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Witness Panel 1
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National Grid

Granite State Electric Company

Fiscal Year 2010 Reliability
Enhancement Plan and Vegetation
Management Plan Report and
Reconciliation Filing

May 17, 2010

Submitted to:
New Hampshire Public Utilities Commission

Submitted by:

nationalgrid

National Grid

Granite State Electric Company

Fiscal Year 2010 Reliability
Enhancement Plan and Vegetation
Management Plan Report

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Introduction

Pursuant to the settlement agreement approved by the Commission as part of the National Grid/KeySpan merger proceeding in Docket No. DG 06-107¹ (“Settlement Agreement”), Granite State Electric Company d/b/a National Grid (“National Grid” or “Company”) is submitting the results of the Reliability Enhancement Plan (“REP”) and Vegetation Management Plan (“VMP”) for fiscal year 2010 (April 1, 2009 - March 31, 2010). This report contains the following information:

1) A report on actual spending on operating and maintenance (“O&M”) activities and capital projects for fiscal year 2010, including an explanation of differences from the fiscal year 2010 budget reviewed by Staff;

2) A request for recovery of the incremental O&M expense of \$1,047,770 above the threshold amount of \$1,360,000, which represents an increase of \$933,868 above the amount of REP/VMP O&M currently reflected in rates, effective for usage on and after July 1, 2010;

3) A request for a REP Capital Investment Allowance of \$163,663, which is the revenue requirement associated with \$876,243 of capital investment for fiscal year 2010 to be included in rates effective for usage on and after July 1, 2010; and

4) A summary of reliability performance for calendar year 2009.

The Company is submitting the testimony of Catherine T. McDonough, Robert D. Sheridan and Sara M. Sankowich which provides further information regarding the Company’s actual O&M cost and capital investment made during fiscal year 2010. In addition, the testimony of David E. Tufts addresses the Company’s request for an increase in distribution rates associated with the REP/VMP Adjustment Provision and the REP Capital Investment Allowance

¹ See Order No. 24,777 (July 12, 2007).

described above, and includes a proposed rate design, typical bill impacts and clean and revised tariff pages.

Section 1: Budget vs. Actual O&M Expenses

As per the Settlement Agreement, the Company will provide an O&M budget to Staff that assumes the REP and VMP O&M spending for each fiscal year will be approximately equal to the Base Plan O&M of \$1,360,000 or an alternative O&M Budget that exceeds the O&M Base Amount for consideration by Staff.

In the wake of the December 2008 Ice Storm and following discussions with Staff, the Company set a vegetation budget of \$1,848,966 for fiscal year 2010, which was more than \$400,000 higher than the \$1,473,832 amount spent for vegetation management in fiscal year 2009. This budget gave the Company the ability to remove hazard trees and/or to perform hazard tree removal along seventeen feeders. Combined with the expenses associated with inspections and REP capital improvements, the Company submitted an alternative O&M budget for fiscal year 2010 of \$1,943,966, which was \$470,134 greater than the \$1,473,832 embedded in rates². Staff expressed their support for this alternative budget, which was filed with the Commission on December 23, 2009 in DE 09-031.

As shown in Tables 1, 2a, and 2b, the Company actually spent \$2,407,770 for O&M activities related to the REP and VMP, or about \$460,000 above the alternative budgeted amount. This work was essential in order for the Company to reach its reliability goals since, as shown in Figure 1, trees account for about 40% of customer interruptions, and failed equipment and lightning (the key focus of its feeder hardening program) account for another 20%-to-30% of

² The annual recovery of REP/VMP O&M currently in rates consists of \$1,360,000 in base rates plus \$113,832 currently being recovered through the REP/VMP Adjustment Factor that took effect August 1, 2009.

customer interruptions. Section 2 and 3 describes the budget variances in more detail.

Attachment 1 shows the monthly expenses and Attachment 2 contains the work plan of completed VMP O&M activities by feeder.

Table 1. REP O&M Activities³

Activities	FY 2010 O&M Cost Proposal	FY 2010 Actual O&M Cost
Inspection and Maintenance	\$20,000	\$6,429
O&M related to Capital Expenditures	\$75,000	\$194,171
Total	\$95,000	\$201,084

Table 2a. VMP O&M Activities⁴

Activities	FY 2010 O&M Cost Proposal	FY 2010 Actual O&M Cost
Spot Tree Trimming	\$42,795	\$37,483
Trouble and Restoration Maintenance	\$22,572	\$16,557
Planned Cycle Trimming	\$635,000	676,858
Cycle Trimming Police Detail Expenses	\$126,401	\$201,176
Hazard Tree Removal	\$850,000	\$1,103,543
Interim Trimming	\$6,048	\$1,047
Tree Planting	\$500	\$0
Other Police Detail Expenses	\$65,650	\$65,327
Total	\$1,748,966	\$2,101,991

