$126.50	\$2.67	2.2%
14		LUM HPS RWY 70W	359	\$76.91	\$4.68	\$140.33	\$84.46	\$143.10	\$2.78	2.0%
15		LUM HPS RWY 100W	493	\$78.06	\$4.68	\$163.40	\$87.62	\$166.40	\$3.00	1.8%
16		LUM HPS RWY 150W	722	\$78.58	\$4.68	\$201.39	\$91.51	\$204.71	\$3.33	1.7%
17		LUM HPS RWY 250W	1,269	\$120.39	\$4.68	\$332.69	\$142.59	\$338.01	\$5.32	1.6%
18		LUM HPS RWY 400W	1,962	\$163.46	\$4.68	\$489.14	\$197.09	\$496.68	\$7.54	1.5%
19		WALL HPS 250W 24 HR	2,663	\$172.21	\$4.68	\$612.58	\$216.38	\$621.34	\$8.75	1.4%
20		LUM HPS FLD 250W	1,269	\$146.11	\$4.68	\$358.41	\$169.08	\$364.50	\$6.09	1.7%
21		LUM HPS FLD 400W	2,663	\$181.37	\$4.68	\$621.74	\$225.81	\$630.77	\$9.02	1.5%
22		LUM HPS POST 50W	255	\$155.49	\$4.68	\$201.89	\$163.89	\$206.90	\$5.01	2.5%
23	LUM HPS POST 100W	493	\$156.80	\$4.68	\$242.14	\$168.72	\$247.50	\$5.36	2.2%	
24	LUM HPS REC 100W-C1	493	\$98.99	\$4.68	\$184.33	\$109.17	\$187.95	\$3.62	2.0%	
25										
26	Metal Halide	LUM MH FLD 400W	1,883	\$181.37	\$4.68	\$494.13	\$214.39	\$502.10	\$7.98	1.6%
27		LUM MH FLD 1000W	4,502	\$181.37	\$4.68	\$922.62	\$252.75	\$934.13	\$11.50	1.2%
28										
29	Light Emitting Diode	LED RWY 20W	88	\$90.61	\$4.68	\$109.69	\$99.30	\$117.21	\$7.52	6.9%
30		LED RWY 30W	130	\$89.77	\$4.68	\$115.72	\$100.90	\$125.12	\$9.40	8.1%
31		LED RWY 60W	255	\$99.15	\$4.68	\$145.55	\$108.19	\$151.20	\$5.65	3.9%
32		LED RWY 140W	589	\$155.03	\$4.68	\$256.08	\$143.81	\$237.02	(\$19.05)	(7.4%)
33		LED RWY 275W	1,153	\$198.27	\$4.68	\$391.59	\$213.81	\$391.80	\$0.21	0.1%
34	LED POST Top 60W	255	\$147.69	\$4.68	\$194.09	\$173.37	\$216.38	\$22.29	11.5%	
35										
36	Temporary Turn-Off	LUM INC RWY 105W TT	N/A	\$46.46	\$4.68	\$51.14	\$44.34	\$49.02	(\$2.12)	(4.1%)
37		LUM MV RWY 400W TT	N/A	\$98.08	\$4.68	\$102.76	\$104.00	\$108.68	\$5.92	5.8%
38		LUM HPS RWY 50W TT	N/A	\$46.46	\$4.68	\$51.14	\$44.34	\$49.02	(\$2.12)	(4.1%)
39		LUM HPS RWY 70W TT	N/A	\$46.15	\$4.68	\$50.83	\$44.85	\$49.53	(\$1.30)	(2.6%)
40		LUM HPS RWY 100W TT	N/A	\$46.84	\$4.68	\$51.52	\$46.53	\$51.21	(\$0.31)	(0.6%)
41		LUM HPS RWY 250W TT	N/A	\$72.23	\$4.68	\$76.91	\$75.72	\$80.40	\$3.49	4.5%
42		LUM HPS RWY 400W TT	N/A	\$98.08	\$4.68	\$102.76	\$104.67	\$109.35	\$6.59	6.4%
43		LUM HPS POST 100W TT	N/A	\$94.08	\$4.68	\$98.76	\$89.60	\$94.28	(\$4.48)	(4.5%)
44		LUM HPS FLD 250W TT	N/A	\$87.67	\$4.68	\$92.35	\$89.79	\$94.47	\$2.12	2.3%
45		LUM HPS FLD 400W TT	N/A	\$108.82	\$4.68	\$113.50	\$119.92	\$124.60	\$11.10	9.8%
46	LUM MH FLD 400W TT	N/A	\$108.82	\$4.68	\$113.50	\$113.86	\$118.54	\$5.04	4.4%	
47										

The Narragansett Electric Company
Streetlights Annual Bill Impacts

Per kWh
\$0.16361

Per kWh
\$0.15031

Line	Luminaire/ Standard Type	Lumens Description	Annual kWh	Current Lum / Std Price	RE Growth Charge	Current Annual Revenue	Proposed Current Lum / Std Price	Proposed Annual Revenue	Annual Bill Impact	Annual % Impact
48	Standards	POLE-WOOD		\$133.71			\$137.72	\$137.72	\$4.01	3.0%
49		POLE FIBER PT EMB <25' w/out foundation		\$260.22			\$268.02	\$268.02	\$7.80	3.0%
50		POLE FIBER RWY <25 w/ foundation		\$424.14			\$436.86	\$436.86	\$12.72	3.0%
51		POLE FIBER RWY => 25 w/ foundation		\$473.53			\$487.73	\$487.73	\$14.20	3.0%
52		POLE METAL=>25FT (with foundation)		\$484.72			\$499.25	\$499.25	\$14.53	3.0%
53		POLE METAL EMBEDDED (S-14 Only)		\$405.16			\$417.31	\$417.31	\$12.15	3.0%
54										
55	S-06 (Decorative) Luminaire	DEC HPS WL 100W	493	\$325.30	\$4.68	\$410.64	\$289.92	\$368.70	(\$41.94)	(12.9%)
56										
57	S-06 Standards	DEC VILL PT/FDN		\$566.70	\$4.68	\$571.38	\$391.23	\$395.91	(\$175.47)	(31.0%)
58		DEC WASH PT/FDN		\$575.78	\$4.68	\$580.46	\$520.32	\$525.00	(\$55.46)	(9.6%)
59										
60										
61	S-5 Energy Rate	Includes all rate components				\$0.19015		\$0.18835	(\$0.00180)	(0.9%)

Column Description:

- (a) - (b) per current tariff R.I.P.U.C. 2095, Sheet 3
- (d) & (g) per current tariff R.I.P.U.C. 2095 \$0.39 per luminaire x 12
- (e) per kWh rate per Workpaper HSG-5 Page 7, Column (a)
Column (b) x per kWh rate + Column (c) + Column (d)
S-5 Energy Rate per Workpaper HSG-5, Page 8 Column (a)
- (f) Schedule HSG-4-J
- (h) per kWh rate per Workpaper HSG-5 Page 7, Column (b)
S-5 Energy Rate per Workpaper HSG-5, Page 8 Column (b)
- (j) Column (i) / Column (e)

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC Docket No. 4770
Witness: Gorman

Workpapers of Howard S. Gorman

Workpaper HSG-1

Curriculum Vitae

RESUME OF HOWARD S. GORMAN

Mr. Gorman has more than 25 years of experience in the energy industry, including 15 years in rate and regulatory proceedings, and more than 30 years overall of professional experience in accounting, finance and rate and regulatory matters.

Mr. Gorman has testified as an expert witness on revenue requirements, class cost of service, revenue allocation and rate design. He has testified as an expert witness before the NYS PSC, and also before the Massachusetts Department of Public Utilities, New Jersey Board of Public Utilities, New Hampshire Public Utilities Commission, Ontario Energy Board, Pennsylvania Public Utility Commission and Rhode Island Public Utilities Commission.

Mr. Gorman also has experience in financial modeling, financial analysis and forecasting, developing accounting systems, competitive service, and treasury and financial management. He is a NYS Certified Public Accountant.

PROFESSIONAL EMPLOYMENT

2010 - Present	HSG Group, Inc. <i>President</i>
1997 - 2010	Black & Veatch Corporation (R.J. Rudden Associates, Inc. before 2005) <i>Principal Consultant</i>
1995 - 1997	<i>Independent Consultant</i>
1987 – 1995	Trigen Energy Corporation 1987-1993 <i>Corporate Controller</i> ; Trigen was formed in 1987 1993-1995 <i>Treasurer</i> ; Trigen had IPO with NYSE listing in 1994
1982 - 1987	Coleco Industries, Inc. <i>Director, Treasury</i>
1976 - 1979	Touche Ross & Co. <i>Staff Accountant</i>

PROFESSIONAL EXPERIENCE

Utility Accounting and Costing

Mr. Gorman has performed numerous class cost of service studies for electric and gas utilities, and has also developed and supported revenue requirements, revenue allocation proposals and rate designs. These assignments included development of test year data, establishment of cost causality, selection of allocation bases, development of allocators, and analysis of customer impacts and policy considerations.

Mr. Gorman also has extensive experience in financial accounting. As controller of Trigen Energy Corporation, he founded and built the finance and accounting function; developed reports,

RESUME OF HOWARD S. GORMAN

procedures and management tools; and managed subsidiary controllers across North America, including an IPO with NYSE listing.

Energy Project Analysis

Mr. Gorman has performed financial analyses of energy-related assets, including electric and gas distribution companies, power plants and transmission operators. These valuations included development of cash flows and financial statements based on both regulatory and accounting presentations, and included review of assumptions, analysis of data, modeling and forecasting, sensitivity testing and stress testing.

Among these analyses are: Valuations of power plants, combined heat and power plants and energy companies for the purpose of acquisition; Valuation and assessment of alternatives for the waste-to-energy assets and other energy assets of a diversified company on behalf of an interested acquirer; Valuation of the common stock of a publicly traded multi-jurisdiction utility for the purpose of investment; Assessment of strategic fit and valuation for a utility seeking to diversify into energy-related services; and Assistance with valuation and preparation for negotiation for a private entity seeking a buyer for energy assets.

Energy Project Financing

Mr. Gorman has negotiated and completed transactions including construction and term loans, tax-exempt bonds, taxable bonds, subordinated debt and asset-backed (receivables and inventory) revolving credit facilities. He has worked successfully with lenders and borrowers to source and structure transactions, and was instrumental in negotiating loan documents and in designing power sale and supply procurement contracts to be financed.

Mr. Gorman has supported energy projects in connection with due diligence for financing, including contract review, financial modeling, supply analysis, forward price projections, and economic valuation with cash flow forecasting, and the identification, assessment and mitigation of financial and operating risks for the project and its investors.

Financial Management and Related Areas

Mr. Gorman has developed, sourced and procured competitive contracts for loans as well as for energy, both as principal and on behalf of clients. He has bought and sold interest rate and currency forward contracts for the purpose of managing risk.

He managed the corporate insurance portfolios and the benefit plans for Trigen Energy Corporation and for Coleco Industries.

Computer Modeling and Decision Support

Mr. Gorman is an accomplished modeler with expertise in spreadsheet and database applications, as well as the use of programming tools. He has developed analytical tools to perform valuations, projections and simulations. These models have been applied to financial analysis, cost

RESUME OF HOWARD S. GORMAN

allocations, rate design and pricing, forecasting revenue requirements, numerous tax and accounting matters, supply modeling and optimizations. Several of these models have contained interactive modules for automated scenario testing and sensitivity analysis.

PUBLICATIONS AND PRESENTATIONS

“What Wall Street Needs From FERC,” published in R. J. Rudden Financial, LLC’s *Energy Capital Markets Report*, September 2002

“A Balanced Look at Balance Sheets,” published in R.J. Rudden Financial, LLC’s *Energy Capital Markets Report*, June 2002

“From Wires To Riches: Shareholder Value Creation In The T&D Business,” April 2002 (co-authored).

“Assessment of Retail Choice Programs,” presented at the American Gas Association Rate and Strategic Issues Committee Conference, March 2002

“Value Creation With Transmission Assets,” quoted in *Electrical World’s Special Edition Quarter 1, 2002*, March 2002

“The Remarkable Story on Enron,” published in Scudder’s *Annual End of Year Issue*, December 2001

EDUCATION

New York University, B.S., Accounting, 1976

Harvard Business School, MBA, 1981

RESUME OF HOWARD S. GORMAN

Expert Testimony and Relevant Projects- Howard S. Gorman				
Jurisdiction	Docket	Client	Date	Subject Matter
Pennsylvania	R-2017-2593142	Veolia Energy Philadelphia	2017	Steam system revenue requirements and sales forecast
New York	17-G-0239	Niagara Mohawk (Gas)	2017	Gas class cost of service; revenue allocation; rate design
New York	17-E-0238	Niagara Mohawk (Electric)	2017	Electric class cost of service; revenue allocation; rate design
Pennsylvania	R-2016-2531550	Citizens' Electric of Lewisburg, PA	2016	Electric revenue requirements, class cost of service, revenue allocation, rate design
Pennsylvania	R-2016-2531551	Wellsboro Electric Company	2016	Electric revenue requirements, class cost of service, revenue allocation, rate design
New Hampshire	DE 16-383	Granite State Electric	2016	Electric revenue requirements
New York	16-G-0058 /0059	Brooklyn Union Gas / KeySpan Gas East	2016	Gas class cost of service; revenue allocation; rate design; distribution marginal cost
Massachusetts	DPU 15-155	Massachusetts Electric and Nantucket Electric	2015	Distribution marginal cost study
New York	15-E-0184	Jamestown Board of Public Utilities	2015	Electric revenue requirements
New Hampshire	DE14-180	Energy North Natural Gas	2014	Gas revenue requirements
New York	14-E-0035	Village of Freeport	2014	Electric revenue requirements; sales forecast; rate design
Pennsylvania	R-2013-2386293	Veolia Energy Philadelphia	2013	Steam system revenue requirements and sales forecast
Pennsylvania	R-2013-2372129	Duquesne Light	2013	Electric class cost of service; revenue allocation; rate design
New Hampshire	DE13-063	Granite State Electric	2013	Electric class cost of service (marginal cost); revenue allocation; rate design

RESUME OF HOWARD S. GORMAN

Expert Testimony and Relevant Projects- Howard S. Gorman				
Jurisdiction	Docket	Client	Date	Subject Matter
Ontario	EB-2005-0378 et al	Hydro One Networks Inc.	2013, 2012, 2010, 2009, 2008, 2006, 2005	Electric Transmission and Distribution Cost allocation; OH capitalization rates
Ontario	EB-2007-0905 et al	Ontario Power Generation	2013, 2010, 2006	Electric Cost allocation methodology
New York	12-E-0201	Niagara Mohawk (Electric)	2012	Electric class cost of service; revenue allocation
Rhode Island	RIPUC 4323	Narragansett Electric	2012	Electric class cost of service
New York	11-E-0590	Village of Rockville Centre	2011	Electric revenue requirements; rate design; sales forecast
New York	11-G-0142	Chautauqua Utilities, Inc.	2011	Gas revenue requirements, rate design
Pennsylvania	R-2010-2179103	Kellogg Company (intervenor)	2010	Water class cost of service; revenue allocation
Pennsylvania	R-2010-2179522	Duquesne Light	2010	Electric class cost of service; revenue allocation; rate design
Pennsylvania	R-2010-2172662	Wellsboro Electric	2010	Electric revenue requirements, class cost of service, revenue allocation, rate design
Pennsylvania	R-2010-2172665	Citizens' Electric of Lewisburg, PA	2010	Electric revenue requirements, class cost of service, revenue allocation, rate design
Pennsylvania	R-2010-2174470	Valley Energy, Inc.	2010	Gas revenue requirements, rate design
Pennsylvania	R-2010-2161592	PECO Energy (Gas)	2010	Gas class cost of service; revenue allocation; rate design
Pennsylvania	R-2010-2161575	PECO Energy (Electric)	2010	Electric class cost of service; revenue allocation; rate design

RESUME OF HOWARD S. GORMAN

Expert Testimony and Relevant Projects- Howard S. Gorman				
Jurisdiction	Docket	Client	Date	Subject Matter
New York	10-E-0050	Niagara Mohawk (Electric)	2010	Electric class cost of service
New York	09-E-0862	Jamestown Board of Public Utilities	2009	Electric revenue requirements
Pennsylvania	R-2009 2139884	Philadelphia Gas Works	2009	Gas class cost of service; revenue allocation
Rhode Island	RIPUC 4065	Narragansett Electric	2009	Electric class cost of service; revenue allocation; rate design
Massachusetts	DPU 09-39	Massachusetts Electric and Nantucket Electric	2009	Electric revenue requirements; adjustment mechanisms; class cost of service; revenue allocation; rate design
Pennsylvania	R-2008-2028394	PECO Energy (Gas)	2008	Gas class cost of service; revenue allocation; rate design
Pennsylvania	R-00072350	Wellsboro Electric	2007	Electric revenue requirements; rate design
Pennsylvania	R-00072348	Citizens' Electric of Lewisburg, PA	2007	Electric revenue requirements; rate design
Pennsylvania	R-00072349	Valley Energy, Inc.	2007	Gas revenue requirements; rate design
Pennsylvania	R-00061931	Philadelphia Gas Works	2006	Gas class cost of service; revenue allocation; rate design
New York	06-E-0911	Village of Freeport	2006	Electric revenue requirements; rate design
Pennsylvania	R-00061346	Duquesne Light	2006	Electric class cost of service; revenue allocation; rate design
New York	03-E-1568	Village of Rockville Centre	2003	Electric revenue requirements; rate design; sales forecast
New Jersey	ER020805 06 et al ER020503 03 et al	Gerdau AmeriSteel aka Co-Steel (intervenor)	2002	Electric cost allocation and rate design; industrial rates

RESUME OF HOWARD S. GORMAN

Expert Testimony and Relevant Projects- Howard S. Gorman				
Jurisdiction	Docket	Client	Date	Subject Matter
Pennsylvania	M-00021612	Philadelphia Gas Works	2002	Gas rate unbundling
Pennsylvania	R-00017034	Philadelphia Gas Works	2002	Gas class cost of service
Pennsylvania	R-00006042	Philadelphia Gas Works	2001	Gas class cost of service; recovery of fixed costs