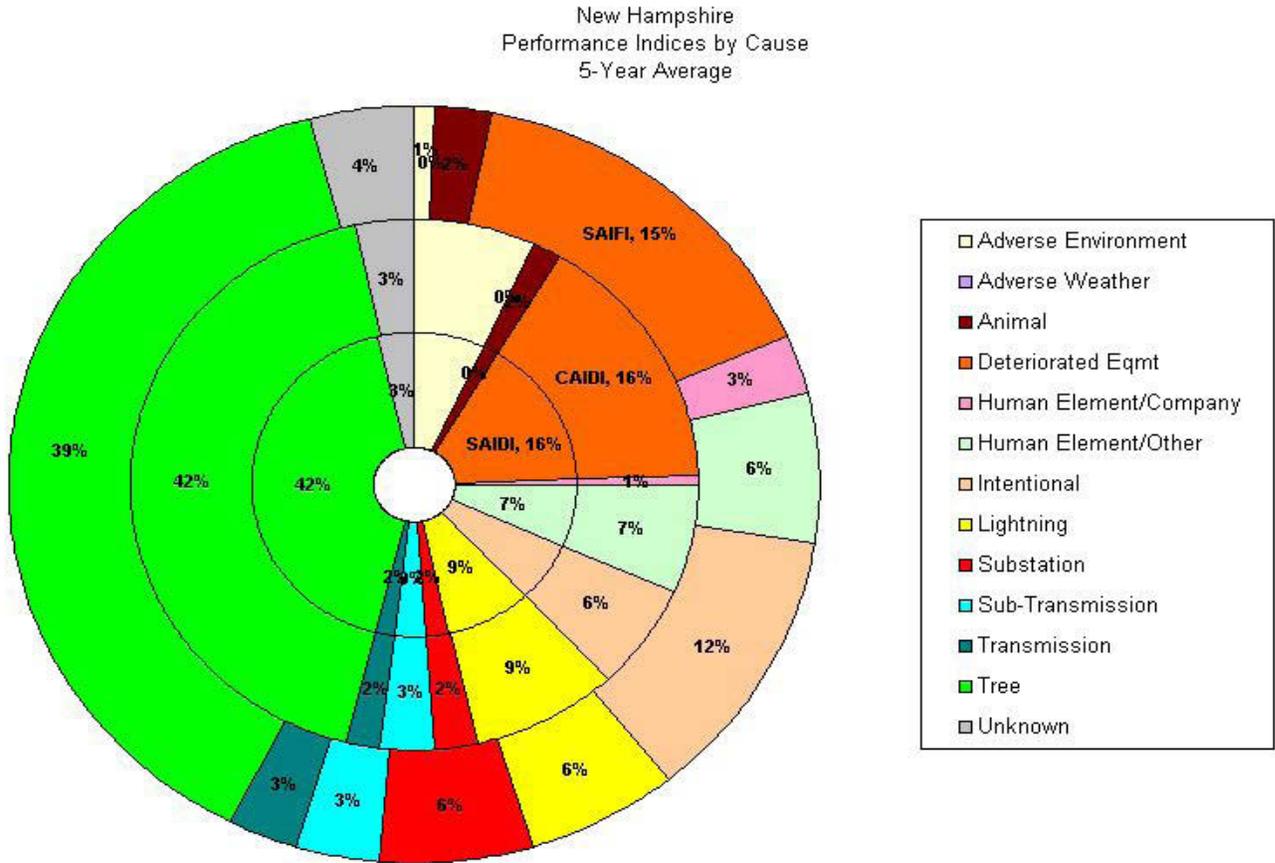
Table 2b. Optional Enhanced O&M Activities

Activities	FY 2010 REP O&M Cost Proposal	FY 2010 Actual REP O&M Cost
Hazard Tree Removal	\$100,000	\$104,695
Total	\$100,000	\$104,695

³ See December 23, 2009 letter in DE 09-031.

⁴ Id.

Figure 1. Performance Indices by Cause



IDS data. CI > 1 customer and duration > 5 minutes. Excludes PUC major storms.

Section 2: Budget vs. Actual Capital Expenditures for REP

The Company proposed a \$620,000 capital budget and \$95,000 for O&M associated with its REP in fiscal year 2010 as shown in Tables 1 and 3. As discussed with Staff, the Company budgeted this amount to perform hardening activities along 25 miles of various feeders, to install six reclosers and to replace/install 220 cutouts.

As shown in Table 3 below, the Company met or exceeded its targets for completing feeder hardening, the installation of line reclosers, and the replacement of potted porcelain

cutouts. In fiscal year 2010, 64 miles of feeder hardening was completed on the Craft Hill 11L1, Salem Depot 9L3, Vilas Bridge 12L1 and Barron Avenue 10L4 feeders. Six (6) new line reclosers were installed to improve feeder sectionalization. A recloser was installed on Mount Support feeder 16L1, Hanover feeder 6L3, Spicket River feeder 13L2 and three reclosers were installed on Salem feeder 9L3. Potted porcelain cutouts are replaced as they are identified. Many are replaced as part of the feeder hardening program, however additional cutouts are targeted on feeders not expected to have feeder hardening completed on them. In fiscal year 2010, replacements outside of the feeder hardening program totaled 310 at various locations.

Driven by its desire to continue the momentum in improvements in its reliability performance and the availability of crews to complete additional reliability work in New Hampshire in fiscal year 2010, the Company chose to exceed its goals in the feeder hardening and cutout programs. This boosted capital outlays and the associated O&M expenditures for these programs.

Table 3 compares the budgeted capital expenditures against the value of electric plant additions placed in-service to the FERC 101/106 accounts. These fiscal year 2010 additions form the basis for the revenue requirement calculation in this filing. Factors contributing to the difference between the fiscal year 2010 budgeted amount and the fiscal year 2010 capital investment are (1) budgeted amounts from the prior fiscal year placed into service in fiscal year 2010, which can typically occur as capital work is performed, completed, and processed through the accounting system, and (2) the difficulty in estimating costs associated with particular projects until the site specific requirements are determined by inspection or detailed design. Variances for unit costs in the feeder hardening program arise due to the uncertainties in the volume of deficiencies that may be identified through the feeder inspections that require repair,

replacement or installation of new plant to address the deficiency. Variances in the recloser and cutout programs are driven by the construction issues that are specific to the site of installation. Examples include the need to replace a pole, cross arms or the relocation of a device to install a new recloser.

As set forth in Mr. Tufts’ testimony, the revenue requirement associated with fiscal year 2010 capital investment of \$876,243 is \$163,663.

The increase in O&M costs associated with the REP programs is driven by the increased mileage completed in the Feeder Hardening program. The Feeder Hardening program has an O&M ratio that is relatively high when compared to other capital projects.

Table 3. Summary of 2010 REP Program

Projects	FY 2010 Goal	FY 2010 Actuals	FY 2010 Capital Investment Budget	FY 2010 Actual Capital Investment (FERC 101/106)
Feeder Hardening (miles)	25	64	\$320,000	\$469,416
Asset Replacement				
- Reclosers	6	6	\$240,000	\$316,975
- Cutouts: Installing new cutouts on side taps and replacing potted porcelain cutouts	220	310	\$60,000	\$89,852
Total			\$620,000	\$876,243

Section 3: Budget versus Actual Spending for Vegetation Management

The Company completed all of the vegetation management work contained in this year’s plan. Overall, actual expenses incurred for base VMP O&M activities (\$2,407,770) were \$463,804 greater than the alternative budget (\$1,943,966). The Company spent less than anticipated for spot tree trimming, trouble and restoration calls, and interim trimming. These

activities are demand driven and the Company experienced less demand for these activities during fiscal year 2010 than expected. In contrast, cycle pruning, cycle pruning police detail expenses, and hazard tree removal exceeded the anticipated spending level. The positive variance for cycle pruning was caused by an unanticipated increase in mileage due to a reconfiguration of circuits that added extra miles to the work plan.

The increase in spending for hazard tree removal was due to a number of factors. First, more trees were removed per mile because of the improved risk analysis and specification training for arborists that the Company rolled out last summer. This training set specific risk tolerances and improved the training and ability of field arborists to identify risk which in turn resulted in more hazard trees being identified and removed. As a result of this training, crews are now removing larger full canopy ‘healthy looking’ trees that may have been passed previously. Such trees are now subjected to more rigorous biological and structural inspection methods and are, therefore, more likely to be removed as hazard trees despite their outward appearance.

Second, the cost of removing hazard trees as part of the circuit pruning program was also higher. Removals for both hazardous trees and incompatible species growing directly under the conductors were performed while maintenance pruning was being done. The number of removals was in excess of average conditions on the 39L 2 and 6L3 circuits, which increased the trees removed per mile on those circuits.

Finally, there was also an impact from the overall decline in tree health from recent storm events and reduced town and private tree care budgets. As customers and towns are less able to care for their own trees, the Company has seen a rise in unmaintained private trees in close proximity to conductors which it must address.

Section 4: Calendar Year 2009 Reliability Results

The REP and VMP activities appear to be bearing fruit. Table 4 shows the Company’s reliability performance metrics for 2009 based on both the regulatory and IEEE Standard 1366 method for excluding major weather events; Customers Interrupted, Customer Minutes Interrupted, system average interruption duration index (“SAIDI”), system average interruption frequency index (“SAIFI”), and customer average interruption duration index (“CAIDI”).

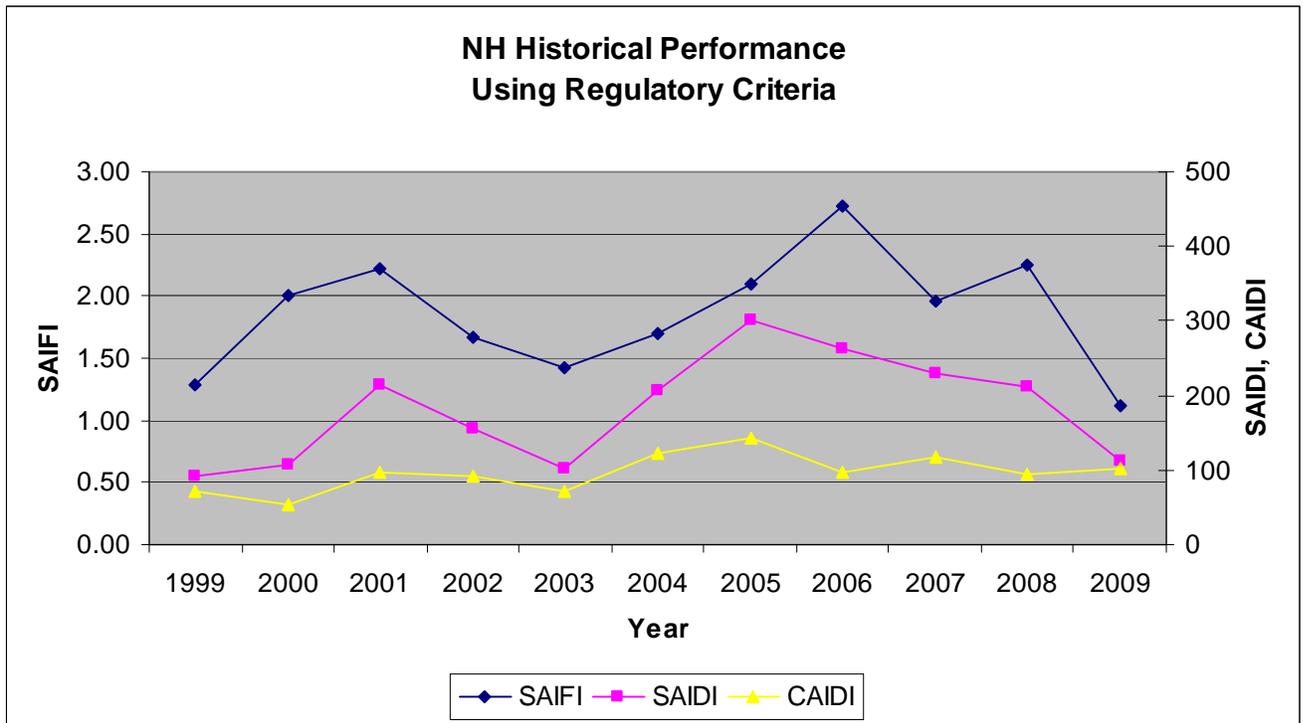
Table 4. Calendar Year 2009 Reliability Results