Workpaper HSG-4
Streetlight Replacement Cost Study

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC Docket No. 4770
Workpaper HSG-4

**Street and Area Lighting Replacement Cost Study
for
Decorative and Light Emitting Diode (LED) Lighting**

THE NARRAGANSETT ELECTRIC COMPANY
d/b/a NATIONAL GRID
RIPUC Docket No. 4770
Workpaper HSG-4

Index

	Page
Summary of Luminaire and Standard Cost	1
Allocation of O&M	2
Lamp Replacement Cost	3
Carrying Charge per Unit	4
Annual Carrying Charge	5
A&G Expense	6
Labor Overhead, Materials Overhead, Engineering Overheads, and Transportation/Equipment Costs	7
Materials Purchase Price as of November 2017	8
Replacement Cost Study	9 - 31

The Narragansett Electric Company
Street and Area Lighting Replacement Cost Study
Summary of Luminaire and Standard Cost

Luminaire/Pole Description	Lumen Size (a)	Input Wattage (KW) (b)	Burning Hours (Annual) (c)	Annual kWh (Including Photo Cell) (d)	Annual Lamp	Annual Photo	Annual	Allocation	Allocation of	Total	Carrying	Total Cost
					Replacement Cost (Materials) (e)	Cell Replacement (Material) (f)	Labor & Equipment Cost (g)		Administrative & General (i)		O&M Charge (k)	
Luminaires:												
DEC HPS TR 50W	4,000	0.06107784	4,175	257	\$1.19	\$0.51	\$18.45	\$9.78	\$25.85	\$55.78	\$116.27	\$172.05
DEC HPS TR 100W	9,600	0.11808383	4,175	495	\$1.19	\$0.51	\$18.45	\$18.83	\$25.85	\$64.83	\$116.52	\$181.35
DEC HPS AG 50W	4,000	0.06107784	4,175	257	\$1.19	\$0.51	\$18.45	\$9.78	\$25.85	\$55.78	\$194.29	\$250.07
DEC HPS AG 100W	9,600	0.11808383	4,175	495	\$1.19	\$0.51	\$18.45	\$18.83	\$25.85	\$64.83	\$185.22	\$250.05
DEC HPS WL 50W	4,000	0.06107784	4,175	257	\$1.19	\$0.51	\$18.45	\$9.78	\$25.85	\$55.78	\$221.51	\$277.29
DEC HPS WL 100W	9,600	0.11808383	4,175	495	\$1.19	\$0.51	\$18.45	\$18.83	\$25.85	\$64.83	\$225.09	\$289.92
DEC HPS TR-TW 50W	4,000	0.12215569	4,175	512	\$2.39	\$0.51	\$19.65	\$19.48	\$27.53	\$69.56	\$319.86	\$389.42
DEC HPS TR-TW 100W	9,600	0.23616766	4,175	988	\$2.39	\$0.51	\$19.65	\$37.58	\$27.53	\$87.66	\$320.38	\$408.04
DEC HPS AG-TW 50W	4,000	0.12215569	4,175	512	\$2.39	\$0.51	\$19.65	\$19.48	\$27.53	\$69.56	\$475.92	\$545.48
DEC HPS AG-TW 100W	9,600	0.23616766	4,175	988	\$2.39	\$0.51	\$19.65	\$37.58	\$27.53	\$87.66	\$457.77	\$545.43
DEC HPS WL-TW 50W	4,000	0.12215569	4,175	512	\$2.39	\$0.51	\$19.65	\$19.48	\$27.53	\$69.56	\$530.35	\$599.91
DEC HPS WL-TW 100W	9,600	0.23616766	4,175	988	\$2.39	\$0.51	\$19.65	\$37.58	\$27.53	\$87.66	\$537.51	\$625.17
LED RWY 20W	2,000	0.02107784	4,175	90	\$0.00	\$0.00	\$10.80	\$3.42	\$15.13	\$29.35	\$69.95	\$99.30
LED RWY 30W	3,300	0.03113772	4,175	132	\$0.00	\$0.00	\$10.80	\$5.02	\$15.13	\$30.95	\$69.95	\$100.90
LED RWY 60W	5,000	0.06107784	4,175	257	\$0.00	\$0.00	\$10.80	\$9.78	\$15.13	\$35.71	\$72.48	\$108.19
LED RWY 140W	9,900	0.14107784	4,175	591	\$0.00	\$0.00	\$10.80	\$22.48	\$15.13	\$48.41	\$95.40	\$143.81
LED RWY 275W	25,000	0.27616766	4,175	1,155	\$0.00	\$0.00	\$10.80	\$43.94	\$15.13	\$69.87	\$143.94	\$213.81
LED Post Top 60W	5,000	0.06107784	4,175	257	\$0.00	\$0.00	\$10.80	\$9.78	\$15.13	\$35.71	\$137.66	\$173.37
DEC LED TW Post Top 60W	5,000	0.12215569	4,175	512	\$0.00	\$0.00	\$10.80	\$19.48	\$15.13	\$45.41	\$345.24	\$390.65
Poles:												
DEC VILL PT/FDN	-	-	-	-	-	-	-	-	-	\$0.00	\$391.23	\$391.23
DEC WASH PT/FDN	-	-	-	-	-	-	-	-	-	\$0.00	\$517.34	\$517.34

Column Descriptions:

- (a) streetlight standards
- (b) per Page 2, Column (c)
- (c) per Page 2, Line (4)
- (d) Column (b) x Column (c), rounded to zero decimal places, plus Photo Cell annual kWhs on Page 2, Column (e)
- (e) per Page 3, Column (e)
- (f) per Page 3, Column (e)
- (g) luminaire annual labor & equipment cost per page 3, Column (g) + photo cell annual labor & equipment cost per page 3, Column (g)
- (h) per Page 2, Column (h)
- (i) luminaire annual A&G expense per page 3, Column (j) + photo cell annual A&G expense per page 3, Column (j)
- (j) Sum of Columns (e) through (i)
- (k) per Page 4, Column (c)
- (l) Column (j) + Column (k)

The Narragansett Electric Company
Allocation of O&M

SECTION I: Calculation of Photo Cell Annual kWh

Line No.	
(1) Total Annual Days	365
(2) 24 Burning Hours per Day	24
(3) Burning Hours for WALL HPS 250W 24 HR	8,760
(4) Fisher-Pierce Burning Hour Study/Luminaire Burning Hours for All Other Luminaires	4,175
(5) Photo Cell Burning Hours	4,585
(6) Wattage	0.0005
(7) Photocell Annual kWhs (all luminaires)	2

SECTION II: Calculation of Luminaire kWhs and O&M Cost per Luminaire

Luminaire Description (a)	Annual Burning Hours (b)	Wattage (c)	Luminaire Annual kWh (d)	Photo Cell Annual kWh (e)	Total Annual kWh (f)	O&M Cost per kWh (g)	O&M Cost per Unit (h)
DEC HPS TR 50W	4,175	0.061	255	2	257	\$0.03804	\$9.78
DEC HPS TR 100W	4,175	0.118	493	2	495	\$0.03804	\$18.83
DEC HPS AG 50W	4,175	0.061	255	2	257	\$0.03804	\$9.78
DEC HPS AG 100W	4,175	0.118	493	2	495	\$0.03804	\$18.83
DEC HPS WL 50W	4,175	0.061	255	2	257	\$0.03804	\$9.78
DEC HPS WL 100W	4,175	0.118	493	2	495	\$0.03804	\$18.83
DEC HPS TR-TW 50W	4,175	0.122	510	2	512	\$0.03804	\$19.48
DEC HPS TR-TW 100W	4,175	0.236	986	2	988	\$0.03804	\$37.58
DEC HPS AG-TW 50W	4,175	0.122	510	2	512	\$0.03804	\$19.48
DEC HPS AG-TW 100W	4,175	0.236	986	2	988	\$0.03804	\$37.58
DEC HPS WL-TW 50W	4,175	0.122	510	2	512	\$0.03804	\$19.48
DEC HPS WL-TW 100W	4,175	0.236	986	2	988	\$0.03804	\$37.58
LED RWY 20W	4,175	0.021	88	2	90	\$0.03804	\$3.42
LED RWY 30W	4,175	0.031	130	2	132	\$0.03804	\$5.02
LED RWY 60W	4,175	0.061	255	2	257	\$0.03804	\$9.78
LED RWY 140W	4,175	0.141	589	2	591	\$0.03804	\$22.48
LED RWY 275W	4,175	0.276	1153	2	1,155	\$0.03804	\$43.94
LED Post Top 60W	4,175	0.061	255	2	257	\$0.03804	\$9.78
DEC LED TW Post Top 60W	4,175	0.122	510	2	512	\$0.03804	\$19.48

Line Descriptions:

- (1) No. of days per year
- (2) No. of hours per day
- (3) Line (1) x Line (2)
- (4) Fisher-Pierce Burning Hour Study
- (5) Line (3) - Line (4)
- (6) Streetlighting standards
- (7) Line (5) x Line (6)

Column Descriptions:

- (a) luminaire description
- (b) per Section I, Line (4)
- (c) Streetlighting standards
- (d) Column (b) x Column (c), rounded to zero decimal places
- (e) per Section I, Line (7)
- (f) Column (d) + (e)
- (g) per Schedule HSG-1C-3, Sheet 6 of 6, line 202
- (h) Column (f) x Column (g), rounded to two decimal places

The Narragansett Electric Company
Lamp Replacement Cost

<u>Luminaire Description</u> (a)	<u>Luminaire Short Name Description</u> (b)	<u>Lamp Replacement Cost</u> (c)	<u>Life Multiplier (years)</u> (d)	<u>Annual Material Cost</u> (e)	<u>Labor & Equipment Replacement Cost</u> (f)	<u>Annual Labor & Equipment Cost</u> (g)	<u>Total Annual Labor & Material Costs</u> (h)	<u>A&G Percentage</u> (i)	<u>A&G Expense</u> (j)
Lumen HPS Decorative Post Top 4,000 (50W)	DEC HPS TR 50W	\$6.80	5.7	\$1.19	\$95.49	\$16.75	\$17.94	140.11%	\$25.14
Lumen HPS Decorative Post Top 9,600 (100W)	DEC HPS TR 100W	\$6.80	5.7	\$1.19	\$95.49	\$16.75	\$17.94	140.11%	\$25.14
Lumen HPS Decorative Post Top 4,000 (50W)	DEC HPS AG 50W	\$6.80	5.7	\$1.19	\$95.49	\$16.75	\$17.94	140.11%	\$25.14
Lumen HPS Decorative Post Top 9,600 (100W)	DEC HPS AG 100W	\$6.80	5.7	\$1.19	\$95.49	\$16.75	\$17.94	140.11%	\$25.14
Lumen HPS Decorative Post Top 4,000 (50W)	DEC HPS WL 50W	\$6.80	5.7	\$1.19	\$95.49	\$16.75	\$17.94	140.11%	\$25.14
Lumen HPS Decorative Post Top 9,600 (100W)	DEC HPS WL 100W	\$6.80	5.7	\$1.19	\$95.49	\$16.75	\$17.94	140.11%	\$25.14
Lumen HPS Decorative Post Top - Twin 4,000 (50W)	DEC HPS TR-TW 50W	\$13.60	5.7	\$2.39	\$95.49	\$16.75	\$19.14	140.11%	\$26.82
Lumen HPS Decorative Post Top - Twin 9,600 (100W)	DEC HPS TR-TW 100W	\$13.60	5.7	\$2.39	\$95.49	\$16.75	\$19.14	140.11%	\$26.82
Lumen HPS Decorative Post Top - Twin 4,000 (50W)	DEC HPS AG-TW 50W	\$13.60	5.7	\$2.39	\$95.49	\$16.75	\$19.14	140.11%	\$26.82
Lumen HPS Decorative Post Top - Twin 9,600 (100W)	DEC HPS AG-TW 100W	\$13.60	5.7	\$2.39	\$95.49	\$16.75	\$19.14	140.11%	\$26.82
Lumen HPS Decorative Post Top - Twin 4,000 (50W)	DEC HPS WL-TW 50W	\$13.60	5.7	\$2.39	\$95.49	\$16.75	\$19.14	140.11%	\$26.82
Lumen HPS Decorative Post Top - Twin 9,600 (100W)	DEC HPS WL0-TW 100W	\$13.60	5.7	\$2.39	\$95.49	\$16.75	\$19.14	140.11%	\$26.82
Light Emitting Diode Roadway 2,000 Lumen (20W)	LED RWY 20W	\$0.00	n/a	\$0.00	\$0.00	\$0.00	\$0.00	140.11%	\$0.00
Light Emitting Diode Roadway 3,300 Lumen (30W)	LED RWY 30W	\$0.00	n/a	\$0.00	\$0.00	\$0.00	\$0.00	140.11%	\$0.00
Light Emitting Diode Roadway 5,000 Lumen (60W)	LED RWY 60W	\$0.00	n/a	\$0.00	\$0.00	\$0.00	\$0.00	140.11%	\$0.00
Light Emitting Diode Roadway 9,900 Lumen (140W)	LED RWY 140W	\$0.00	n/a	\$0.00	\$0.00	\$0.00	\$0.00	140.11%	\$0.00
Light Emitting Diode Roadway 25,000 Lumen (275W)	LED RWY 275W	\$0.00	n/a	\$0.00	\$0.00	\$0.00	\$0.00	140.11%	\$0.00
Light Emitting Diode Post Top 5,000 Lumen (60W)	LED Post Top 60W	\$0.00	n/a	\$0.00	\$0.00	\$0.00	\$0.00	140.11%	\$0.00
Light Emitting Diode Decorative Post Top 5,000 Lumen (60W)	DEC LED TW Post Top 60W	\$0.00	n/a	\$0.00	\$0.00	\$0.00	\$0.00	140.11%	\$0.00
Photo Cell (non-LED)	Photo Cell (non-LED)	\$2.93	5.7	\$0.51	\$0.00	\$0.00	\$0.51	140.11%	\$0.71
Photo Cell (LED)	Photo Cell (LED)	\$12.50	10.0	\$1.25	\$95.49	\$9.55	\$10.80	140.11%	\$15.13

Column Descriptions:

- Column (c) lamp material cost per Replacement Cost Studies, pages 9 through 31
- Column (d) Streetlighting Standards
- Column (e) Column (c) ÷ Column (d) rounded to 2 decimal places
- Column (f) Page 23
- Column (g) Column (f) ÷ Column (d)
- Column (h) Column (e) + Column (g)
- Column (i) Administrative & General Costs as a percentage of O&M Costs per page 6, Line (5)
- Column (j) Column (h) x Column (i) rounded to two places

The Narragansett Electric Company
Carrying Charge per Unit

<u>Luminaire/Standard Short Description</u>	<u>Replacement Installed Cost (a)</u>	<u>Replacement Cost Study Page No.</u>	<u>Carrying Charge Rate (b)</u>	<u>Carrying Charge per Unit (c)</u>
<u>High Pressure Sodium Vapor - Post Tops:</u>				
DEC HPS TR 50W	\$716.77	9	16.22%	\$116.27
DEC HPS TR 100W	\$718.37	10	16.22%	\$116.52
DEC HPS AG 50W	\$1,197.81	11	16.22%	\$194.29
DEC HPS AG 100W	\$1,141.89	12	16.22%	\$185.22
DEC HPS WL 50W	\$1,365.60	13	16.22%	\$221.51
DEC HPS WL 100W	\$1,387.68	14	16.22%	\$225.09
DEC HPS TR-TW 50W	\$1,971.93	15	16.22%	\$319.86
DEC HPS TR-TW 100W	\$1,975.10	16	16.22%	\$320.38
DEC HPS AG-TW 50W	\$2,934.01	17	16.22%	\$475.92
DEC HPS AG-TW 100W	\$2,822.15	18	16.22%	\$457.77
DEC HPS WL-TW 50W	\$3,269.58	19	16.22%	\$530.35
DEC HPS WL-TW 100W	\$3,313.73	20	16.22%	\$537.51
<u>Light Emitting Diode</u>				
LED RWY 20W	\$431.23	24	16.22%	\$69.95
LED RWY 30W	\$431.23	25	16.22%	\$69.95
LED RWY 60W	\$446.83	26	16.22%	\$72.48
LED RWY 140W	\$588.15	27	16.22%	\$95.40
LED RWY 275W	\$887.37	28	16.22%	\$143.94
LED Post Top 60W	\$848.67	29	16.22%	\$137.66
DEC LED TW Post Top 60W	\$2,128.39	30	16.22%	\$345.24
<u>Poles:</u>				
DEC VILL PT/FDN	\$2,411.94	21	16.22%	\$391.23
DEC WASH PT/FDN	\$3,189.40	22	16.22%	\$517.34

Column Descriptions:

- (a) Plant Addition per Replacement Cost Study on pages 9 through 30
- (b) per Page 5, Line (5)
- (c) Column (a) x Column (b), rounded to two decimal places

The Narragansett Electric Company
Annual Carrying Charge

(1) <u>Capital Costs:</u>	<u>Capital Structure</u>	<u>Cost Rate</u>	<u>Weighted Return</u>
Long Term Debt	48.47%	4.690%	2.27%
Short Term Debt	0.45%	1.760%	0.01%
Preferred Stock(COP)	0.11%	4.500%	0.00%
Common Equity (COC)	50.97%	10.100%	5.15%
Total	<u>100.00%</u>		<u>7.43%</u>

(2) <u>Income Taxes:</u>	<u>Rate</u>	<u>Formula</u>	
Federal (FIT)	35.00%	$((COP) + COC) / (1 - 0.35) * 0.35 = FIT$	2.77%

(3)	Depreciation Expense		4.00%				
(4)	Property Taxes	<table border="0" style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Expense</td> <td style="text-align: center;">Average Depreciable Plant in Service</td> </tr> <tr> <td style="text-align: center;">\$30,530,258</td> <td style="text-align: center;">\$1,513,907,000</td> </tr> </table>	Expense	Average Depreciable Plant in Service	\$30,530,258	\$1,513,907,000	2.02%
Expense	Average Depreciable Plant in Service						
\$30,530,258	\$1,513,907,000						
(5)	Total Carrying Charge		16.22%				

Line Descriptions:

- (1) Overall Cost of Capital per Cost of Service
- (2) see formula
- (3) Straight-line depreciation rate for the 25 year life of streetlights
- (4) Municipal Property Tax Expense Schedule HSG-1B, page 5 of 6, line 139 (Total); Plant in Service Schedule HSG-1B Sheet 1 of 6, line 24
- (5) Sum of Lines (1) through (4)

The Narragansett Electric Company
A&G Expense

(1) Total Distribution O&M Expense		\$45,024,000
(2) Administrative & General Expense	\$87,771,000	
(3) Employee Benefits	\$24,688,000	
(4) A&G Expense Excluding Benefits		\$63,083,000
(5) Percentage Allocation for A&G Expense		140.11%

- (1) Schedule HSG-1B, Sheet 3 of 6, line 88
- (2) Schedule HSG-1B, Sheet 4 of 6, line 118
- (3) Schedule HSG-1B, Sheet 4 of 6, line 113
- (4) Line (2) - Line (3)
- (5) Line (4) ÷ Line (1), rounded to 4 decimal places

Crew Protection, and Transportation/Equipment Cost
Engineering Study Data
Labor Overhead, Materials Overhead, Engineering Overheads,
and Transportation/Equipment Costs

Line No.