Exclusions ⁵	Customers Interrupted CI	Customer Minutes Interrupted CMI	SAIFI	SAIDI	CAIDI
PUC Major Storm ⁶	45,860	4,634,160	1.12	112.81	101.05
IEEE Major Event Days ⁷	45,860	4,634,160	1.12	112.81	101.05

As shown in Figure 2, the improvement trend in reliability performance continues. The SAIFI metric improved remarkably in 2009 - down about 60% since the metric peaked in 2006. The improvement trend in reliability as measured by SAIDI, an even broader measure of reliability performance, is also compelling. In 2009, SAIDI was down for the fourth year in a row. Still, it is important to note that part of the improvement in reliability performance in 2009 was due to good weather. The Company will need to remain vigilant with its REP and VMP activities to sustain these improvements.

⁵ Only events involving 1 or more customers and more than 5 minutes are included in the calculated statistics.
⁶ PUC Major Storm: [(CI >= 15 % of Customers Served and 30 concurrent events) or (45 concurrent events)], Using PUC criteria, no days were excluded in 2009.
⁷ IEEE Major Event Days: Using IEEE criteria, no days were excluded in 2009

Figure 2. Historical Performance



Maintenance Activities Fiscal Year 2010 Actuals by Month

Activity Description	April	May	June	July	August	September	October	November	December	January	February	March	Grand total
Spot Tree Trimming	\$ 360.41	\$ 165.94	\$ 5,238.54	\$ 3,182.20	\$ 2,233.98	\$ 7,883.94	\$ 5,730.05	\$ 2,277.18	\$ 4,316.16	\$ 1,937.45	\$ -	\$ 4,157.58	\$ 37,483.43
Trouble & Restoration Maintenance		\$ 4,932.37		\$ 3,977.87	\$ 784.93	\$ 1,960.50	\$ 916.44	\$ 405.44	\$ 1,720.51		\$ 593.94	\$ 1,265.51	\$ 16,557.51
Planned Cycle Trimming	\$ (115,885.58)				\$ 137,533.35	\$ 131,459.86		\$ 132,055.69	\$ 70,268.62		\$ 183,063.46	\$ 138,363.07	\$ 676,858.47
Cycle Trimming Police Detail Expense	\$ (11,918.06)	\$ 11,888.00		\$ 1,136.00	\$ 30,220.00	\$ 9,121.00	\$ 35,954.39	\$ 25,544.50	\$ 9,992.00	\$ 23,636.50	\$ 34,017.00	\$ 31,584.50	\$ 201,175.83
Hazard Tree Removal	\$ (20,240.01)	\$ 1,404.56	\$ 32,482.56	\$ 179,298.25	\$ 224,514.65	\$ 239,274.36	\$ 134,221.26	\$ 159,211.57	\$ 62,545.91	\$ 72,404.71	\$ 84,651.52	\$ 38,468.80	\$ 1,208,238.14
Interim Trimming	\$ 420.00	\$ -	\$ -	\$ -	\$ 627.66	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,047.66
Tree Planting	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Police Detail Expenses	\$ -	\$ -	\$ 2,046.15	\$ -	\$ -	\$ 30,918.80	\$ 16,714.20	\$ -	\$ 3,202.00	\$ 11,520.00	\$ -	\$ -	\$ 65,326.95
Total	\$ (147,263.24)	\$ 13,458.50	\$ 42,653.47	\$ 189,640.47	\$ 395,914.57	\$ 420,618.46	\$ 193,536.34	\$ 319,494.38	\$ 152,045.20	\$ 109,498.66	\$ 302,325.92	\$ 214,765.26	\$ 2,206,687.99

FY 10 Vegetation Management Program - Completed Workplan

Planned Circuit Trimming		CO_DIST_FDR	Substation Name	FY10 Planned Miles	FY10 Completed Miles	FY10 Hazard Trees Rmvd	Comments
Salem		41_42_10L1	Barron Ave. #10	11.51	5.08		Feeder reconfigured after work plan submitted
Salem		41_42_10L4	Barron Ave. #10	15.37	14.14	53	GIS variance
Salem		41_42_14L3	Pelham #14	29.06	36.24		GIS variance
Salem		41_42_18L1	Old Trolley #18	0.11	0.02		GIS variance
Salem		41_42_18L4	Old Trolley #18	13.25	12.96		GIS variance
Lebanon		41_41_16L1	Mt. Support #16	42.52	41.07	126	GIS variance
Lebanon		41_41_39L1	Slayton Hill #39	14.14	1.87		Feeder reconfigured after work plan submitted
Lebanon		41_41_39L2	Slayton Hill #39	15.93	29.88	87	Added miles from 39L1 reconfiguration
Lebanon		41_41_6L3	Hanover #6	34.30	34.94	185	
Charlestown/Walpole		41_43_8L2	Charlestown #8	0.26	0.01		GIS variance
Totals FY10				176.45	176.21	451	

Base Hazard Tree Removal		CO_DIST_FDR	Substation Name	FY10 Planned Miles	FY10 Completed Miles	FY10 Hazard Trees Rmvd	Comments
Salem		41_42_10L2	Barron Ave. #10			76	
Salem		41_42_18L2	Old Trolley #18			78	
Salem		41_42_9L3	Salem Depot #9			265	
Lebanon		41_41_11L1	Crafts Hill #11			93	
Lebanon		41_41_1L2	Lebanon #1			1	
Lebanon		41_41_1L4	Lebanon #1			29	
Lebanon		41_41_6L4	Hanover #6			28	
Lebanon		41_41_7L1	Enfield #7			178	
Lebanon		41_41_16L2	Mt. Support			160	Carry over from FY09
Charlestown/Walpole		41_43_12L1	Vilas Bridge #12			189	Carry over from FY09
Totals FY10						1097	

Optional Enhanced O&M Budget Off Cycle Hazard Tree Removal Feeders		CO_DIST_FDR	Substation Name	FY10 Planned Miles	FY10 Completed Miles	FY10 Hazard Trees Rmvd	Comments
Lebanon		41_41_1L3	Lebanon #1			70	Balance Deferred to FY11
Lebanon		41_41_6L2	Hanover #6			6	
Lebanon		41_41_39L2	Slayton Hill #39				See 39L2 above-moved to on cycle w/prune
Lebanon		41_41_15H1	Monroe #15				Completed FY09 147 Removals
Lebanon		41_41_7L2	Enfield #7			105	Carry Over from FY09
Salem		41_42_18L4	Old Trolley #18				Deferred to FY11
Totals FY10						181	

Grand Total FY10 Removals

1729

Sub-Transmission Clearing

Non scheduled in FY10 Work Plan

Direct Testimony
of
Catherine T. McDonough
Robert D. Sheridan
and
Sara M. Sankowich

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Dr. Catherine T. McDonough**

3 **Q. Dr. McDonough, please state your full name and business address?**

4 A. My name is Catherine T. McDonough, and my business address is 40 Sylvan Road,
5 Waltham, MA 02451.

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

8 A. I am employed as the Director of Regulatory Strategy for Electric Distribution
9 Operations by National Grid USA Service Company, Inc (the “Service Company”). In
10 my capacity as Director, I am responsible for Granite State Electric Company’s d/b/a
11 National Grid (“Granite State” or “Company”) regulatory filings and regulatory
12 compliance related to electric distribution operations in New Hampshire and for other
13 National Grid retail distribution companies in Massachusetts, Rhode Island, and New
14 York.

15
16 **Q. Please describe your educational background.**

17 A. I graduated from the University of Massachusetts, Amherst in 1979. I received a Masters
18 in Economics from New York University in 1987 and a doctorate in Economics from
19 New York University in 1995.

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

1 A. I joined National Grid (formerly Niagara Mohawk Power Corporation (“Niagara
2 Mohawk”)) eleven years ago. Before being named to my current position in April 2008,
3 I was a project manager directing research to support a variety of strategic decisions
4 related to electric distribution operations, customer satisfaction and electric pricing. Prior
5 to joining Niagara Mohawk, I served as a Finance Professor at SUNY Binghamton and
6 Babson College following several years as a Vice President, Senior Economist with
7 Merrill Lynch Capital Markets in New York City.

8

9 **Q. Have you previously testified before the Commission?**

10 A. Yes. I testified in the docket involving the Company’s May 15, 2008 and 2009
11 REP/VMP Reconciliation filings.

12

13 **Robert D. Sheridan**

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

15 A. My name is Robert D. Sheridan and my business address is 40 Sylvan Road, Waltham,
16 MA, 02451.

17

18 **Q. By whom are you employed and in what position?**

19 A. I am the Director of Distribution Planning for the Service Company. In that capacity, I
20 am responsible for conducting distribution system and asset reviews each year for
21 National Grid’s electric distribution companies in Massachusetts, Rhode Island, New

1 Hampshire and upstate New York. This includes developing recommended system
2 improvement projects in support of National Grid's objectives concerning capacity,
3 reliability and sustainability of the distribution network.

4

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

6 A. I graduated from the University of South Florida in 1986, earning a bachelor's degree in
7 electrical engineering, and from Bentley College in 1995, earning a master's degree in
8 business administration.

9

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

11 A. In 1987, I began my engineering career as an associate engineer at General Dynamics,
12 Electric Boat Division in Groton, Connecticut, working with the power systems on
13 nuclear submarines. In 1988, I took a position with Massachusetts Electric Company,
14 now National Grid, in North Andover, Massachusetts. Since that time I have held
15 various engineering and management positions within the company, all focusing on the
16 electric distribution system. In 1995, I was promoted to district engineering manager. I
17 then became district engineering manager for the Narragansett Electric Company, also
18 part of National Grid, in 1998. In 2002, I was promoted to vice-president of distribution
19 planning and engineering for New England; in 2005, vice-president of distribution
20 engineering and asset management for both New England and upstate New York. In

1 2008, I assumed my current position as director of network asset planning, and I am a
2 registered professional engineer in the Commonwealth of Massachusetts.