	<u>Labor Overhead:</u>	
(1)	Benefits, Insurance, & Taxes	59.44%
(2)	Bonus Accrual	4.50%
(3)	Time Not Worked	<u>18.56%</u>
(4)	Total Labor Overhead	82.50%
(5)	Supervision & Admin (Standard Rate)	29.67%
	<u>Materials Overhead</u>	
(6)	Stores Handling	23.25%
	<u>Engineering Overheads:</u>	
(7)	Capital O & H	13.00%
(8)	Crew Protection (police detail) - hourly cost	\$59.51
(9)	Transportation Hourly Rate	\$10.22

Line Descriptions:

- (1)-(4) Test Year July 1 2016-June 30 2017 average Monthly Allocation Percentages
- (5) Sum of Line 1 through 4
- (6) Test Year July 1 2016-June 30 2017 average Monthly Allocation Percentages
- (7) Test Year July 1 2016-June 30 2017 average Monthly Allocation Percentages
- (9) per current 2017 S.T.O.R.M. estimates

Materials Purchase Price as of November 2017

Material ID No.	Unit of Measure	Material Description	Unit Price 2017
1	EA	ARM, TWIN, AL, 30 IN, POST TOP LUMINAIRE, BLACK	arm \$388.05
2	EA	BRACKET FLOODLIGHT AL 30IN SINGLE	Bracket \$88.00
3	EA	BRACKET PENDANT UPSWEEP SINGLE AL 6FT	Bracket \$70.87
4	EA	BRACKET PENDANT UPSWEEP SINGLE AL 8FT	Bracket \$39.45
5	EA	CLAMP, GROUND ROD, CU, FOR 5/8IN. DIA GROUND ROD	clamp \$1.11
6	EA	CLAMP, GROUND, CONDUIT, NO 4 - 4/10, 1-1IN - 2IN IPS	clamp \$15.40
7	EA	CONNECTOR, ST LIGHT, #14 AWG TO #2 AWG, AL OR CU	connector \$11.30
8	EA	CONNECTOR, VISE, 4 AWG SOLID OR 5 AWG, AL OR CU	connector \$1.90
9	ES	CONTROL, PELEC, 120-300VAC, 1000W, BLUE, TWISTLOCK	control \$12.50
10	EA	CONTROL, PELEC, 120VAC, 1000W, GRAY, TWISTLOCK	control \$2.93
11	EA	FOUNDATION, LTG, 24IN X 24 IN X 5FT, 11 1/2IN BC, PRCST	foundation \$389.96
12	EA	HOLDER, FUSE, ST LIGHT, #6- #2 AWG, COND	holder \$5.12
13	EA	LAMP, HPS, NON-CYCLING, 50W, MOGUL SCREW BASE, CLEAR	lamp \$6.80
14	EA	LAMP, HID, METAL HALIDE, 400W, MOGUL SCREW BASE, CLEAR	lamp \$8.00
15	EA	LAMP, HPS, NON-CYCLING, 100W, CLEAR, MOGUL BASE	lamp \$6.80
16	EA	LAMP, HPS, NON-CYCLING, 150W, CLEAR, MOGUL BASE	lamp \$6.80
17	EA	LAMP, HPS, NON-CYCLING, 250W, CLEAR, MOGUL BASE	lamp \$8.05
18	EA	LAMP, HPS, NON-CYCLING, 400W, CLEAR, MOGUL BASE	lamp \$9.00
19	EA	LAMP, HPS, NON-CYCLING, 70W, CLEAR, MOGUL BASE	lamp \$6.80
20	EA	LUMINAIRE, FLOODLIGHT, 250W, HPS, 120V, REG BLST	luminaire \$130.18
21	EA	LUMINAIRE, FLOODLIGHT, 400W, HPS, 120V, REG BLST	luminaire \$133.43
22	EA	LUMINAIRE, FLOODLIGHT, 400W, MH, 120V, REG BLST	luminaire \$125.00
23	EA	LUMINAIRE, HORIZONTAL ROADWAY SEMI-CUTOFF II GRAY 50W	luminaire \$69.18
24	EA	LUMINAIRE, POST TOP, 100W HPS, WILLIAMSVILLE, REG BLST	luminaire \$614.00
25	EA	LUMINAIRE, POST TOP, ASPEN GROVE, 50W HPS, 120V, BLACK	luminaire \$485.00
26	EA	LUMINAIRE, POST TOP, IES III, BLK, HPS, REG, 100W, ASPE	luminaire \$447.00
27	EA	LUMINAIRE, POST TOP, SEMI-CUTOFF III, SEMI-GLOSS BLK,	luminaire \$158.17
28	EA	LUMINAIRE, POST TOP, TRADITIONAL, 100W, HPS, REAC BLST	luminaire \$159.25
29	n/a	LUMINAIRE, POST TOP, TRADITIONAL, 60W, LED	luminaire \$460.00
30	EA	LUMINAIRE, POST TOP, WILLIAMSVILLE, 50W HPS, 120V, BLAC	luminaire \$599.00
31	EA	LUMINAIRE, ROADWAY, MSC, IES II, GRAY, NPF REA, 150W	luminaire \$56.11
32	EA	LUMINAIRE, ROADWAY, MSC, IES II, HPS, NPF REA, 100W	luminaire \$69.18
33	EA	LUMINAIRE, ROADWAY, MSC, IES II, HPS, NPF REA, 70W	luminaire \$69.18
34	n/a	LUMINAIRE, ROADWAY, MSC, IES II, LED, 20W	luminaire \$103.88
35	n/a	LUMINAIRE, ROADWAY, MSC, IES II, LED, 30W	luminaire \$103.88
36	n/a	LUMINAIRE, ROADWAY, MSC, IES II, LED, 60W	luminaire \$114.48
37	EA	LUMINAIRE, ROADWAY, MSC, IES III, GRAY, NPF REA, 150W	luminaire \$72.76
38	EA	LUMINAIRE, ROADWAY, MSC, IES III, HPS, AUGO, 250W	luminaire \$85.21
39	EA	LUMINAIRE, ROADWAY, MSC, IES III, HPS, AUGO, 250W	luminaire \$77.50
40	EA	LUMINAIRE, ROADWAY, MSC, IES III, HPS, NPF REA, 100W	luminaire \$68.32
41	EA	LUMINAIRE, ROADWAY, MSC, IES III, HPS, NPF REA, 70W	luminaire \$69.18
42	n/a	LUMINAIRE, ROADWAY, MSC, IES III, LED, 140W	luminaire \$185.50
43	n/a	LUMINAIRE, ROADWAY, MSC, IES III, LED, 275W	luminaire \$388.80
44	EA	LUMINAIRE, UNDERPASS, 250W, HPS, 120V	luminaire \$344.00
45	EA	LUMINAIRE, ROADWAY, MSC, IES III 400W, HPS, AUTO REG	luminaire \$101.27
46	EA	POLE, DÉCOR. VILLAGER, ALUM, ANCHOR BASE W/ ATTACHED T-	pole \$685.77
47	EA	POLE, LIGHT, FBRGL, 24FT, 5IN X 5IN SQ SFT	pole \$455.74
48	EA	POLE, LT, FBRGL, AHR BASE, PENDANT, 25FT MOUNTING	pole \$674.49
49	EA	POLE, PWR, DISTR, 30FT, CL5, SYP, PENTA FINISH	pole \$127.54
50	EA	POLE, ST LT, 14FT LG, ALUM, BLACK, WASHINGTON STYLE	pole \$1,214.00
51	EA	POLE, ST LT, ALUM, 35FT, PENDANT, ANCHOR BASE, PENDANT	pole \$885.00
52	EA	POLE, ST LT, FBRGL, 14FT, BLACK	pole \$259.00
53	EA	ROD, GROUND, SOLID, CU BONDED STL, 5/8IN X 8FT	rod \$9.94
54	FT	WIRE, 1/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, GREEN	wire \$0.29
55	FT	WIRE, 1/C, #6 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, GREEN	wire \$0.47
56	FT	WIRE, 2/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, BLK-W	wire \$0.38
57	FT	WIRE, GENERAL PURPOSE, CU, XHHW, 1C/NO. 10, WHITE, 500FT	wire \$0.22
58	EA	LUMINAIRE, HORIZ CO IES 3 REA 50W 120V	luminaire

The Narragansett Electric Company
Replacement Cost Study

Installed 4,000 Lumen (50W)
High Pressure Sodium Vapor Decorative Post Top
DEC HPS TR 50W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
0811055	CONTROL, PELEC, 120VAC, 1000W, GRAY, TWISTLOCK	1	\$2.93	\$2.93
5824615	LAMP, HPS, NON-CYCLING, 50W, MOGUL SCREW BASE, CLEAR	1	\$6.80	\$6.80
5821461	LUMINAIRE, POST TOP, SEMI-CUTOFF III, SEMI-GLOSS BLK,	1	\$158.17	\$158.17
9202613	WIRE, 1/C, #6 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, GREEN	25	\$0.47	\$11.75
9202617	WIRE, 2/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, BLK-W	21	\$0.38	\$7.94
	Total Materials			<u>\$187.59</u>
			Sales Tax @ 7%	\$13.13
<u>Material Overheads</u>				
	Stores Handling	\$187.59	23.25%	\$43.61
	Total Materials and Material Overheads			<u>\$244.33</u>
<u>Installation</u>				
	Labor & Equipment			<u>\$403.68</u>
	Total Material and Labor			\$648.01
	Capital O & H	\$528.91	13.00%	<u>\$68.76</u>
	PLANT ADDITION			<u>\$716.77</u>

The Narragansett Electric Company
Replacement Cost Study

Installed 9,600 Lumen (100W)
High Pressure Sodium Vapor Decorative Post Top
DEC HPS TR 100W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
0811055	CONTROL, PELEC, 120VAC, 1000W, GRAY, TWISTLOCK	1	\$2.93	\$2.93
2508100	LAMP, HPS, NON-CYCLING, 100W, CLEAR, MOGUL BASE	1	\$6.80	\$6.80
0811079	LUMINAIRE, POST TOP, TRADITIONAL, 100W, HPS, REAC BLST	1	\$159.25	\$159.25
9202613	WIRE, 1/C, #6 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, GREEN	25	\$0.47	\$11.75
9202617	WIRE, 2/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, BLK-W	21	\$0.38	\$7.94
	Total Materials			<u>\$188.67</u>
			Sales Tax @ 7%	\$13.21
<u>Material Overheads</u>				
	Stores Handling	\$188.67	23.25%	\$43.87
	Total Materials and Material Overheads			<u>\$245.75</u>
<u>Installation</u>				
	Labor & Equipment			<u>\$403.68</u>
	Total Material and Labor			\$649.43
	Capital O & H	\$530.33	13.00%	\$68.94
	PLANT ADDITION			<u>\$718.37</u>

The Narragansett Electric Company
Replacement Cost Study

Installed 4,000 Lumen (50W)
High Pressure Sodium Vapor Decorative Post Top
DEC HPS AG 50W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
0811055	CONTROL, PELEC, 120VAC, 1000W, GRAY, TWISTLOCK	1	\$2.93	\$2.93
5824615	LAMP, HPS, NON-CYCLING, 50W, MOGUL SCREW BASE, CLEAR	1	\$6.80	\$6.80
9202342	LUMINAIRE, POST TOP, ASPEN GROVE, 50W HPS, 120V, BLACK	1	\$485.00	\$485.00
9202613	WIRE, 1/C, #6 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, GREEN	25	\$0.47	\$11.75
9202617	WIRE, 2/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, BLK-W	21	\$0.38	\$7.94
	Total Materials			<u>\$514.42</u>
			Sales Tax @ 7%	\$36.01
<u>Material Overheads</u>				
	Stores Handling	\$514.42	23.25%	\$119.60
	Total Materials and Material Overheads			<u>\$670.03</u>
<u>Installation</u>				
	Labor & Equipment			<u>\$403.68</u>
	Total Material and Labor			\$1,073.71
	Capital O & H	\$954.61	13.00%	\$124.10
	PLANT ADDITION			<u>\$1,197.81</u>

The Narragansett Electric Company
Replacement Cost Study

Installed 9,600 Lumen (100W)
High Pressure Sodium Vapor Decorative Post Top
DEC HPS AG 100W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
0811055	CONTROL, PELEC, 120VAC, 1000W, GRAY, TWISTLOCK	1	\$2.93	\$2.93
2508100	LAMP, HPS, NON-CYCLING, 100W, CLEAR, MOGUL BASE	1	\$6.80	\$6.80
2507081	LUMINAIRE, POST TOP, IES III, BLK, HPS, REG, 100W, ASPE	1	\$447.00	\$447.00
9202613	WIRE, 1/C, #6 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, GREEN	25	\$0.47	\$11.75
9202617	WIRE, 2/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, BLK-W	21	\$0.38	\$7.94
	Total Materials			<u>\$476.42</u>
			Sales Tax @ 7%	\$33.35
<u>Material Overheads</u>				
	Stores Handling	\$476.42	23.25%	\$110.77
	Total Materials and Material Overheads			<u>\$620.54</u>
<u>Installation</u>				
	Labor & Equipment			<u>\$403.68</u>
	Total Material and Labor			\$1,024.22
	Capital O & H	\$905.12	13.00%	\$117.67
	PLANT ADDITION			<u>\$1,141.89</u>

The Narragansett Electric Company
Replacement Cost Study

Installed 4,000 Lumen (50W)
High Pressure Sodium Vapor Decorative Post Top
DEC HPS WL 50W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
0811055	CONTROL, PELEC, 120VAC, 1000W, GRAY, TWISTLOCK	1	\$2.93	\$2.93
5824615	LAMP, HPS, NON-CYCLING, 50W, MOGUL SCREW BASE, CLEAR	1	\$6.80	\$6.80
9202343	LUMINAIRE, POST TOP, WILLIAMSVILLE, 50W HPS, 120V, BLAC	1	\$599.00	\$599.00
9202613	WIRE, 1/C, #6 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, GREEN	25	\$0.47	\$11.75
9202617	WIRE, 2/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, BLK-W	21	\$0.38	\$7.94
	Total Materials			\$628.42
			Sales Tax @ 7%	\$43.99
<u>Material Overheads</u>				
	Stores Handling	\$628.42	23.25%	\$146.11
	Total Materials and Material Overheads			\$818.52
<u>Installation</u>				
	Labor & Equipment			\$403.68
	Total Material and Labor			\$1,222.20
	Capital O & H	\$1,103.10	13.00%	\$143.40
	PLANT ADDITION			\$1,365.60

The Narragansett Electric Company
Replacement Cost Study

Installed 9,600 Lumen (100W)
High Pressure Sodium Vapor Decorative Post Top
DEC HPS WL 100W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
0811055	CONTROL, PELEC, 120VAC, 1000W, GRAY, TWISTLOCK	1	\$2.93	\$2.93
2508100	LAMP, HPS, NON-CYCLING, 100W, CLEAR, MOGUL BASE	1	\$6.80	\$6.80
0810946	LUMINAIRE, POST TOP, 100W HPS, WILLIAMSVILLE, REG BLST	1	\$614.00	\$614.00
9202613	WIRE, 1/C, #6 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, GREEN	25	\$0.47	\$11.75
9202617	WIRE, 2/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, BLK-W	21	\$0.38	\$7.94
	Total Materials			<u>\$643.42</u>
			Sales Tax @ 7%	\$45.04
<u>Material Overheads</u>				
	Stores Handling	\$643.42	23.25%	\$149.60
	Total Materials and Material Overheads			<u>\$838.06</u>
<u>Installation</u>				
	Labor & Equipment			<u>\$403.68</u>
	Total Material and Labor			\$1,241.74
	Capital O & H	\$1,122.64	13.00%	\$145.94
	PLANT ADDITION			<u>\$1,387.68</u>

The Narragansett Electric Company
Replacement Cost Study
Installed 4,000 Lumen (50W)
High Pressure Sodium Vapor Decorative Post Top - Twin
DEC HPS TR-TW 50W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
5105296	ARM, TWIN, AL, 30 IN, POST TOP LUMINAIRE, BLACK	1	\$388.05	\$388.05
5105197	CONNECTOR, ST LIGHT, #14 AWG TO #2 AWG, AL OR CU	1	\$11.30	\$11.30
0811055	CONTROL, PELEC, 120VAC, 1000W, GRAY, TWISTLOCK	2	\$2.93	\$5.86
5105198	HOLDER, FUSE, ST LIGHT, #6- #2 AWG, COND	1	\$5.12	\$5.12
5824615	LAMP, HPS, NON-CYCLING, 50W, MOGUL SCREW BASE, CLEAR	2	\$6.80	\$13.60
5821461	LUMINAIRE, POST TOP, SEMI-CUTOFF III, SEMI-GLOSS BLK,	2	\$158.17	\$316.34
9202617	WIRE, 2/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, BLK-W	32	\$0.38	\$12.12
	Total Materials			<u>\$752.39</u>
			Sales Tax @ 7%	\$52.67
<u>Material Overheads</u>				
	Stores Handling	\$752.39	23.25%	\$174.93
	Total Materials and Material Overheads			<u>\$927.36</u>
<u>Installation</u>				
	Labor & Equipment			<u>\$792.48</u>
	Total Material and Labor			\$1,722.47
	Capital O & H	\$1,534.28	13.00%	\$199.46
	PLANT ADDITION			<u>\$1,921.93</u>

The Narragansett Electric Company
Replacement Cost Study

Installed 9,600 Lumen (100W)
High Pressure Sodium Vapor Decorative Post Top - Twin
DEC HPS TR-TW 100W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
5105296	ARM, TWIN, AL, 30 IN, POST TOP LUMINAIRE, BLACK	1	\$388.05	\$388.05
5105197	CONNECTOR, ST LIGHT, #14 AWG TO #2 AWG, AL OR CU	1	\$11.30	\$11.30
0811055	CONTROL, PELEC, 120VAC, 1000W, GRAY, TWISTLOCK	2	\$2.93	\$5.86
5105198	HOLDER, FUSE, ST LIGHT, #6- #2 AWG, COND	1	\$5.12	\$5.12
2508100	LAMP, HPS, NON-CYCLING, 100W, CLEAR, MOGUL BASE	2	\$6.80	\$13.60
0811079	LUMINAIRE, POST TOP, TRADITIONAL, 100W, HPS, REAC BLST	2	\$159.25	\$318.50
9202617	WIRE, 2/C, #10 AWG, 7-STRD, SD-CU, RHH/RHW/USE-2, BLK-W	32	\$0.38	\$12.12
	Total Materials			<u>\$754.55</u>
			Sales Tax @ 7%	\$52.82
<u>Material Overheads</u>				
	Stores Handling	\$754.55	23.25%	\$175.43
	Total Materials and Material Overheads			<u>\$928.80</u>
<u>Installation</u>				
	Labor & Equipment			<u>\$792.48</u>
	Total Material and Labor			\$1,775.28
	Capital O & H	\$1,537.09	13.00%	\$199.82
	PLANT ADDITION			<u>\$1,975.10</u>

The Narragansett Electric Company
Replacement Cost Study

Installed 4,000 Lumen (50W)
High Pressure Sodium Vapor Decorative Post Top - Twin
DEC HPS AG-TW 50W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
5105296	Arm, Twin, Al, 30 In, Post Top Luminaire, Black	1	\$388.05	\$388.05
5105197	Connector, St Light, #14 Awg To #2 Awg, Al Or Cu	1	\$11.30	\$11.30
0811055	Control, Pelec, 120Vac, 1000W, Gray, Twistlock	2	\$2.93	\$5.86
5105198	Holder, Fuse, St Light, #6- #2 Awg, Cond	1	\$5.12	\$5.12
5824615	Lamp, Hps, Non-Cycling, 50W, Mogul Screw Base, Clear	2	\$6.80	\$13.60
9202342	Luminaire, Post Top, Aspen Grove, 50W Hps, 120V, Black	2	\$485.00	\$970.00
9202617	Wire, 2/C, #10 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Blk-W	32	\$0.38	\$12.12
	Total Materials			\$1,406.05
			Sales Tax @ 7%	\$98.42
<u>Material Overheads</u>				
	Stores Handling	\$1,406.05	23.25%	\$326.91
	Total Materials and Material Overheads			\$1,831.38
<u>Installation</u>				
	Labor & Equipment			\$792.48
	Total Material and Labor			\$2,623.87
	Capital O & H	\$2,385.67	13.00%	\$310.14
	PLANT ADDITION			\$2,934.01

The Narragansett Electric Company
Replacement Cost Study

Installed 9,600 Lumen (100W)
High Pressure Sodium Vapor Decorative Post Top - Twin
DEC HPS AG-TW 100W

Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
5105296	Arm, Twin, Al, 30 In, Post Top Luminaire, Black	1	\$388.05	\$388.05
5105197	Connector, St Light, #14 Awg To #2 Awg, Al Or Cu	1	\$11.30	\$11.30
0811055	Control, Pelec, 120Vac, 1000W, Gray, Twistlock	2	\$2.93	\$5.86
5105198	Holder, Fuse, St Light, #6- #2 Awg, Cond	1	\$5.12	\$5.12
2508100	Lamp, Hps, Non-Cycling, 100W, Clear, Mogul Base	2	\$6.80	\$13.60
2507081	Luminaire, Post Top, Ies Iii, Blk, Hps, Reg, 100W, Aspe	2	\$447.00	\$894.00
9202617	Wire, 2/C, #10 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Blk-W	32	\$0.38	\$12.12
Total Materials				\$1,330.05
			Sales Tax @ 7%	\$93.10
<u>Material Overheads</u>				
Stores Handling		\$1,330.05	23.25%	\$309.24
Total Materials and Material Overheads				\$1,732.39
<u>Installation</u>				
Labor & Equipment				\$792.48
Total Material and Labor				\$2,524.88
Capital O & H		\$2,286.68	13.00%	\$297.27
PLANT ADDITION				\$2,822.15

The Narragansett Electric Company
Replacement Cost Study
Installed 4,000 Lumen (50W)
High Pressure Sodium Vapor Decorative Post Top - Twin
DEC HPS WL-TW 50W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
5105296	Arm, Twin, Al, 30 In, Post Top Luminaire, Black	1	\$388.05	\$388.05
5105197	Connector, St Light, #14 Awg To #2 Awg, Al Or Cu	1	\$11.30	\$11.30
0811055	Control, Pelec, 120Vac, 1000W, Gray, Twistlock	2	\$2.93	\$5.86
5105198	Holder, Fuse, St Light, #6- #2 Awg, Cond	1	\$5.12	\$5.12
5824615	Lamp, Hps, Non-Cycling, 50W, Mogul Screw Base, Clear	2	\$6.80	\$13.60
9202343	Luminaire, Post Top, Williamsville, 50W Hps, 120V, Blac	2	\$599.00	\$1,198.00
9202617	Wire, 2/C, #10 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Blk-W	32	\$0.38	\$12.12
Total Materials				\$1,634.05
			Sales Tax @ 7%	\$114.38
<u>Material Overheads</u>				
Stores Handling		\$1,634.05	23.25%	\$379.92
Total Materials and Material Overheads				\$2,128.35
<u>Installation</u>				
Labor & Equipment				\$792.48
Total Material and Labor				\$2,920.84
Capital O & H		\$2,682.64	13.00%	\$348.74
PLANT ADDITION				\$3,269.58

The Narragansett Electric Company
Replacement Cost Study

Installed 9,600 Lumen (100W)
High Pressure Sodium Vapor Decorative Post Top - Twin

DEC HPS WL0-TW 100W
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
5105296	Arm, Twin, Al, 30 In, Post Top Luminaire, Black	1	\$388.05	\$388.05
5105197	Connector, St Light, #14 Awg To #2 Awg, Al Or Cu	1	\$11.30	\$11.30
0811055	Control, Pelec, 120Vac, 1000W, Gray, Twistlock	2	\$2.93	\$5.86
5105198	Holder, Fuse, St Light, #6- #2 Awg, Cond	1	\$5.12	\$5.12
2508100	Lamp, Hps, Non-Cycling, 100W, Clear, Mogul Base	2	\$6.80	\$13.60
0810946	Luminaire, Post Top, 100W Hps, Williamsville, Reg Blst	2	\$614.00	\$1,228.00
9202617	Wire, 2/C, #10 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Blk-W	32	\$0.38	\$12.12
	Total Materials			\$1,664.05
			Sales Tax @ 7%	\$116.48
<u>Material Overheads</u>				
	Stores Handling	\$1,664.05	23.25%	\$386.89
	Total Materials and Material Overheads			\$2,167.42
<u>Installation</u>				
	Labor & Equipment			\$792.48
	Total Material and Labor			\$2,959.91
	Capital O & H	\$2,721.71	13.00%	\$353.82
	PLANT ADDITION			\$3,313.73

The Narragansett Electric Company
Replacement Cost Study
Outdoor Lighting Overhead Poles and Underground Standards

Installed Standard
Underground Service Decorative Standard
DEC VILL PT/FDN
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
9201842	Pole, Décor. Villager, Alum, Anchor Base W/ Attached T-	1	\$685.77	\$685.77
9202617	Wire, 2/C, #10 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Blk-W	21	\$0.38	\$7.94
3503328	Clamp, Ground Rod, Cu, For 5/8In. Dia Ground Rod	1	\$1.11	\$1.11
5821035	Foundation, Ltg, 24In X 24 In X 5Ft, 11 1/2In Bc, Prest	1	\$389.96	\$389.96
3503013	Rod, Ground, Solid, Cu Bonded Stl, 5/8In X 8Ft	1	\$9.94	\$9.94
9202617	Wire, 2/C, #10 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Blk-W	21	\$0.38	\$7.98
4005142	Wire, General Purpose, Cu, Xhhw, 1C/No. 10, White, 500Ft	18	\$0.22	\$3.96
9202616	Wire, 1/C, #10 Awg, 7-Strd, Sd-Cu,Rhh/Rhw/Use-2, Green	21	\$0.29	\$6.09
9202613	Wire, 1/C, #6 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Green	10	\$0.47	\$4.70
	Total Materials			\$1,117.45
			Sales Tax @ 7%	\$78.22
<u>Material Overheads</u>				
	Stores Handling	\$1,117.45	23.25%	\$259.81
	Total Materials and Material Overheads			\$1,455.48
<u>Installation</u>				
	Labor	3.38	\$64.07	\$216.56
	Labor Overheads	\$216.56	112.17%	\$242.92
	Transportation	3.38	\$10.22	\$34.55
	Crew Protection	3.38	\$59.51	\$201.16
	Total Labor and Equipment			\$695.19
	Total Material and Labor			\$2,150.67
	Capital O & H	\$2,009.77	13.00%	\$261.27
	PLANT ADDITION			\$2,411.94

The Narragansett Electric Company
Replacement Cost Study
Outdoor Lighting Overhead Poles and Underground Standards

Installed Standard
Underground Service Decorative Standard
DEC WASH PT/FDN
Rate Class S-06

<u>ID. No.</u>	<u>Description</u>	<u>Quantity</u>	<u>Unit Cost</u>	<u>Extended Cost</u>
<u>Materials</u>				
5104882	Pole, St Lt, 14Ft Lg, Alum, Black, Washington Style	1	\$1,214.00	\$1,214.00
9202617	Wire, 2/C, #10 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Blk-W	20.9	\$0.38	\$7.94
3503328	Clamp, Ground Rod, Cu, For 5/8In. Dia Ground Rod	1	\$1.11	\$1.11
5821035	Foundation, Ltg, 24In X 24 In X 5Ft, 11 1/2In Bc, Prest	1	\$389.96	\$389.96
3503013	Rod, Ground, Solid, Cu Bonded Stl, 5/8In X 8Ft	1	\$9.94	\$9.94
9202617	Wire, 2/C, #10 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Blk-W	21	\$0.38	\$7.98
4005142	Wire, General Purpose, Cu, Xhhw, 1C/No. 10, White, 500Ft	18	\$0.22	\$3.96
9202616	Wire, 1/C, #10 Awg, 7-Strd, Sd-Cu,Rhh/Rhw/Use-2, Green	21	\$0.29	\$6.09
9202613	Wire, 1/C, #6 Awg, 7-Strd, Sd-Cu, Rhh/Rhw/Use-2, Green	10	\$0.47	\$4.70
	Total Materials			\$1,645.68
			Sales Tax @ 7%	\$115.20
<u>Material Overheads</u>				
	Stores Handling	\$1,645.68	23.25%	\$382.62
	Total Materials and Material Overheads			\$2,143.50
<u>Installation</u>				
	Labor	3.38	\$64.07	\$216.56
	Labor Overheads	\$216.56	112.17%	\$242.92
	Transportation	3.38	\$10.22	\$34.55
	Crew Protection	3.38	\$59.51	\$201.16
	Total Labor and Equipment			\$695.19
	Total Material and Labor			\$2,838.69
		\$2,697.79	13.00%	\$350.71
PLANT ADDITION				\$3,189.40

The Narragansett Electric Company
Labor and Equipment Costs

Initial Installation Cost-Single Fixture

**Subject to
Plant Overheads**

Labor

(1) Labor - Hourly Rate	\$64.16		
(2) Installation & Travel Time (Minutes)	135		
(3) Total Direct Labor		\$144.36	\$144.36
(4) Design and Supervision	29.67%	\$42.83	\$42.83
(5) ADD: Overhead Labor Cost	82.50%	<u>\$119.10</u>	
(6) Total Labor		\$306.29	

Equipment

(7) Truck-Aerial 45 ML OC	\$10.22		
(8) Installation & Travel Time (Minutes)	135		
(9) Total Equipment		\$23.00	\$23.00

Work Zone Protection/Police Detail

(10) Work Zone Protection/Police Detail	\$59.51		
(11) Installation & Travel Time (Minutes)	75		
(12) Total Misc		<u>\$74.39</u>	<u>\$74.39</u>
(13) Total Labor & Equipment Cost		<u>\$403.68</u>	<u>\$284.58</u>

Initial Installation Cost-Twin Fixture

Labor

(14) Labor - Hourly Rate	\$64.16		
(15) Installation & Travel Time (Minutes)	270		
(16) Total Direct Labor		\$288.72	\$288.72
(17) Design and Supervision	29.67%	\$85.66	\$85.66
(18) ADD: Overhead Labor Cost	82.50%	<u>\$238.19</u>	
(19) Total Labor		\$612.58	

Equipment

(20) Truck-Aerial 45 ML OC	\$10.22		
(21) Installation & Travel Time (Minutes)	270		
(22) Total Equipment		\$46.00	\$46.00

Work Zone Protection/Police Detail

(23) Work Zone Protection/Police Detail	\$59.51		
(24) Installation & Travel Time (Minutes)	135		
(25) Total Misc		<u>\$133.91</u>	<u>\$133.91</u>
(26) Total Labor & Equipment Cost		<u>\$792.48</u>	<u>\$554.29</u>

Lamp/Photo Cell Replacement

Labor

(27) Labor - Hourly Rate	\$64.16		
(28) Installation & Travel Time (Minutes)	45		
(29) Total Direct Labor		\$48.12	
(30) ADD: Overhead Labor Cost	82.50%	<u>\$39.70</u>	
(31) Total Labor		\$87.82	

Equipment

(32) Truck-Aerial 45 ML OC	\$10.22		
(33) Installation & Travel Time (Minutes)	45		
(34) Total Equipment		<u>\$7.67</u>	
(35) Total Labor & Equipment Cost		<u>\$95.49</u>	

The Narragansett Electric Company
20 Watt LED Roadway Installed Cost

Tariff Code Description

Roadway luminaire, 20 watt, Light Emitting Diode

<u>Material Cost</u>	<u>Overhead Percentage (b)</u>	<u>Qty (c)</u>	<u>Unit Price (d)</u>	<u>Total Price (e)</u>
<u>Description</u>				
Roadway Luminaire w/ LED Lamp		1	\$103.88	\$103.88
Photoelectric Control		1	\$12.50	\$12.50
Bracket		1	\$65.00	\$65.00
Wire (Luminaire, 4-#10, 18')		1	\$1.15	<u>\$1.15</u>
Sub-Total Material				\$182.53
Sales Tax			Sales Tax @ 7%	\$12.78
<u>Material Overhead</u>				
Stores Handling		\$182.53	23.25%	<u>\$42.44</u>
Total Material and Overhead				\$237.75
<u>Installation</u>				
Labor & Equipment				<u>\$147.66</u>
Total Material and Labor				\$385.41
Plant Overhead		\$352.44	13.00%	<u>\$45.82</u>
Total Plant Addition				\$431.23

The Narragansett Electric Company
30 Watt LED Roadway Installed Cost

Tariff Code Description

Roadway luminaire, 30 watt, Light Emitting Diode

<u>Material Cost</u>	<u>Overhead Percentage</u> (b)	<u>Qty</u> (c)	<u>Unit Price</u> (d)	<u>Total Price</u> (e)
<u>Description</u>				
Roadway Luminaire w/ LED Lamp		1	\$103.88	\$103.88
Photoelectric Control		1	\$12.50	\$12.50
Bracket		1	\$65.00	\$65.00
Wire (Luminaire, 4-#10, 18')		1	\$1.15	<u>\$1.15</u>
Sub-Total Material				\$182.53
Sales Tax			Sales Tax @ 7%	\$12.78
<u>Material Overhead</u>				
Stores Handling		\$182.53	23.25%	<u>\$42.44</u>
Total Material and Overhead				\$237.75
<u>Crew Cost</u>				
Labor & Equipment				<u>\$147.66</u>
Total Material and Labor				\$385.41
Plant Overhead		\$352.44	13.00%	<u>\$45.82</u>
Total Plant Addition				\$431.23

The Narragansett Electric Company
60 Watt LED Roadway Installed Cost

Tariff Style Description

Roadway luminaire, 60 watt, Light Emitting Diode

<u>Material Cost</u>	<u>Overhead Percentage</u> (b)	<u>Qty</u> (c)	<u>Unit Price</u> (d)	<u>Total Price</u> (e)
<u>Description</u>				
Roadway Luminaire w/ LED Lamp		1	\$114.48	\$114.48
Photoelectric Control		1	\$12.50	\$12.50
Bracket		1	\$65.00	\$65.00
Wire (Luminaire, 4-#10, 18')		1	\$1.15	\$1.15
Sub-Total Material				\$193.13
Sales Tax			Sales Tax @ 7%	\$13.52
<u>Material Overhead</u>				
Stores Handling		\$193.13	23.25%	<u>\$44.90</u>
Total Material and Overhead				\$251.55
<u>Crew Cost</u>				
Labor & Equipment				<u>\$147.66</u>
Total Material and Labor				\$399.22
Plant Overhead		\$366.25	13.00%	<u>\$47.61</u>
Total Plant Addition				\$446.83