3

4 **Q. Have you previously testified before the Commission?**

5 A. No, although I have testified before the Massachusetts Department of Public Utilities.

6

7 **Sara M. Sankowich**

8 **Q. Ms. Sankowich, would you please state your full name and business address?**

9 A. My name is Sara M. Sankowich, and my business address is 40 Sylvan Road, Waltham,
10 MA, 02451.

11

12 **Q. By whom are you employed and in what position?**

13 A. I am employed as the Manager of Vegetation Management Strategy for Electric
14 Distribution Operations by the Service Company. In my capacity as Manager, I am
15 responsible for distribution Vegetation Management Strategy and Policy in Granite State
16 Electric Company's d/b/a National Grid ("National Grid" or "Company") territory in
17 New Hampshire and for other National Grid retail distribution company affiliates in
18 Massachusetts, Rhode Island, and New York.

19

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

1 A. I graduated from The State University of New York, College of Environmental Science
2 and Forestry in 2000. I received a Bachelor of Science in Resource Management
3 (Forestry).

4

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

6 A. I joined the Service Company in 2004. Before being named to my current position in
7 August 2008, I was the New England South Lead Arborist for Construction Delivery
8 Forestry. I oversaw New England South Arborists responsible for delivering distribution
9 Forestry strategy and work plan. Prior to being named to the lead position in May 2007,
10 I was the Rhode Island Coastal District Arborist. Prior to joining the Service Company, I
11 was employed with Orange and Rockland Utilities, in Monroe, NY as an Associate
12 Arborist. I was hired at Orange and Rockland Utilities after being a Contract Arborist
13 through Environmental Consultants Inc., where I contracted for Northern Indiana Public
14 Service Company and then Orange and Rockland Utilities.

15

16 **Q. Have you previously testified before the Commission?**

17 A. Yes. I testified in the Company's last reconciliation proceeding regarding its Reliability
18 Enhancement Plan/Vegetation Management Program, DE 09-094.

19

20 **II. PURPOSE OF TESTIMONY**

21 **Q. What is the purpose of this testimony?**

1 A. This testimony serves two purposes. First, this testimony will provide the Commission
2 with background information regarding the Reliability Enhancement Program (REP) and
3 Vegetation Management Program (“VMP”) that Granite State implemented during fiscal
4 year 2010 (April 1, 2009-March 31, 2010) and is described in the Company’s May 17,
5 2010 Fiscal Year Reliability Enhancement Plan and Vegetation Management Plan Report
6 (the “2010 REP/VMP Report”) submitted to the Commission as part of this filing.
7 Second, this testimony supports the Company’s request for recovery of the incremental
8 operating and maintenance (“O&M”) expense of \$1,047,770 above the base O&M
9 amount of \$1,360,000 through the REP/VMP Adjustment Provision as set forth in
10 Exhibit GSE-8 of the Granite State Rate Plan approved as part of the comprehensive
11 merger settlement agreement in Docket No. DG 06-107 (the “Settlement Agreement”)¹,
12 as well as a revenue requirement of \$163,663 associated REP Capital Investment of
13 \$876,243. Information regarding the calculation of the REP/VMP Adjustment Provision
14 and the REP Capital Investment Allowance, and the associated rate impacts, is set forth
15 in the Testimony of David E. Tufts which is a part of this filing.
16

17 **III. OVERVIEW OF REP AND VMP**

18 **Q. Please explain the purpose of the REP and VMP.**

19 A. As part of the Settlement Agreement, Granite State committed to implement a REP and
20 VMP to bring the Company back to the historical reliability performance levels that
21 existed prior to 2005, with the goal of meeting those historical performance levels by

¹ See Order No. 24,777 (July 12, 2007).

1 2013. In general, the REP and VMP include categories of both capital and O&M
2 spending targeted to improve reliability performance. The REP and VMP are premised
3 on the idea that a certain amount of annual spending on both capital and O&M activities
4 is necessary to maintain the safety and reliability of the Company's electric distribution
5 system. The Settlement Agreement assumes that a base amount of \$1,360,000 will be
6 spent on O&M activities associated with the REP and VMP during each fiscal year of the
7 Company's five year rate plan established in the Settlement Agreement, and that the
8 Company will establish a proposed budget for REP capital investments for each fiscal
9 year following discussions with Staff. To the extent the Company spends less than the
10 agreed upon base O&M budget on REP and VMP O&M activities for the given fiscal
11 year, the difference would be credited to customers either through a refund commencing
12 on July 1 or credited to the following year's REP and VMP O&M budget, at the
13 Commission's discretion. Notwithstanding the base O&M amount of \$1,360,000, the
14 Company has the flexibility to propose, implement and collect the revenue requirement
15 associated with alternative plans that exceed the base O&M amount assuming that the
16 associated spending is reasonable and prudent.²

17

18 **Q. What kinds of activities are included in the REP and VMP?**

² Settlement Agreement, Exhibit GSE-8 at 4-5 provides for cost recovery for any deviations from the plan reviewed by Staff, providing that the deviations were either due to circumstances out of the Company's reasonable control or, if within its control, were reasonable and prudent. Exhibit GSE-8 at 8-9.

1 A. As described in detail in Exhibit GSE-8 to the Settlement Agreement, the REP and VMP
2 include the following categories of activities: feeder hardening, augmented tree-trimming
3 and clearing, asset replacement, and inspection and maintenance.