The Narragansett Electric Company
140 Watt LED Roadway Installed Cost

Tariff Style Description

Roadway luminaire, 140 watt, Light Emitting Diode

<u>Material Cost</u>	<u>Overhead</u> <u>Percentage</u> (b)	<u>Qty</u> (c)	<u>Unit Price</u> (d)	<u>Total Price</u> (e)
Description				
Roadway Luminaire w/ LED Lamp		1	\$185.50	\$185.50
Photoelectric Control		1	\$12.50	\$12.50
Bracket		1	\$90.00	\$90.00
Wire (Luminaire, 4-#10, 18')		1	\$1.15	<u>\$1.15</u>
Sub-Total Material				\$289.15
Sales Tax			Sales Tax @ 7%	\$20.24
<u>Material Overhead</u>				
Stores Handling		\$289.15	23.25%	<u>\$67.23</u>
Total Material and Overhead				\$376.62
<u>Crew Cost</u>				
Labor & Equipment				<u>\$147.66</u>
Total Material and Labor				\$524.28
Plant Overhead		\$491.32	13.00%	<u>\$63.87</u>
Total Plant Addition				\$588.15

The Narragansett Electric Company
275 Watt LED Roadway Installed Cost

Tariff Style Description

Roadway luminaire, 275 watt, Light Emitting Diode

<u>Material Cost</u>	<u>Overhead Percentage</u> (b)	<u>Qty</u> (c)	<u>Unit Price</u> (d)	<u>Total Price</u> (e)
Description				
Roadway Luminaire w/ LED Lamp		1	\$388.80	\$388.80
Photoelectric Control		1	\$12.50	\$12.50
Bracket		1	\$90.00	\$90.00
Wire (Luminaire, 4-#10, 18')		1	\$1.15	\$1.15
Sub-Total Material				\$492.45
Sales Tax			Sales Tax @ 7%	\$34.47
<u>Material Overhead</u>				
Stores Handling		\$492.45	23.25%	\$114.49
Total Material and Overhead				\$641.42
<u>Crew Cost</u>				
Labor & Equipment				\$147.66
Total Material and Labor				\$789.08
Plant Overhead		\$756.11	13.00%	\$98.29
Total Plant Addition				\$887.37

The Narragansett Electric Company
Post Top luminaire, 60 watt, Light Emitting Diode Installed Cost

Tariff Luminaire Style

Tariff Style Description

Post Top luminaire, 60 watt, Light Emitting Diode

<u>Material Cost</u>	<u>Overhead Percentage (b)</u>	<u>Qty (c)</u>	<u>Unit Price (d)</u>	<u>Total Price (e)</u>
Description				
Post Top Luminaire w/ LED Lamp		1	\$452.50	\$452.50
Photoelectric Control		1	\$12.50	\$12.50
Bracket		1	\$0.00	\$0.00
Wire (Luminaire, 4-#10, 18')		1	\$1.15	<u>\$1.15</u>
Sub-Total Material				\$466.15
Sales Tax			Sales Tax @ 7%	\$32.63
<u>Material Overhead</u>				
Stores Handling		\$466.15	23.25%	<u>\$108.38</u>
Total Material and Overhead				<u>\$607.16</u>
<u>Crew Cost</u>				
Labor & Equipment				<u>\$147.66</u>
Total Material and Labor				\$754.82
Plant Overhead		\$721.86	13.00%	<u>\$93.84</u>
Total Plant Addition				\$848.67

The Narragansett Electric Company
Twin Post Top luminaire, 60 watt, Light Emitting Diode Installed Cost

Tariff Style Description

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

<u>Material Cost</u>	<u>Overhead Percentage (b)</u>	<u>Qty (c)</u>	<u>Unit Price (d)</u>	<u>Total Price (e)</u>
Description				
Post Top Luminaire w/ LED Lamp		2	\$452.50	\$905.00
Photoelectric Control		2	\$12.50	\$25.00
Cross-Arm		1	\$412.33	\$412.33
Wire (Luminaire, 4-#10, 18')		2	\$1.15	<u>\$2.30</u>
Sub-Total Material				\$1,344.63
Sales Tax			Sales Tax @ 7%	\$94.12
<u>Material Overhead</u>				
Stores Handling		\$1,344.63	23.25%	<u>\$312.63</u>
Total Material and Overhead				\$1,751.38
<u>Crew Cost</u>				
Labor & Equipment				<u>\$344.55</u>
Total Material and Labor				\$2,095.93
Plant Overhead		\$2,019.01	13.00%	<u>\$32.47</u>
Total Plant Addition				\$2,128.39

The Narragansett Electric Company
Labor and Equipment

Initial Installation Cost-Single Fixture

Labor

Subject to Plant Overheads

Labor - Hourly Rate	\$64.16		
Installation & Travel Time (Minutes)	45		
Total Direct Labor		\$48.12	\$48.12
Design and Supervision	29.67%	\$14.28	\$14.28
ADD: Overhead Labor Cost	52.83%	<u>\$32.96</u>	
Total Labor		\$95.36	

Equipment

Truck-Aerial 45 ML OC	\$10.22		
Installation & Travel Time (Minutes)	45		
Total Equipment		\$7.67	\$7.67

Miscellaneous

Work Zone Protection/Police Detail	\$59.51		
Installation & Travel Time (Minutes)	45		
Total Misc		<u>\$44.64</u>	\$44.64
Total Labor & Equipment Cost		<u>\$147.66</u>	<u>\$114.70</u>

Initial Installation Cost-Twin Fixture

Labor

Labor - Hourly Rate	\$64.16		
Installation & Travel Time (Minutes)	105		
Total Direct Labor		\$112.28	\$112.28
Design and Supervision	29.67%	\$33.31	\$33.31
ADD: Overhead Labor Cost	52.83%	<u>\$76.92</u>	
Total Labor		\$222.51	

Equipment

Truck-Aerial 45 ML OC	\$10.22		
Installation & Travel Time (Minutes)	105		
Total Equipment		\$17.89	\$17.89

Miscellaneous

Work Zone Protection/Police Detail	\$59.51		
Installation & Travel Time (Minutes)	105		
Total Misc		<u>\$104.15</u>	\$104.15
Total Labor & Equipment Cost		<u>\$344.55</u>	<u>\$267.63</u>

Workpaper HSG-5
Development of proposed Rates

The Narragansett Electric Company
Present and Proposed Rates for Bill Impacts

Rate A-16 (Basic Residential)

Line No.		Present Rates @ 11/1/17 (a)	Proposed Rate (b)
(1)	LIHEAP Enhancement Charge	\$0.81	\$0.81
(2)			
(3)	Base Distribution Customer Charge	\$5.00	\$8.50
(4)			
(5)	Renewable Energy Growth Charge	\$0.78	\$0.79
(6)			
(7)	Base Distribution Energy (per kWh)	\$0.03664	\$0.04438
(8)			
(9)	Operating & Maintenance Expense Charge	\$0.00163	\$0.00163
(10)			
(11)	Operating & Maintenance Expense Reconciliation Factor	(\$0.00001)	(\$0.00001)
(12)			
(13)	FY18 CapEx Factor Charge	\$0.00288	\$0.00000
(14)			
(15)	CapEx Reconciliation Factor	(\$0.00135)	(\$0.00135)
(16)			
(17)	Proposed Low Income Discount Recovery Factor	\$0.00000	\$0.00087
(18)			
(19)	Revenue Decoupling Adjustment Factor	\$0.00118	\$0.00118
(20)			
(21)	Pension Adjustment Factor	(\$0.00085)	(\$0.00085)
(22)			
(23)	Storm Fund Replenishment Factor	\$0.00288	\$0.00288
(24)			
(25)	Long-term Contracting for Renewable Energy Charge	\$0.00664	\$0.00665
(26)			
(27)	Net Metering Charge	\$0.00023	\$0.00023
(28)			
(29)	Base Transmission Charge and Adjustment Factor	\$0.03140	\$0.03140
(30)			
(31)	Transmission Uncollectible Factor	\$0.00039	\$0.00040
(32)			
(33)	Total Transition Charge	\$0.00057	\$0.00057
(34)			
(35)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(36)			
(37)	Standard Offer Service Base Charge	\$0.09792	\$0.09792
(38)			
(39)	SOS Adjustment Factor	(\$0.00465)	(\$0.00465)
(40)			
(41)	SOS Administrative Cost Adjustment Factor	\$0.00148	\$0.00151
(42)			
(43)	Renewable Energy Standard Charge	\$0.00040	\$0.00040
(44)			
(45)			
(46)	Customer Charge	\$5.00	\$8.50
(47)	RE Growth Factor	\$0.78	\$0.79
(48)	LIHEAP Charge	\$0.81	\$0.81
(49)	Transmission Energy Charge	\$0.03179	\$0.03180
(50)	Base Distribution Energy (per kWh)	\$0.03664	\$0.04438
(51)	Other Distribution Energy Charge	\$0.00636	\$0.00435
(52)	Transition Energy Charge	\$0.00057	\$0.00057
(53)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(54)	Renewable Energy Distribution Charge	\$0.00687	\$0.00688
(55)	Standard Offer Charge	\$0.09515	\$0.09518

Notes:

Column (a): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095, and Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Column (b):

Lines (1, 9, 11, 15, 19, 21, 23, 27, 29, 33) per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095

Lines (37, 39, 43) per Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Line (3): Schedule HSG-4-I Page 1, Line (2)

Line (5): Page 16, Line (3)

Line (7): Schedule HSG-4-I Page 1, Line (9)

Line (17): Schedule PP-2, Page 1, Section 2, Line (3)

Line (25): Page 13, Line (13)

Line (31): Page 12, Line (10)

Line (35): Page 17, Line (7)

Line (41): Page 18, Line (7)

Line (46): Line (3)

Line (47): Line (5)

Line (48): Line (1)

Line (49): Line (29) + Line (31)

Line (50): Line (7)

Line (51): Line (9) + Line (11) + Line (13) + Line (15) + Line (17) + Line (19) + Line (21) + Line (23)

Line (52): Line (33)

Line (53): Line (35)

Line (54): Line (25) + Line (27)

Line (55): Line (37) + Line (39) + Line (41) + Line (43)

The Narragansett Electric Company
Present and Proposed Rates for Bill Impacts

Line No.		Present	Proposed
		Rates @ 11/1/17 (a)	Rate (c)
(1)	LIHEAP Enhancement Charge	\$0.81	\$0.81
(2)			
(3)	Base Distribution Customer Charge	\$0.00	\$2.75
(4)			
(5)	Renewable Energy Growth Charge	\$0.78	\$0.79
(6)			
(7)	Base Distribution Energy (per kWh)	\$0.02317	\$0.04438
(8)			
(9)	Operating & Maintenance Expense Charge	\$0.00163	\$0.00163
(10)			
(11)	Operating & Maintenance Expense Reconciliation Factor	(\$0.00001)	(\$0.00001)
(12)			
(13)	FY18 CapEx Factor Charge	\$0.00288	\$0.00000
(14)			
(15)	CapEx Reconciliation Factor	(\$0.00135)	(\$0.00135)
(16)			
(17)	Revenue Decoupling Adjustment Factor	\$0.00118	\$0.00118
(18)			
(19)	Pension Adjustment Factor	(\$0.00085)	(\$0.00085)
(20)			
(21)	Storm Fund Replenishment Factor	\$0.00288	\$0.00288
(22)			
(23)	Long-term Contracting for Renewable Energy Charge	\$0.00664	\$0.00665
(24)			
(25)	Net Metering Charge	\$0.00023	\$0.00023
(26)			
(27)	Base Transmission Charge and Adjustment Factor	\$0.03140	\$0.03140
(28)			
(29)	Transmission Uncollectible Factor	\$0.00039	\$0.00040
(30)			
(31)	Total Transition Charge	\$0.00057	\$0.00057
(32)			
(33)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(34)			
(35)	Standard Offer Service Base Charge	\$0.09792	\$0.09792
(36)			
(37)	SOS Adjustment Factor	(\$0.00465)	(\$0.00465)
(38)			
(39)	SOS Administrative Cost Adjustment Factor	\$0.00148	\$0.00151
(40)			
(41)	<u>Renewable Energy Standard Charge</u>	<u>\$0.00040</u>	<u>\$0.00040</u>
(42)			
(43)			
(44)	Customer Charge	\$0.00	\$2.75
(45)	RE Growth Factor	\$0.78	\$0.79
(46)	LIHEAP Charge	\$0.81	\$0.81
(47)	Transmission Energy Charge	\$0.03179	\$0.03180
(48)	Base Distribution Energy (per kWh)	\$0.02317	\$0.04438
(49)	Other Distribution Energy Charge	\$0.00636	\$0.00348
(50)	Transition Energy Charge	\$0.00057	\$0.00057
(51)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(52)	Renewable Energy Distribution Charge	\$0.00687	\$0.00688
(53)	Standard Offer Charge	\$0.09515	\$0.09518

Notes:

Column (a): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095, and Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Column (b):

Lines (1, 9, 11, 15, 17, 19, 21, 25, 27, 31) per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095

Lines (35, 37, 41) per Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Line (3): Schedule HSG-4-I Page 1, Line (4)

Line (5): Page 16, Line (3)

Line (23): Page 13, Line (13)

Line (29): Page 12, Line (10)

Line (33): Page 17, Line (7)

Line (39): Page 18, Line (7)

Line (44): Line (3)

Line (45): Line (5)

Line (46): Line (1)

Line (47): Line (27) + Line (29)

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Line (49): Line (9) + Line (11) + Line (13) + Line (15) + Line (17) + Line (19) + Line (21)

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Line (51): Line (33)

Line (52): Line (23) + Line (25)

Line (53): Line (35) + Line (37) + Line (39) + Line (41)

The Narragansett Electric Company
Present and Proposed Rates for Bill Impacts

Rate C-06 (Small C&I)

Line No.		Present Rates @ 11/1/17 (a)	Proposed Rate (c)
(1)	LIHEAP Enhancement Charge	\$0.81	\$0.81
(2)			
(3)	Base Distribution Customer Charge	\$10.00	\$13.00
(4)			
(5)	Renewable Energy Growth Charge	\$1.26	\$1.26
(6)			
(7)	Base Distribution Energy (per kWh)	\$0.03253	\$0.04273
(8)			
(9)	Operating & Maintenance Expense Charge	\$0.00169	\$0.00169
(10)			
(11)	Operating & Maintenance Expense Reconciliation Factor	(\$0.00001)	(\$0.00001)
(12)			
(13)	FY18 CapEx Factor Charge	\$0.00269	\$0.00000
(14)			
(15)	CapEx Reconciliation Factor	(\$0.00119)	(\$0.00119)
(16)			
(17)	Proposed Low Income Discount Recovery Factor	\$0.00000	\$0.00087
(18)			
(19)	Revenue Decoupling Adjustment Factor	\$0.00118	\$0.00118
(20)			
(21)	Pension Adjustment Factor	(\$0.00085)	(\$0.00085)
(22)			
(23)	Storm Fund Replenishment Factor	\$0.00288	\$0.00288
(24)			
(25)	Long-term Contracting for Renewable Energy Charge	\$0.00664	\$0.00665
(26)			
(27)	Net Metering Charge	\$0.00023	\$0.00023
(28)			
(29)	Base Transmission Charge and Adjustment Factor	\$0.02803	\$0.02803
(30)			
(31)	Transmission Uncollectible Factor	\$0.00035	\$0.00036
(32)			
(33)	Total Transition Charge	\$0.00057	\$0.00057
(34)			
(35)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(36)			
(37)	Standard Offer Service Base Charge	\$0.09492	\$0.09492
(38)			
(39)	SOS Adjustment Factor	(\$0.00304)	(\$0.00304)
(40)			
(41)	SOS Administrative Cost Adjustment Factor	\$0.00122	\$0.00125
(42)			
(43)	Renewable Energy Standard Charge	\$0.00040	\$0.00040
(44)			
(45)			
(46)	Customer Charge	\$10.00	\$13.00
(47)	RE Growth Factor	\$1.26	\$1.26
(48)	LIHEAP Charge	\$0.81	\$0.81
(49)	Transmission Energy Charge	\$0.02838	\$0.02839
(50)	Base Distribution Energy (per kWh)	\$0.03253	\$0.04273
(51)	Other Distribution Energy Charge	\$0.00639	\$0.00457
(52)	Transition Energy Charge	\$0.00057	\$0.00057
(53)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(54)	Renewable Energy Distribution Charge	\$0.00687	\$0.00688
(55)	Standard Offer Charge	\$0.09350	\$0.09353

Notes:

Column (a): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095, and Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096
Column (b):

Lines (1, 9, 11, 15, 19, 21, 23, 27, 29, 33) per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095

Lines (37, 39, 43) per Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Line (3): Schedule HSG-4-I Page 1, Line (2)

Line (5): Page 16, Line (3)

Line (7): Schedule HSG-4-I Page 1, Line (9)

Line (17): Schedule PP-2, Page 1, Section 2, Line (3)

Line (25): Page 13, Line (13)

Line (31): Page 12, Line (10)

Line (35): Page 17, Line (7)

Line (41): Page 18, Line (7)

Line (46): Line (3)

Line (47): Line (5)

Line (48): Line (1)

Line (49): Line (29) + Line (31)

Line (50): Line (7)

Line (51): Line (9) + Line (11) + Line (13) + Line (15) + Line (17) + Line (19) + Line (21) + Line (23)

Line (52): Line (33)

Line (53): Line (35)

Line (54): Line (25) + Line (27)

Line (55): Line (37) + Line (39) + Line (41) + Line (43)

The Narragansett Electric Company
Present and Proposed Rates for Bill Impacts

Rate G-02 (General C&I)

Line No.		Present Rates @ 11/1/17 (a)	Proposed Rate (c)
(1)	LIHEAP Enhancement Charge	\$0.81	\$0.81
(2)			
(3)	Base Distribution Customer Charge	\$135.00	\$145.00
(4)			
(5)	Renewable Energy Growth Charge	\$11.85	\$11.85
(6)			
(7)	Base Distribution Energy (per kWh)	\$0.00468	\$0.00608
(8)			
(9)	Distribution kW Charge (per kW >10)	\$4.85	\$6.50
(10)			
(11)	Operating & Maintenance Expense Charge	\$0.00122	\$0.00122
(12)			
(13)	Operating & Maintenance Expense Reconciliation Factor	(\$0.00001)	(\$0.00001)
(14)			
(15)	FY CapEx Factor (per kW >10)	\$0.67	\$0.00
(16)			
(17)	CapEx Reconciliation Factor	(\$0.00098)	(\$0.00098)
(18)			
(19)	Proposed Low Income Discount Recovery Factor	\$0.00000	\$0.00087
(20)			
(21)	Revenue Decoupling Adjustment Factor	\$0.00118	\$0.00118
(22)			
(23)	Pension Adjustment Factor	(\$0.00085)	(\$0.00085)
(24)			
(25)	Storm Fund Replenishment Factor	\$0.00288	\$0.00288
(26)			
(27)	Long-term Contracting for Renewable Energy Charge	\$0.00664	\$0.00665
(28)			
(29)	Net Metering Charge	\$0.00023	\$0.00023
(30)			
(31)	Transmission kW Charge	\$4.37	\$4.37
(32)			
(33)	Base Transmission Charge and Adjustment Factor	\$0.01064	\$0.01064
(34)			
(35)	Transmission Uncollectible Factor	\$0.00032	\$0.00033
(36)			
(37)	Total Transition Charge	\$0.00057	\$0.00057
(38)			
(39)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(40)			
(41)	Standard Offer Service Base Charge	\$0.09492	\$0.09492
(42)			
(43)	SOS Adjustment Factor	(\$0.00304)	(\$0.00304)
(44)			
(45)	SOS Administrative Cost Adjustment Factor	\$0.00122	\$0.00125
(46)			
(47)	Renewable Energy Standard Charge	\$0.00040	\$0.00040
(48)			
(49)			
(50)	Customer Charge	\$135.00	\$145.00
(51)	RE Growth Factor	\$11.85	\$11.85
(52)	LIHEAP Charge	\$0.81	\$0.81
(53)	Transmission Demand Charge	\$4.37	\$4.37
(54)	Transmission Energy Charge	\$0.01096	\$0.01097
(55)	Base Distribution Demand Charge-xcs 10 kW	\$4.85	\$6.50
(56)	CapEx Charge	\$0.67	\$0.00
(57)	Base Distribution Energy Charge	\$0.00468	\$0.00608
(58)	Other Distribution Energy Charge	\$0.00344	\$0.00431
(59)	Transition Energy Charge	\$0.00057	\$0.00057
(60)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(61)	Renewable Energy Distribution Charge	\$0.00687	\$0.00688
(62)	Standard Offer Charge	\$0.09350	\$0.09353

Notes:

Column (a): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095, and Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Column (b):

Lines (1, 11, 13, 17, 21, 23, 25, 29, 31, 33, 37) per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095

Lines (41, 43, 47) per Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Line (3): Schedule HSG-4-I Page 1, Line (2)

Line (5): Page 16, Line (3)

Line (7): Schedule HSG-4-I Page 1, Line (9)

Line (9): Schedule HSG-4-I, Page 1, Line (14)

Line (19): Schedule PP-2, Page 1, Section 2, Line (3)

Line (27): Page 13, Line (13)

Line (35): Page 12, Line (10)

Line (39): Page 17, Line (7)

Line (45): Page 18, Line (7)

Line (50): Line (3)

Line (51): Line (5)

Line (52): Line (1)

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Line (54): Line (33) + Line (35)

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Line (60): Line (39)

Line (61): Line (27) + Line (29)

Line (62): Line (41) + Line (43) + Line (45) + Line (47)

The Narragansett Electric Company
Present and Proposed Rates for Bill Impacts

Rate G-32 (Large Demand Rate)

Line No.		Present Rates @ 11/1/17 (a)	Proposed Rate (c)
(1)	LIHEAP Enhancement Charge	\$0.81	\$0.81
(2)			
(3)	Base Distribution Customer Charge	\$825.00	\$1,100.00
(4)			
(5)	Renewable Energy Growth Charge	\$86.86	\$107.55
(6)			
(7)	Base Distribution Energy (per kWh)	\$0.00551	\$0.00631
(8)			
(9)	Distribution kW Charge (per kW >200)	\$3.70	\$5.00
(10)			
(11)	Operating & Maintenance Expense Charge	\$0.00079	\$0.00080
(12)			
(13)	Operating & Maintenance Expense Reconciliation Factor	(\$0.00001)	(\$0.00001)
(14)			
(15)	FY18 CapEx Factors (per kW >200)	\$0.71	\$0.00
(16)			
(17)	CapEx Reconciliation Factor	(\$0.00050)	(\$0.00048)
(18)			
(19)	Proposed Low Income Discount Recovery Factor	\$0.00000	\$0.00087
(20)			
(21)	Revenue Decoupling Adjustment Factor	\$0.00118	\$0.00118
(22)			
(23)	Pension Adjustment Factor	(\$0.00085)	(\$0.00085)
(24)			
(25)	Storm Fund Replenishment Factor	\$0.00288	\$0.00288
(26)			
(27)	Long-term Contracting for Renewable Energy Charge	\$0.00664	\$0.00665
(28)			
(29)	Net Metering Charge	\$0.00023	\$0.00023
(30)			
(31)	Transmission kW Charge	\$4.69	\$4.43
(32)			
(33)	Base Transmission Charge and Adjustment Factor	\$0.01093	\$0.01175
(34)			
(35)	Transmission Uncollectible Factor	\$0.00030	\$0.00031
(36)			
(37)	Total Transition Charge	\$0.00057	\$0.00057
(38)			
(39)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(40)			
(41)	Standard Offer Service Base Charge	\$0.06785	\$0.06785
(42)			
(43)	SOS Adjustment Factor	(\$0.00507)	(\$0.00507)
(44)			
(45)	SOS Administrative Cost Adjustment Factor	\$0.00122	\$0.00125
(46)			
(47)	Renewable Energy Standard Charge	\$0.00040	\$0.00040
(48)			
(49)			
(50)	Customer Charge	\$825.00	\$1,100.00
(51)	RE Growth Factor	\$86.86	\$107.55
(52)	LIHEAP Charge	\$0.81	\$0.81
(53)	Transmission Demand Charge	\$4.69	\$4.43
(54)	Transmission Energy Charge	\$0.01123	\$0.01206
(55)	Base Distribution Demand Charge - > 200 kW	\$3.70	\$5.00
(56)	CapEx Charge	\$0.71	\$0.00
(57)	Base Distribution Energy Charge	\$0.00551	\$0.00631
(58)	Other Distribution Energy Charge	\$0.00349	\$0.00439
(59)	Transition Energy Charge	\$0.00057	\$0.00057
(60)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(61)	Renewable Energy Distribution Charge	\$0.00687	\$0.00688
(62)	Standard Offer Charge	\$0.06440	\$0.06443

Notes:

Column (a): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095, and Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096
Column (b):

- Lines (1, 13, 21, 23, 25, 29, 37) per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095
- Lines (41, 43, 47) per Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096
- Line (3): Schedule HSG-4-1 Page 1, Line (2)
- Line (5): Page 16, Line (3)
- Line (7): Schedule HSG-4-1 Page 1, Line (9)
- Line (9): Schedule HSG-4-1, Page 1, Line (15)
- Line (11): Page 21, Column (f), Line (6)
- Line (17), Page 22, Column (f), Line (10)
- Line (19): Schedule PP-2, Page 1, Section 2, Line (3)
- Line (27): Page 13, Line (13)
- Line (31): Page 10, Column (f), Line (10)
- Line (33): Page 10, Column (f), Line (13) + Page 11, Column (f), Line (5)
- Line (35): Page 12, Column (f), Line (10)
- Line (39): Page 17, Line (7)
- Line (45): Page 18, Line (7)
- Line (50): Line (3)
- Line (51): Line (5)
- Line (52): Line (1)
- Line (53): Line (31)
- Line (54): Line (33) + Line (35)
- Line (55): Line (9)
- Line (57): Line (7)
- Line (58): Line (11) + Line (13) + Line (17) + Line (19) + Line (21) + Line (23) + Line (25)
- Line (59): Line (37)
- Line (60): Line (39)
- Line (61): Line (27) + Line (29)
- Line (62): Line (41) + Line (43) + Line (45) + Line (47)

The Narragansett Electric Company
Present and Proposed Rates for Bill Impacts

Rate G-62 (Optional Large Demand Rate)

Line No.		Present Rates @ 11/1/17 (a)	Proposed G-32 Rate (c)
(1)	LIHEAP Enhancement Charge	\$0.81	\$0.81
(2)			
(3)	Base Distribution Customer Charge	\$17,000.00	\$1,100.00
(4)			
(5)	Renewable Energy Growth Charge	\$1,928.08	\$107.55
(6)			
(7)	Base Distribution Energy (per kWh)	\$0.00000	\$0.00631
(8)			
(9)	Distribution kW Charge (per kW) (per kW >200) proposed	\$2.99	\$5.00
(10)			
(11)	Operations & Maintenance Expense Charge (per kW)	\$0.36	n/a
(12)			
(13)	Operating & Maintenance Expense Charge	\$0.00000	\$0.00080
(14)			
(15)	Operating & Maintenance Expense Reconciliation Factor	(\$0.00001)	(\$0.00001)
(16)			
(17)	FY18 CapEx Factors (per kW) (per kW >200) proposed	\$0.55	\$0.00
(18)			
(19)	CapEx Reconciliation Factor	(\$0.00038)	(\$0.00048)
(20)			
(21)	Proposed Low Income Discount Recovery Factor	\$0.00000	\$0.00087
(22)			
(23)	Revenue Decoupling Adjustment Factor	\$0.00118	\$0.00118
(24)			
(25)	Pension Adjustment Factor	(\$0.00085)	(\$0.00085)
(26)			
(27)	Long-term Contracting for Renewable Energy Charge	\$0.00664	\$0.00665
(28)			
(29)	Net Metering Charge	\$0.00023	\$0.00023
(30)			
(31)	Transmission (per kW)	\$3.40	\$4.43
(32)			
(33)	Base Transmission Charge and Adjustment Factor	\$0.01492	\$0.01175
(34)			
(35)	Transmission Uncollectible Factor	\$0.00032	\$0.00031
(36)			
(37)	Total Transition Charge	\$0.00057	\$0.00057
(38)			
(39)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(40)			
(41)	Storm Fund Replenishment Factor	\$0.00288	\$0.00288
(42)			
(43)	Standard Offer Service Base Charge	\$0.06785	\$0.06785
(44)			
(45)	SOS Adjustment Factor	(\$0.00507)	(\$0.00507)
(46)			
(47)	SOS Administrative Cost Adjustment Factor	\$0.00122	\$0.00125
(48)			
(49)	Renewable Energy Standard Charge	\$0.00040	\$0.00040
(50)			
(51)			
(52)	Customer Charge	\$17,000.00	\$1,100.00
(53)	RE Growth Factor	\$1,928.08	\$107.55
(54)	LIHEAP Charge	\$0.81	\$0.81
(55)	Transmission Demand Charge	\$3.40	\$4.43
(56)	Transmission Energy Charge	\$0.01524	\$0.01206
(57)	Base Distribution Demand Charge	\$2.99	\$5.00
(58)	O&M kW Charge	\$0.36	n/a
(59)	CapEx kW Charge	\$0.55	\$0.00
(60)	Base Distribution Energy Charge	\$0.00000	\$0.00631
(61)	Other Distribution Energy Charge	\$0.00282	\$0.00439
(62)	Transition Energy Charge	\$0.00057	\$0.00057
(63)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(64)	Renewable Energy Distribution Charge	\$0.00687	\$0.00688
(65)	Standard Offer Charge	\$0.06440	\$0.06443

Notes:

Column (a): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095, and Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096
Column (b):

- Lines (1, 15, 23, 25, 29, 37, 41) per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095
- Lines (43, 45, 49) per Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096
- Line (3): Schedule HSG-4-I Page 1, Line (2)
- Line (5): Page 16, Line (3)
- Line (7): Schedule HSG-4-I Page 1, Line (9)
- Line (9): Schedule HSG-4-I, Page 1, Line (15)
- Line (13): Page 21, Column (f), Line (6)
- Line (19): Page 22, Column (f), Line (10)
- Line (21): Schedule PP-2, Page 1, Section 2, Line (3)
- Line (27): Page 13, Line (13)
- Line (31): Page 10, Column (f), Line (10)
- Line (33): Page 10, Column (f), Line (13) + Page 11, Column (f), Line (5)
- Line (35): Page 12, Column (f), Line (10)
- Line (39): Page 17, Line (7)
- Line (47): Page 18, Line (7)
- Line (52): Line (3)
- Line (53): Line (5)
- Line (54): Line (1)
- Line (55): Line (31)
- Line (56): Line (33) + Line (35)
- Line (57): Line (9)
- Line (58): Page 21, Column (f), Line (8)
- Line (60): Line (7)
- Line (61): Line (13) + Line (15) + Line (19) + Line (21) + Line (23) + Line (25) + Line (41)
- Line (62): Line (37)
- Line (63): Line (39)
- Line (64): Line (27) + Line (29)
- Line (65): Line (43) + Line (45) + Line (47) + Line (49)

The Narragansett Electric Company
Present and Proposed Rates for Bill Impacts

Rate X-01 (Electric Propulsion Rate)

Line No.		Present Rates @ 11/1/17 (a)	Proposed Rate (b)
(1)	LIHEAP Enhancement Charge	\$0.81	\$0.81
(2)			
(3)	Base Distribution Customer Charge	\$16,500.00	\$21,000.00
(4)			
(5)	Renewable Energy Growth Charge	\$2,087.71	\$2,088.76
(6)			
(7)	Base Distribution Energy (per kWh)	\$0.01600	\$0.01816
(8)			
(9)	Operating & Maintenance Expense Charge	\$0.00123	\$0.00123
(10)			
(11)	Operating & Maintenance Expense Reconciliation Factor	(\$0.00001)	(\$0.00001)
(12)			
(13)	FY18 CapEx Factor Charge	\$0.00217	\$0.00000
(14)			
(15)	CapEx Reconciliation Factor	(\$0.00103)	(\$0.00103)
(16)			
(17)	Proposed Low Income Discount Recovery Factor	\$0.00000	\$0.00087
(18)			
(19)	Revenue Decoupling Adjustment Factor	\$0.00118	\$0.00118
(20)			
(21)	Pension Adjustment Factor	(\$0.00085)	(\$0.00085)
(22)			
(23)	Long-term Contracting for Renewable Energy Charge	\$0.00664	\$0.00665
(24)			
(25)	Net Metering Charge	\$0.00023	\$0.00023
(26)			
(27)	Transmission (per kW)	\$3.40	\$4.43
(28)			
(29)	Base Transmission Charge and Adjustment Factor	\$0.01492	\$0.01175
(30)			
(31)	Transmission Uncollectible Factor	\$0.00032	\$0.00031
(32)			
(33)	Total Transition Charge	\$0.00057	\$0.00057
(34)			
(35)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(36)			
(37)	Storm Fund Replenishment Factor	\$0.00288	\$0.00288
(38)			
(39)	Standard Offer Service Base Charge	\$0.06785	\$0.06785
(40)			
(41)	SOS Adjustment Factor	(\$0.00507)	(\$0.00507)
(42)			
(43)	SOS Administrative Cost Adjustment Factor	\$0.00122	\$0.00125
(44)			
(45)	Renewable Energy Standard Charge	\$0.00040	\$0.00040
(46)			
(47)			
(48)	Customer Charge	\$16,500.00	\$21,000.00
(49)	RE Growth Factor	\$2,087.71	\$2,088.76
(50)	LIHEAP Charge	\$0.81	\$0.81
(51)	Transmission Demand Charge	\$3.40	\$4.43
(52)	Transmission Energy Charge	\$0.01524	\$0.01206
(53)	Base Distribution Energy Charge	\$0.01600	\$0.01816
(54)	Other Distribution Energy Charge	\$0.00557	\$0.00427
(55)	Transition Energy Charge	\$0.00057	\$0.00057
(56)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(57)	Renewable Energy Distribution Charge	\$0.00687	\$0.00688
(58)	Standard Offer Charge	\$0.06440	\$0.06443

Notes:

Column (a): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095, and Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Column (b):

Lines (1, 9, 11, 15, 19, 21, 25, 33, 37) per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095

Lines (39, 41, 45) per Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Line (3): Schedule HSG-4-I Page 1, Line (2)

Line (5): Page 16, Line (3)

Line (7): Schedule HSG-4-I Page 1, Line (9)

Line (17): Schedule PP-2, Page 1, Section 2, Line (3)

Line (23): Page 13, Line (13)

Line (27): Page 10, Column (f), Line (10)

Line (29): Page (10), Column (f), Line (13) + Page 11, Column (f), Line (5)

Line (31): Page 12, Column (f), Line (10)

Line (35): Page 17, Line (7)

Line (43): Page 18, Line (7)

Line (48): Line (3)

Line (49): Line (5)

Line (50): Line (1)

Line (51): Line (27)

Line (52): Line (29) + Line (31)

Line (53): Line (7)

Line (54): Line (9) + Line (11) + Line (13) + Line (15) + Line (17) + Line (19) + Line (21) + Line (37)

Line (55): Line (33)

Line (56): Line (35)

Line (57): Line (23) + Line (25)

Line (58): Line (39) + Line (41) + Line (43) + Line (45)

The Narragansett Electric Company
Present and Proposed Rates for Bill Impacts

Rate S-06/S-10/S-14 (Street and Area Lighting)

Line No.		Present Rates @ 11/1/17 (a)	Proposed Rate (c)
(1)	LIHEAP Enhancement Charge	\$0.81	\$0.81
(2)			
(3)	Base Distribution Customer Charge	n/a	n/a
(4)			
(5)	Renewable Energy Standard Charge (per luminaire)	\$0.39	\$0.39
(6)			
(7)	Base Distribution Energy (per kWh)	\$0.00000	\$0.00000
(8)			
(9)	Operating & Maintenance Expense Charge	\$0.01273	\$0.01273
(10)			
(11)	Operating & Maintenance Expense Reconciliation Factor	(\$0.00001)	(\$0.00001)
(12)			
(13)	FY18 CapEx Factor Charge	\$0.01422	\$0.00000
(14)			
(15)	CapEx Reconciliation Factor	(\$0.00151)	(\$0.00151)
(16)			
(17)	Proposed Low Income Discount Recovery Factor	\$0.00000	\$0.00087
(18)			
(19)	Revenue Decoupling Adjustment	\$0.00118	\$0.00118
(20)			
(21)	Pension Adjustment Factor	(\$0.00085)	(\$0.00085)
(22)			
(23)	Storm Fund Replenishment Factor	\$0.00288	\$0.00288
(24)			
(25)	Long-term Contracting Charge	\$0.00664	\$0.00665
(26)			
(27)	Net Metering Charge	\$0.00023	\$0.00023
(28)			
(29)	Base Transmission Charge and Adjustment Factor	\$0.02221	\$0.02221
(30)			
(31)	Transmission Uncollectible Factor	\$0.00028	\$0.00029
(32)			
(33)	Transition Charge	\$0.00057	\$0.00057
(34)			
(35)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(36)			
(37)	Standard Offer Service Base Charge	\$0.09492	\$0.09492
(38)			
(39)	SOS Adjustment Factor	(\$0.00304)	(\$0.00304)
(40)			
(41)	SOS Administrative Cost Adjustment Factor	\$0.00122	\$0.00125
(42)			
(43)	Renewable Energy Standard Charge	\$0.00040	\$0.00040
(44)			
(45)			
(46)	Volumetric Charge per kWh	\$0.16361	\$0.15031