4
5 **Q. How does the Company decide how to allocate funds towards vegetation**
6 **management and reliability activities within a given year's budget and how does the**
7 **Company determine which REP/VMP projects to undertake in any given year?**

8 A. Each year the Company develops an Annual Work Plan that is designed to achieve the
9 overriding performance objectives of the business (safety, reliability, efficiency,
10 customer satisfaction and environmental). At the outset, a draft work plan consists of a
11 compilation of proposed spending for Asset Strategies, individual capital projects and
12 statutory and regulatory mandatory work activities. Each potential project specified
13 within the plan contains justification and estimated costs. The Company uses a
14 prioritization model based on relative risk of each project proposal to facilitate the
15 selection of appropriate projects to be included in the Annual Work Plan. The ranking
16 and selection of projects is reviewed in challenge sessions and further prioritized to
17 achieve an optimized portfolio of projects considering the most up to date reliability
18 performance information compared to the reliability improvements targeted by the
19 various programs and the deliverability of the various programs within the fiscal year.
20 The Company's objective is to arrive at a budget that is the optimal balance in terms of
21 making investments necessary to maintain and improve the performance of the system,

1 while also ensuring a cost-effective use of the Company's available resources. At the
2 same time the Company must maintain a level of flexibility with regard to the budget and
3 spending process to deal with circumstances that inevitably arise during the year. The
4 allocation of funds for vegetation management and reliability improvement activities is
5 part of the budget vetting process.

6
7 **Q. Are the capital improvements in the REP/VMP Plan the only capital investments**
8 **made by the Company to its system?**

9 A. No. The Company has a five year capital plan which includes investments in the
10 following key categories: (a) expenditures required to ensure that the Company meets its
11 legal, regulatory and contractual obligations; (b) capital expenditures required to replace
12 failed or damaged equipment and to restore the Company's system to its normal
13 operating configuration and capability following storm or other events; (c) non-
14 infrastructure improvements that are required to run the Company's power system such
15 as tools and other general plant; (d) expenditures undertaken to maintain and/or upgrade
16 the capability of the Company's system to provide adequate or improved thermal loading,
17 voltage, stability, reliability or availability performance, and; (e) capital expenditures
18 required to reduce the risk and consequences of potential failures of transmission and
19 distribution assets

20
21 **Q. Please explain the purpose of the 2010 REP/VMP Filing.**

1 A. By May 15 of each fiscal year associated with the five-year rate plan period (January 1,
2 2008 through December 31, 2012), the Company is required to make a reconciliation
3 filing with the Commission for both its REP and VMP detailing the actual amounts
4 associated with REP and VMP activities during the prior fiscal year as compared with
5 budgeted amounts. Following the Company's submission of a proposed budget for fiscal
6 year 2010 REP and VMP activities to Staff on February 15, 2009, the Company met with
7 Staff on August 13, 2009 and October 29, 2009 to discuss the Company's fiscal year
8 2010 plan. The Staff and Company agreed on a budget for the Company's fiscal year
9 2010 plan, which was filed with the Commission on December 23, 2009 in DE 09-031.
10 This budget reflected an incremental increase of \$488,966 over the threshold amount of
11 \$1,360,000 in O&M expense set forth in the Settlement Agreement due to a significant
12 increase in the costs associated with hazard tree removals. As set forth in the 2010
13 REP/VMP Report and the Pre-filed Testimony of David E. Tufts, the Company's actual
14 O&M expense and capital investment associated with REP/VMP activities deviated from
15 the December 23, 2009 budget. Specifically, the Company is seeking recovery of
16 \$1,047,770 in incremental O&M expense above the threshold amount of \$1,360,000 and
17 \$163,663 for the REP Capital Investment Allowance which is the revenue requirement
18 associated with \$876,243 of capital investment in fiscal year 2010. If approved, the
19 Company is requesting that these rate adjustments become effective for usage on and
20 after July 1, 2010, as set forth in the Settlement Agreement.

21

1 **IV. FISCAL YEAR 2010 REP AND VMP IMPLEMENTATION**

2 **Q. Why did the Company's capital investment during the fiscal year vary from the**
3 **December 23, 2009 capital budget agreed to with Staff?**

4 A. As described in the 2010 REP/VMP Report, this increase was due in large part to an
5 increased number of feeder hardening projects conducted by the Company. As shown on
6 Table 3, the Company initially planned to conduct 25 miles of feeder hardening projects,
7 but actually completed 64 miles by the end of the fiscal year. The Company conducted
8 these additional projects in order to further improve system reliability and because
9 additional feeder hardening work had been designed and crews were available to
10 complete this work in fiscal year 2010. The Company believes the REP projects are
11 having a positive impact on reliability. As shown in Figure 1, deteriorated equipment,
12 lightning and animals have been found to account for 20-to-30% of the interruptions
13 experienced by customers and the feeder hardening programs was designed to address
14 these problems. Table 3 also indicated that the Company replaced 310 cutouts –more
15 than the 220 cutouts shown in the REP budget. The Company replaced more cutouts
16 because it has an objective to remove all potted porcelain cutouts from its system and
17 crews were available to perform this work. These cutouts have been prone to failure,
18 resulting in customer outages, and they also pose a safety risk for operating personnel
19 who have to operate them.

20

1 It is important to note that the work described in the REP and VMP Plan each year is a
2 subset of the work performed each year to maintain reliability. The incremental spending
3 included in the REP is required to restore reliability performance to the level experienced
4 prior to 2005.