Notes:

Column (a): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095, and Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096
Column (b):

Lines (1, 7, 9, 11, 15, 19, 21, 23, 27, 29, 33) per Summary of Retail Delivery Service Rates tariff

Lines (37, 39, 43) per Summary of Rates Standard Offer Service tariff

Line (3): n/a

Line (5): Page 16, Line (3)

Line (17): Schedule PP-2, Page 1, Section 2, Line (3)

Line (25): Page 13, Line (13)

Line (31): Page 12, Line (10)

Line (35): Page 17, Line (7)

Line (41): Page 18, Line (7)

Line (46): sum of Lines (1) through (43)

The Narragansett Electric Company
Present and Proposed Rates for Bill Impacts

Rate S-05 (Customer-Owned Street and Area Lighting)

Line No.		Present Rates <u>@ 11/1/17</u> (a)	Proposed <u>Rate</u> (c)
(1)	LIHEAP Enhancement Charge	\$0.81	\$0.81
(2)			
(3)	Base Distribution Customer Charge	n/a	n/a
(4)			
(5)	Renewable Energy Standard Charge (per luminaire)	\$0.39	\$0.39
(6)			
(7)	Base Distribution Energy (per kWh)	\$0.02654	\$0.03804
(8)			
(9)	Operating & Maintenance Expense Charge	\$0.01273	\$0.01273
(10)			
(11)	Operating & Maintenance Expense Reconciliation Factor	(\$0.00001)	(\$0.00001)
(12)			
(13)	FY18 CapEx Factor Charge	\$0.01422	\$0.00000
(14)			
(15)	CapEx Reconciliation Factor	(\$0.00151)	(\$0.00151)
(16)			
(17)	Proposed Low Income Discount Recovery Factor	\$0.00000	\$0.00087
(18)			
(19)	Revenue Decoupling Adjustment	\$0.00118	\$0.00118
(20)			
(21)	Pension Adjustment Factor	(\$0.00085)	(\$0.00085)
(22)			
(23)	Storm Fund Replenishment Factor	\$0.00288	\$0.00288
(24)			
(25)	Long-term Contracting Charge	\$0.00664	\$0.00665
(26)			
(27)	Net Metering Charge	\$0.00023	\$0.00023
(28)			
(29)	Base Transmission Charge and Adjustment Factor	\$0.02221	\$0.02221
(30)			
(31)	Transmission Uncollectible Factor	\$0.00028	\$0.00029
(32)			
(33)	Transition Charge	\$0.00057	\$0.00057
(34)			
(35)	Energy Efficiency Program Charge	\$0.01154	\$0.01154
(36)			
(37)	Standard Offer Service Base Charge	\$0.09492	\$0.09492
(38)			
(39)	SOS Adjustment Factor	(\$0.00304)	(\$0.00304)
(40)			
(41)	SOS Administrative Cost Adjustment Factor	\$0.00122	\$0.00125
(42)			
(43)	<u>Renewable Energy Standard Charge</u>	<u>\$0.00040</u>	<u>\$0.00040</u>
(44)			
(45)			
(46)	Volumetric Charge per kWh	\$0.19015	\$0.18835

Notes:

Column (a): per Summary of Retail Delivery Service Rates, R.I.P.U.C. No. 2095, and Summary of Rates Standard Offer Service tariff, R.I.P.U.C. No. 2096

Column (b):

Lines (1, 7, 9, 11, 15, 19, 21, 23, 27, 29, 33) per Summary of Retail Delivery Service Rates tariff

Lines (37, 39, 43) per Summary of Rates Standard Offer Service tariff

Line (3): n/a

Line (5): Page 16, Line (3)

Line (7): Schedule HSG-F, Line 92

Line (17): Schedule PP-2, Page 1, Section 2, Line (3)

Line (25): Page 13, Line (13)

Line (31): Page 12, Line (10)

Line (35): Page 17, Line (7)

Line (41): Page 18, Line (7)

Line (46): sum of Lines (1) through (43)

The Narragansett Electric Company
Calculation of 2017 Base Transmission Factors
Effective January 1, 2018

Line No.	Total	Residential	Small Commercial & Industrial	General Commercial & Industrial	Large Demand	Large Demand	Combined B32/G32	Street Lighting S05/S06	
		A16/ A60 (a)	C06 (b)	G02 (c)	B32/G32 (d)	B62/G62/X01 (e)	B62/G62/X01 (f)	S10/S14 (g)	
(1)	Estimated Transmission Expenses	\$212,722,033							
(2)	Coincident Peak Allocator	100.00%	45.12%	8.92%	17.07%	23.44%	5.05%	28.48%	0.41%
(3)	Estimated 2017 Transmission Expenses by Rate Class	\$212,722,033	\$95,975,112	\$18,976,592	\$36,301,176	\$49,857,577	\$10,734,534	\$60,592,111	\$877,043
(4)	Allocated Estimated 2016 Transmission Expenses	\$178,151,436	\$79,595,694	\$15,675,426	\$29,787,336	\$42,177,437	\$10,138,531	\$52,315,968	\$777,012
(5)	Increase/(Decrease)	\$34,570,597	\$16,379,417	\$3,301,166	\$6,513,840	\$7,680,140	\$596,002	\$8,276,142	\$100,031
(6)	Percentage Increase/(Decrease)	19.41%	20.58%	21.06%	21.87%	18.21%	5.88%	15.82%	12.87%
(7)	Forecast 2017 Demand kW	11,451,784			4,545,406	5,657,297	1,249,081	6,906,378	
(8)	Forecast kWh for the period April 1, 2017 through March 31, 2018	7,423,513,683	3,027,852,906	596,142,607	1,295,163,245	1,988,885,728	454,899,445	2,443,785,174	60,569,751
(9)	Current Transmission kW Charge				\$3.59	\$3.97	\$3.22	\$3.83	
(10)	Proposed Transmission kW Charge				\$4.37	\$4.69	\$3.40	\$4.43	
(11)	Transmission Expenses to be Recovered on a kW Basis	\$50,458,679			\$19,863,424	\$26,532,725	\$4,246,874	\$30,595,255	
(12)	Transmission Expenses to be Recovered on a kWh Basis	\$162,263,354	\$95,975,112	\$18,976,592	\$16,437,752	\$23,324,852	\$6,487,659	\$29,996,856	\$877,043
(13)	Proposed Transmission kWh Charge		\$0.03169	\$0.03183	\$0.01269	\$0.01172	\$0.01426	\$0.01227	\$0.01447

Column Descriptions:

Columns (a), (b), (c), (d), (e), (g) per 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, Schedule ASC-11, Page 1

Column (f) Combination of Columns (d) and (e) - See Line Descriptions below

Line Descriptions:

- (1) per 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, Schedule TMF-1, Page 1, Line (11)
- (2) Columns (a), (b), (c), (d), (e), (g) per 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, Schedule ASC-11, Page 2, Column (j); Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g)
- (3) Line 2 x Total Line 1; Total Column sum of Columns (a), (b), (c), (f), (g)
- (4) per 2016 Electric Retail Rate Filing, RIPUC Docket No 4599 Schedule ASC-11, Page 1 of 2, Line (3); Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g)
- (5) Line 3 - Line 4; Total Column sum of Columns (a), (b), (c), (f), (g)
- (6) Line 5 ÷ Line 4
- (7) per Company forecast; Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g)
- (8) per Company forecast; Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g)
- (9) Columns (a), (b), (c), (d), (e), (g) per 2016 Electric Retail Rate Filing, RIPUC Docket No 4599, Schedule ASC-11, Page 1, Line (10); Column (f) per 2016 Electric Retail Rate Filing, RIPUC Docket No 4599, Schedule ASC-11, Page 1 - rate classes B32/G32 and B62/G62, weighted average of sum of lines (7) and (11)
- (10) Higher of current charge or Line 9 x (1 + Line 6)
- (11) Line 7 x Line 10; Total Column sum of Columns (c) and (f)
- (12) Line 3 - Line 11; Total Column sum of Columns (a), (b), (c), (f), (g)
- (13) Line 12 ÷ Line 8 truncated to five decimal places

The Narragansett Electric Company
Calculation of Transmission Adjustment Factor
Effective January 1, 2018

Line No.	Total	Residential A16/ A60 (a)	Small Commercial & Industrial C06 (b)	General Commercial & Industrial G02 (c)	Large Demand B32/G32 (d)	Large Demand B62/G62/X01 (e)	Combined B32/G32 B62/G62/X01 (f)	Street Lighting S05/S06 S10/S14 (g)
(1) Transmission Over/(Under) Recovery	\$6,523,275	\$867,714	\$2,235,697	\$2,626,915	\$1,555,754	(\$300,386)	\$1,255,368	(\$462,420)
(2) Plus: Estimated Interest During the Refund/Recovery Period	<u>\$93,993</u>	<u>\$12,503</u>	<u>\$32,214</u>	<u>\$37,851</u>	<u>\$22,417</u>	<u>(\$4,328)</u>	<u>\$18,089</u>	<u>(\$6,663)</u>
(3) Total Transmission Over(Under) Recovery (including interest)	\$6,617,268	\$880,217	\$2,267,911	\$2,664,766	\$1,578,170	(\$304,714)	\$1,273,456	(\$469,083)
(4) Forecasted kWhs During Recovery Period	\$7,423,513,683	3,027,852,906	596,142,607	1,295,163,245	1,988,885,728	454,899,445	2,443,785,174	60,569,751
(5) Proposed Transmission Adjustment Charge/(Credit)		(\$0.00029)	(\$0.00380)	(\$0.00205)	(\$0.00079)	\$0.00066	(\$0.00052)	\$0.00774

Line Descriptions:

- (1) Columns (a), (b), (c), (d), (e), (g) per 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, ASC-12 Revised, Page 2; Column (f) sum of Columns (d) and (e)
- (2) Columns (a), (b), (c), (d), (e), (g) per 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, ASC-13 Revised, Page 2; Total Column sum of Columns (a), (b), (c), (f), and (g)
- (3) Line (1) + Line (2); Total Column sum of Columns (a), (b), (c), (f), and (g)
- (4) per Company forecast; Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), and (g)
- (5) Line 3 - Line 4, truncated to five decimal places

The Narragansett Electric Company
Calculation of Transmission Uncollectible Factor
Effective January 1, 2018

<u>Line No.</u>	<u>Total</u>	<u>Residential A16/ A60 (a)</u>	<u>Small Commercial & Industrial C06 (b)</u>	<u>General Commercial & Industrial G02 (c)</u>	<u>Large Demand B32/G32 (d)</u>	<u>Large Demand B62/G62/X01 (e)</u>	<u>Combined B32/G32 B62/G62/X01 (f)</u>	<u>Street Lighting S05/S06 S10/S14 (g)</u>
(1) Estimated Base Transmission Revenue	\$212,722,033	\$95,975,112	\$18,976,592	\$36,301,176	\$49,857,577	\$10,734,534	\$60,592,111	\$877,043
(2) Transmission Service (Over)/Under Collection	(\$6,617,268)	(\$880,217)	(\$2,267,911)	(\$2,664,766)	(\$1,578,170)	\$304,714	(\$1,273,456)	\$469,083
(3) Transmission Uncollectible (Over)/Under Collection Balance	\$34,297	\$13,081	\$5,407	(\$2,561)	\$6,350	\$11,009	\$17,359	\$1,011
(4) Total	\$206,139,062	\$95,107,975	\$16,714,087	\$33,633,849	\$48,285,757	\$11,050,257	\$59,336,014	\$1,347,136
(5) Proposed Uncollectible Rate	1.30%							
(6) Estimated Transmission-related Uncollectible Expense	\$2,679,808	\$1,236,404	\$217,283	\$437,240	\$627,715	\$143,653	\$771,368	\$17,513
(7) Forecasted kWh	7,423,513,683	3,027,852,906	596,142,607	1,295,163,245	1,988,885,728	454,899,445	2,443,785,174	60,569,751
(8) Proposed Transmission Uncollectible Factor per kWh		\$0.00040	\$0.00036	\$0.00033	\$0.00031	\$0.00031	\$0.00031	\$0.00028
(9) 2016 Transmission Uncollectible Reconciliation Factor		\$0.00000	\$0.00000	\$0.00000	\$0.00000	\$0.00002	\$0.00000	\$0.00001
(10) Proposed Transmission Uncollectible Factor		\$0.00040	\$0.00036	\$0.00033	\$0.00031	\$0.00033	\$0.00031	\$0.00029

Line Descriptions:

- Columns (a), (b), (c), (d), (e), (g) per 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, ASC-11, Page 1, Line (3); Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g)
- (1) Columns (a), (b), (c), (d), (e), (g) from 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, Schedule ASC-13 revised, page 1, line (3); Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g); Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g)
- (2) Columns (a), (b), (c), (d), (e), (g) from 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, Schedule ASC-15 Revised, page 1, Line 14
- (3) Line (1) + Line (2) + Line (3); Total Column sum of Columns (a), (b), (c), (f), (g) per Schedule MAL-22, Page 6, Line 15
- (6) Line (4) x Line (5); Total Column sum of Columns (a), (b), (c), (f), (g)
- (7) per Company forecast for the recovery/(refund) period; Total Column sum of Columns (a), (b), (c), (f), (g)
- (8) Line (6) ÷ Line (7), truncated to five decimal places
- Columns (a), (b), (c), (d), (e), (g) from 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, Schedule ASC-15 Revised, page 1, Line 17; Column (f) per 2017 Electric Retail Rate Filing, RIPUC Docket No 4691, Schedule ASC-15 Revised, Page 1 - rate classes B32/G32 and B62/G62, weighted average of sum of lines (15) and (16)
- (9) Line (8) + Line (9)

The Narragansett Electric Company
LTCRER Factor Calculation
Effective January 1, 2018

Line No.

(1) Ending Under-Recovery Balance, Calendar Year 2016	(\$7,523,488)
(2) Interest	(\$36,740)
(3) Ending Balance Including Interest	(\$7,560,228)
(4) Interest During Recovery Period	(\$75,245)
(5) Ending Balance Including Interest During the Recovery Period	(\$7,635,473)
(6) Forecasted kWhs for the period	7,423,513,683
(7) Unadjusted charge per kWh	\$0.00102
(8) LTC Recovery Factor Effective July 1, 2017 (prior to Uncollectible Adjustments)	\$0.00555
(9) LTC Recovery Reconciliation Factor Effective April 1, 2017, prior to Uncollectible Adjustments	\$0.00102
(10) Combined LTC Factor, prior to Uncollectible Adjustments	\$0.00657
(11) Proposed Uncollectible Allowance	1.3%
(12) Adjustment for Uncollectible Allowance	\$0.00008
(13) Proposed LTC Recovery Factor	\$0.00665

Line Descriptions:

(1) per 2017 Electric Retail Rate Filing, Docket No. 4691. Schedule ASC-18, Page 1, Ending Balance	(7) Line (5) ÷ Line (6), truncated to 5 decimal places
(2) per 2017 Electric Retail Rate Filing, Docket No. 4691. Schedule ASC-18, Page 1, Line (1)	(8) per LTC Recovery Factor filing, Docket No. 4673. May 2017, Attachment 1, Page 1, Line (6)
(3) Line (1) + Line (2)	(9) per 2017 Electric Retail Rate Filing, Docket No. 4691. Schedule ASC-18, Page 1, Line (6)
(4) 2017 Electric Retail Rate Filing, Docket No. 4691. Schedule ASC-18, Page 2	(10) Line (8) + Line (9)
(5) Line (3) + Line (4)	(11) per Schedule MAL-22, Page 6, Line 15
(6) per Company forecast	(12) Line (10) x Line (11)
	(13) Line (10) + Line (12)

The Narragansett Electric Company
Renewable Energy Growth Program
Renewable Energy Growth Program Factors
Effective January 1, 2018

<u>Line No.</u>	<u>Total</u>	<u>Residential A16 / A60 (a)</u>	<u>Small Commercial & Industrial C06 (b)</u>	<u>General Commercial & Industrial G02 (c)</u>	<u>Large Demand B32 / G32 (d)</u>	<u>Large Demand B62 / G62 (e)</u>	<u>Combined B32/G32 B62 / G62 (f)</u>	<u>Street Lighting S05/S06 S10 / S14 (g)</u>	<u>Electric Propulsion X01 (h)</u>
(1) Projected Annual Renewable Energy Growth Program Cost	\$7,598,773								
(2) Total Rate Base (\$000s)	\$561,738	\$296,490	\$54,542	\$82,460	\$77,651	\$19,545	\$97,196	\$29,286	\$1,764
(3) Percentage of Total (RBA)	100.00%	52.78%	9.71%	14.68%	13.82%	3.48%	17.30%	5.21%	0.31%
(4) Allocated Expense	\$7,598,773	\$4,010,692	\$737,805	\$1,115,458	\$1,050,407	\$264,391	\$1,314,798	\$396,164	\$23,857
(5) Forecasted Number of Bills/Luminaires (FBill)	7,009,440	5,257,356	608,568	98,664	12,696	144	12,840	1,032,000	12
(6) Proposed REG Factor - monthly per bill charge		\$0.76	\$1.21	\$11.30	\$82.73	\$1,836.04	\$102.39	\$0.38	\$1,988.05
(7) Uncollectible Percentage (UP)	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
(8) Proposed RE Growth Factors		\$0.77	\$1.22	\$11.44	\$83.81	\$1,860.22	\$103.73	\$0.38	\$2,014.23

Column Descriptions:

Columns (a), (b), (c), (d), (e), (g) per RE Growth Factor Filing, RIPUC Docket No. 4707, Schedule ASC-2, Page 4

Column (f) Combination of Columns (d) and (e) - See Line Descriptions below

Line Descriptions:

- (1) RE Growth Factor Filing, RIPUC Docket No. 4707, Schedule ASC-2, Page 1, Line (6)
- (2) per RIPUC 4323, Compliance Attachment 3A, (Schedule HSG-1), page 2, line 10; Column (f) sum of Columns (d) and (e)
- (3) Line (2) ÷ Line (2) Total Column; Total Column sum of Columns (a), (b), (c), (f), (g), (h)
- (4) Line (1) Total Column x Line (3); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
Company forecast for the period October 1, 2017 through September 30, 2018; for Streetlighting number represents individual fixtures; Column (f) sum of Columns (d) and (e); Total Column sum
- (5) Columns (a), (b), (c), (f), (g), (h)
- (6) Line (4) ÷ Line (5), truncated to 2 decimal places
- (7) Proposed Uncollectible percentage, per Schedule MAL-22, Page 6, Line 15
- (8) Line (6) ÷ (1- Line (7)), truncated to 2 decimal places

The Narragansett Electric Company
Renewable Energy Growth Program
RE Growth Cost Recovery Reconciling Factors
Effective January 1, 2018

<u>Factor Calculation</u>	<u>Total</u>	<u>Residential</u>	<u>Small Commercial & Industrial</u>	<u>General Commercial & Industrial</u>	<u>Large Demand</u>	<u>Large Demand</u>	<u>Combined</u>	<u>Street Lighting</u>	<u>Electric Propulsion</u>
<u>Line No.</u>		<u>A16 / A60</u>	<u>C06</u>	<u>G02</u>	<u>B32 / G32</u>	<u>B62 / G62</u>	<u>B32 / G32</u>	<u>S05 / S06</u>	<u>X01</u>
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
(1) RE Growth Program Year 2017 Cost (Over)/Under Recovery	\$281,221								
(2) Total Rate Base (\$000s)	\$561,738	\$296,490	\$54,542	\$82,460	\$77,651	\$19,545	\$97,196	\$29,286	\$1,764
(3) Rate Base as Percentage of Total (RBA)	100.00%	52.78%	9.71%	14.68%	13.82%	3.48%	17.30%	5.21%	0.31%
(4) Allocated 2017 Program Year (Over)/Under Recovery	\$281,221	\$148,431	\$27,305	\$41,282	\$38,874	\$9,785	\$48,659	\$14,662	\$883
(5) Forecasted Number of Bills/Luminaires (Fbill)	7,009,440	5,257,356	608,568	98,664	12,696	144	12,840	1,032,000	12
(6) Proposed Class-specific RE Growth Reconciling Factor per Month		\$0.02	\$0.04	\$0.41	\$3.06	\$67.94	\$3.78	\$0.01	\$73.57
(7) Proposed Uncollectible Percentage (UP)		1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%	1.30%
(8) Proposed Factor incl. Adjustment for Uncollectible Allowance (X%)		\$0.02	\$0.04	\$0.41	\$3.10	\$68.83	\$3.82	\$0.01	\$74.53

Column Descriptions:

Columns (a), (b), (c), (d), (e), (g) per RE Growth Factor Filing, RIPUC Docket No. 4707, Schedule ASC-3, Page , Section (2)
Column (f) Combination of Columns (d) and (e) - See Line Descriptions below

Line Descriptions:

- (1) RE Growth Factor Filing, Docket No. 4707, Schedule ASC-3, Page 1, Line (5)
- (2) per RIPUC 4323, Compliance Attachment 3A, (Schedule HSG-1), page 2, line 10; Column (f) sum of Columns (d) and (e)
- (3) Line (2) ÷ Line (2) Total Column; Total Column sum of Columns (a), (b), (c), (f), (g), (h)
- (4) Line (1) Total Column x Line (3); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
Company forecast for the period October 1, 2017 through September 30, 2018; for Streetlighting number represents individual fixtures; Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
- (5) (b), (c), (f), (g), (h)
- (6) Line (4) ÷ Line (5), truncated to 2 decimal places
- (7) Proposed Uncollectible percentage, per Schedule MAL-22, Page 6, Line 15
- (8) Line (6) ÷ (1- Line (7)), truncated to 2 decimal places

The Narragansett Electric Company
Renewable Energy Growth Program
Combined Monthly RE Growth Cost Recovery Factors
Effective January 1, 2018

<u>Line No.</u>	Residential	Small Commercial	General Commercial	Large Demand	Large Demand	Combined	Street Lighting	Electric Propulsion
	<u>A16 / A60</u> (a)	<u>C06</u> (b)	<u>G02</u> (c)	<u>B32 / G32</u> (d)	<u>B62 / G62</u> (e)	<u>B62 / G62</u> (f)	<u>S10 / S14</u> (g)	<u>X01</u> (h)
(1) RE Growth Factor (Costs for PYE March 2018)	\$0.77	\$1.22	\$11.44	\$83.81	\$1,860.22	\$103.73	\$0.38	\$2,014.23
(2) RE Growth Reconciliation Factor (Costs for PYE March 2017)	<u>\$0.02</u>	<u>\$0.04</u>	<u>\$0.41</u>	<u>\$3.10</u>	<u>\$68.83</u>	<u>\$3.82</u>	<u>\$0.01</u>	<u>\$74.53</u>
(3) Proposed Combined RE Growth Factor	\$0.79	\$1.26	\$11.85	\$86.91	\$1,929.05	\$107.55	\$0.39	\$2,088.76

Line Descriptions:

- (1) Page 14, Line (8)
- (2) Page 15, Line (8)
- (3) Line (1) + Line (2)

The Narragansett Electric Company
Energy Efficiency Factor Calculation
Effective January 1, 2018

<u>Line No.</u>		
(1)	Currently Effective Energy Efficiency Program charge per kWh, excluding uncollectible recovery:	\$0.01108
(2)	Currently Effective System Reliability Factor per kWh, excluding uncollectible recovery:	\$0.00002
(3)	Total Effective Energy Efficiency Charge per kWh, excluding uncollectible recovery:	\$0.01110
(4)	Proposed Uncollectible Rate	1.30%
(5)	Energy Efficiency Program charge per kWh, including proposed uncollectible recovery:	\$0.01124
(6)	Renewable Energy Charge	\$0.00030
(7)	Proposed Energy Efficiency Charge	\$0.01154

Line Descriptions:

- (1) per Energy Efficiency Program Plan For 2017, Docket No. 4654, Attachment 5, Page 1, Line (9)
- (2) per Energy Efficiency Program Plan For 2017, Docket No. 4654, Attachment 5, Page 1, Line (10)
- (3) per Energy Efficiency Program Plan For 2017, Docket No. 4654, Attachment 5, Page 1, Line (11)
- (4) Proposed Uncollectible percentage, per Schedule MAL-22, Page 6, Line 15
- (5) Line 3 ÷ (1-Line (4)), truncated to 5 decimal places
- (6) Renewable Energy Charge per R.I.G.L. §39-2-1.2
- (7) Line (5) + Line (6)

The Narragansett Electric Company
Calculation of Standard Offer Service Administrative Cost Factor
Effective January 1, 2018

<u>Line No.</u>	<u>Total</u>	<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>
(1) Estimated Commodity Related Uncollectible Expense for 2017	\$3,137,281	\$2,172,700	\$794,276	\$170,305
(2) Estimated Other Administrative Expense for 2017	\$2,828,342	\$2,013,777	\$657,335	\$157,230
(3) Estimated Total Administrative Expense for 2017	\$5,965,623	\$4,186,477	\$1,451,611	\$327,535
(4) Forecasted SOS kWh for the period of April 1, 2017 through March 31, 2018	3,846,663,819	2,641,130,580	972,590,232	232,943,007
(5) Estimated SOS Administrative Cost Factor		\$0.00158	\$0.00149	\$0.00140
(6) SOS Administrative Cost Reconciliation Adjustment Factor		(\$0.00007)	(\$0.00024)	(\$0.00015)
(7) Proposed SOS Administrative Cost Factor		\$0.00151	\$0.00125	\$0.00125

Line Descriptions:

- (1) from Page 19, line (3)
- (2) from Page 20, line (4)
- (3) Line (1) + Line (2)
- (4) per 2017 Electric Retail Rate Filing, Docket No. 4691, Schedule ASC-3, page 2, line (4)
- (5) Line 3 + Line 4, truncated to 5 decimal places
- (6) per 2017 Electric Retail Rate Filing, Docket No. 4691, Schedule ASC-7, Page 1 Lines (15), (10) and (5)
- (7) Line (5) + Line (6)

The Narragansett Electric Company
Calculation of Standard Offer Service Administrative Cost Factor
Effective January 1, 2018

Commodity-Related Uncollectible Expense for April 1, 2017 through March 31, 2018

(1)	Estimated Rate Year Cost/Revenue	\$167,130,743	\$61,098,118	\$13,100,418	\$241,329,280
(2)	Uncollectible Rate	<u>1.30%</u>	<u>1.30%</u>	<u>1.30%</u>	
(3)	Expense	\$2,172,700	\$794,276	\$170,305	\$3,137,281

- per 2017 Electric Annual Retail Rate Filing, RIPUC Docket No. 4691, Schedule ASC-4, Page 2, Section 1, Columns (c), (f), and (i), Line
- (1) (13)
 - (2) Proposed Uncollectible percentage, per Schedule MAL-22, Page 6, Line 15
 - (3) Line (1) x Line (2)

The Narragansett Electric Company
Calculation of Standard Offer Service Administrative Cost Factor
Effective January 1, 2018

<u>Line No.</u>		<u>Total</u>	<u>Residential</u>	<u>Commercial</u>	<u>Industrial</u>
(1)	Estimated GIS Cost	\$44,285	\$31,644	\$10,314	\$2,327
(2)	Estimated CWC	\$2,420,321	\$1,723,269	\$561,515	\$135,538
(3)	Estimate of Other Administrative Costs	<u>\$363,736</u>	<u>\$258,864</u>	<u>\$85,507</u>	<u>\$19,365</u>
(4)	Total Other Administrative Expenses	\$2,828,342	\$2,013,777	\$657,335	\$157,230

Line Descriptions:

- (1) from 2017 Electric Retail Rate Filing, Docket No. 4691, Schedule ASC-5 Revised, Page 4, column (g), Page 5, column (g) and Page 6, column (g)
- (2) from 2017 Electric Retail Rate Filing, Docket No. 4691, Schedule ASC-5, Page 4, column (h), Page 5, column (h) and Page 6, column (h)
- (3) from 2017 Electric Retail Rate Filing, Docket No. 4691, Schedule ASC-5, Page 4, column (i), Page 5, column (i) and Page 6, column (i), less costs incurred in CY 2016 for Northbridge study
- (4) Line (1) + Line (2) + Line (3)

The Narragansett Electric Company
FY18 Proposed Operations & Maintenance Factors
Effective January 1, 2018

<u>Line No.</u>	<u>Total</u>	<u>Residential A16 / A60 (a)</u>	<u>Small Commercial & Industrial C06 (b)</u>	<u>General Commercial & Industrial G02 (c)</u>	<u>Large Demand B32 / G32 (d)</u>	<u>Large Demand B62 / G62 (e)</u>	<u>Combined Large Demand B32 / G32 B62 / G62 (f)</u>	<u>Street Lighting S05/S06 S10 / S14 (g)</u>	<u>Electric Propulsion X01 (h)</u>
(1) FY2018 Forecasted Vegetation Management (VM) and Inspection & Maintenance (I&M) O&M Expense	\$10,306,051								
(2) Operating & Maintenance Expense - Rate Year Allowance (\$000s)	\$35,640	\$17,115	\$3,503	\$5,508	\$5,438	\$1,306	\$6,744	\$2,668	\$102
(3) Percentage of Total	100.00%	48.02%	9.83%	15.45%	15.26%	3.66%	18.92%	7.49%	0.29%
Allocated Vegetation Management (VM) and Inspection & Maintenance (I&M) O&M Expense	\$10,306,051	\$4,949,160	\$1,012,966	\$1,592,753	\$1,572,511	\$377,657	\$1,950,169	\$771,508	\$29,495
(4) Maintenance (I&M) O&M Expense	\$10,306,051	\$4,949,160	\$1,012,966	\$1,592,753	\$1,572,511	\$377,657	\$1,950,169	\$771,508	\$29,495
(5) Forecasted kWh - April 2017 through March 2018	6,724,493,045	3,027,852,906	596,142,607	596,142,607	1,988,885,728	431,021,320	2,419,907,048	60,569,751	23,878,126
Proposed Vegetation Management (VM) and Inspection & Maintenance (I&M) O&M Expense Charge per kWh		\$0.00163	\$0.00169	\$0.00267	\$0.00079	n/a	\$0.00080	\$0.01273	\$0.00123
(6) Maintenance (I&M) O&M Expense Charge per kWh		\$0.00163	\$0.00169	\$0.00267	\$0.00079	n/a	\$0.00080	\$0.01273	\$0.00123
(7) Forecasted kW - April 2017 through March 2018						1,037,528			
Proposed Vegetation Management (VM) and Inspection & Maintenance (I&M) O&M Expense Charge per kW		n/a	n/a	n/a	n/a	\$0.36	n/a	n/a	n/a
(8) Maintenance (I&M) O&M Expense Charge per kW		n/a	n/a	n/a	n/a	\$0.36	n/a	n/a	n/a

Column Descriptions:

Columns (a), (b), (c), (d), (e), (g) per FY 2018 Electric Infrastructure, Safety, and Reliability Plan, RIPUC Docket No. 4682, Section 6 Revised: Rate Design, Page 2
Column (f) Combination of Columns (d) and (e) - See Line Descriptions below

Line Descriptions:

- (1) per Revised Section 5: Attachment 1S, page 1, line 4, column (b)
- (2) per R.I.P.U.C. 4323, Compliance Attachment 3A, (Schedule HSG-1), page 4, line 72; Column (f) Sum of Columns (d) and (e)
- (3) Line (2) ÷ Line (2) Total Column; Total Column sum of Columns (a), (b), (c), (f), (g), (h)
- (4) Line (1) Total Column x Line (3); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
- (5) per Company forecasts; Column (f) Sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
- (6) Line (4) ÷ Line (5), truncated to 5 decimal places
- (7) per Company forecasts
- (8) Line (4) ÷ Line (7), truncated to 2 decimal places

The Narragansett Electric Company
Proposed CapEx Reconciling Factors
For Fiscal Year 2017 ISR Plan
Effective January 1, 2018

Line No.	Total	Residential A16 / A60 (a)	Small Commercial & Industrial C-06 (b)	General Commercial & Industrial G-02 (c)	Large Demand B32 / G32 (d)	Large Demand B62 / G62 (e)	Combined Large Demand B32 / G32 B62 / G62 (f)	Street Lighting S05/S06 S10 / S14 (g)	Electric Propulsion X01 (h)
(1) Actual FY2017 Capital Investment Revenue Require	\$10,303,388								
(2) Total Rate Base (\$000s)	\$561,738	\$296,490	\$54,542	\$82,460	\$77,651	\$19,545	\$97,196	\$29,286	\$1,764
(3) Rate Base as Percentage of Total	100.00%	52.78%	9.71%	14.68%	13.82%	3.48%	17.30%	5.21%	0.31%
(4) Allocated Actual FY2017 Capital Investment Revenue	\$10,303,388	\$5,438,209	\$1,000,410	\$1,512,480	\$1,424,276	\$358,495	\$1,782,772	\$537,170	\$32,348
(5) CapEx Revenue Billed	\$17,507,073	\$9,435,653	\$1,709,223	\$2,630,079	\$2,473,402	\$555,383	\$3,028,786	\$647,114	\$56,218
(6) Total Over Recovery for FY 2017	\$7,203,685	\$3,997,444	\$708,813	\$1,117,599	\$1,049,126	\$196,888	\$1,246,014	\$109,945	\$23,871
(7) Remaining Over (Under) For FY 2015	\$96,576	\$71,407	\$3,936	\$141,442	(\$67,802)	(\$34,333)	(\$102,135)	(\$18,859)	\$785
(8) Total Over (Under) Recovery	\$7,300,261	\$4,068,851	\$712,749	\$1,259,041	\$981,324	\$162,555	\$1,143,879	\$91,086	\$24,656
Forecasted kWhs - October 1, 2017 through (9) September 30, 2018	7,337,969,020	2,998,659,138	595,774,268	1,278,569,621	1,957,175,257	423,715,760	2,380,891,017	60,279,246	23,795,730
(10) Proposed Class-specific CapEx Reconciling Factor (Credit) per kWh		(\$0.00135)	(\$0.00119)	(\$0.00098)	(\$0.00050)	(\$0.00038)	(\$0.00048)	(\$0.00151)	(\$0.00103)

Column Descriptions:
Columns (a), (b), (c), (d), (e), (g) per FY 2017 Electric Infrastructure, Safety, and Reliability Plan Reconciliation Filing, RIPUC Docket No. 4592, Attachment ASC-2, page 1
Column (f) Combination of Columns (d) and (e) - See Line Descriptions below
Line Descriptions:
(1) Total per FY 2017 Electric Infrastructure, Safety, and Reliability Plan Reconciliation Filing, RIPUC Docket No. 4592, Attachment AM-1, Page 1, Line (15)
(2) per R.I.P.U.C. 4323, Compliance Attachment 3A, (Schedule HSG-1), page 2, Line (10); Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
(3) Line (2) - Line (2) Total Column; Total Column sum of Columns (a), (b), (c), (f), (g), (h)
(4) Line (1) Total Column x Line (3); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
(5) per FY 2017 Electric Infrastructure, Safety, and Reliability Plan Reconciliation Filing, RIPUC Docket No. 4592, Attachment ASC-2, page2; Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
(6) Line (5) - Line (4); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
(7) per FY 2017 Electric Infrastructure, Safety, and Reliability Plan Reconciliation Filing, RIPUC Docket No. 4592, Attachment ASC-2, page 3; Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
(8) Line (6) + Line (7); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
(9) per Company forecasts; ; Column (f) sum of Columns (d) and (e); Total Column sum of Columns (a), (b), (c), (f), (g), (h)
(10) -1 x [Line (8) + Line (9)], truncated to 5 decimal places