5
6 **Q. Why did the Company's O&M spending vary from the Company's original budget?**

7 A. The increase in O&M spending above the Company's original budget is attributable to
8 several factors. First, a portion of the increased costs arise from cycle pruning as a result
9 of a change in scope of work, including an unanticipated increase in mileage from the
10 original bid as a result of circuit reconfiguration as well as a unforeseen price adjustment
11 due to a change associated with feeder reconfiguration. The Company also incurred
12 increased expenses with the removal of hazard trees due to its adoption of specific risk
13 tolerances, resulting from a more rigorous biological and structural inspection of trees
14 instead of relying on a tree's outward appearance. The change in risk tolerances made it
15 difficult to predict the number of hazard trees that would be targeted for removal and
16 therefore reflected in the Company's budget. O&M costs also varied from the original
17 budget with respect to the police detail costs. With more experience in budgeting for
18 hazard tree removal under the new risk tolerances, the Company believes it will be able
19 to better identify the number of hazard trees anticipated to be removed for budget
20 purposes.

21

1 The Company incurred an additional \$106,084 in O&M expense as a result of increased
2 volumes of REP work. Although the majority of REP expenditures are capital, there is
3 associated O&M spending for each program. The ratio of O&M to capital varies
4 depending upon the specific construction tasks required. For the REP projects, the O&M
5 associated with reclosers is estimated to be small, on the order of 2% of capital costs.
6 However, for the Feeder Hardening program, the associated O&M tends to be between
7 20%-30% because inspections may identify issues that require a maintenance response
8 rather than the replacement of a unit of plant. The increase in the feeder hardening
9 mileage from 25 miles to 64 miles is the primary driver of the increase in O&M costs
10 related to the REP.

11
12 **Q. Has the Company seen any improvements in the reliability of its system as a result**
13 **of its REP/VMP expenditures?**

14 A. Yes. As reflected on Figure 1 of the 2010 REP/VmP Report, the Company's SAIFI
15 metric is down about 60% since 2006 and its SAIDI performance has declined steadily
16 over the same time period. But some of the improvement in 2009 was due to good
17 weather. The Company will need to continue its REP and VMP activities to sustain the
18 recent improvements to reach the 2013 targeted reliability goals in the Settlement
19 Agreement.

20

1 **Q. Were the REP/VMP expenditures for which the Company is seeking recovery**
2 **reasonable and prudent?**

3 A. Yes. As described in this filing, the expenditures were reasonable and prudent because
4 these expenditures were made for programs that are specifically referenced in the
5 Settlement Agreement as necessary to achieve continued improvement in the Company's
6 system reliability in order to achieve pre-2005 reliability levels. The expanded scope of
7 work taken on this year in terms of vegetation management, feeder hardening and cutout
8 replacements was necessary to enable the Company to deliver on its commitment to
9 restore reliability performance to the goals set in the Agreement. It is reasonable to grant
10 the Company recovery of those costs because they were incurred for the explicit purpose
11 of improving system reliability, consistent with the intent of the Settlement Agreement,
12 and generated real customer benefits in the form of improved reliability performance.
13 Moreover, these expenditures were the result of a budgeting process which as described
14 above, prioritizes capital projects based on a number of criteria.

15

16 **V. CONCLUSION**

17 **Q. Does that conclude your testimony?**

18 A. Yes it does.

Direct Testimony
of
David E. Tufts

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1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Mr. Tufts, please state your full name and business address.**

3 A. My name is David E. Tufts. My business address is 40 Sylvan Road, Waltham,
4 Massachusetts 02451.

5

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

7 A. I am Director, Electric Distribution and Generation Revenue Requirements for National
8 Grid USA Service Company, Inc. (“Service Company”). The Service Company provides
9 engineering, financial, administrative and other technical support to subsidiary companies
10 of National Grid USA. My current duties include revenue requirements oversight for
11 National Grid’s electric distribution and generation activities in the US, including Granite
12 State Electric Company d/b/a National Grid (“National Grid” or “the Company”).

13

14 **Q. Please provide a brief summary of your educational background.**

15 A. In 1983, I earned a Bachelor of Science degree in Accounting, from Stonehill College in
16 Easton, Massachusetts.

17

18 **Q. Please describe your professional background.**

19 A. From 1981 through April 2000, I was employed by various subsidiary companies of
20 Eastern Utilities Associates (“EUA”), including EUA Service Corporation which
21 provided accounting, financial, engineering, planning, data processing and other services
22 to all EUA System companies. I joined EUA’s accounting department in 1983. I held

1 positions of increasing responsibility in accounting and was promoted to the position of
2 Manager of Accounting Services in 1991. The EUA System was acquired by National
3 Grid USA in early 2000, at which time I joined the Service Company. In January 2009 I
4 became Director, Electric Distribution and Generation Revenue Requirements.

5
6 **Q. Have you previously testified before the New Hampshire Public Utilities**
7 **Commission (“NHPUC” or “Commission”)?**

8 A. Yes. I have previously testified before the Commission in Docket DE 09-094.

9
10 **II. PURPOSE OF TESTIMONY**

11 **Q. What is the purpose of this testimony?**

12 A. This testimony supports the Company’s request for Commission approval to recover the
13 incremental operating and maintenance (“O&M”) and capital investment allowance
14 expense associated with the Vegetation Management Program (“VMP”) and Reliability
15 Enhancement Program (“REP”) implemented during fiscal year 2010. Resulting from the
16 Company’s Fiscal Year 2010 REP and VMP Report (“2010 REP/VMP Report”) included
17 in this filing, the Company is seeking to recover the incremental O&M expense of
18 \$1,047,770 above the base O&M amount of \$1,360,000 through the REP/VMP
19 Adjustment Provision, and also to recover a REP Capital Investment Allowance of
20 \$163,663 which is the revenue requirement associated with \$876,243 of capital
21 investment for fiscal year 2010.

22

1 The Company has calculated an annual rate adjustment of \$1,123,095 (including interest
2 on the O&M recovery during the recovery period) effective for usage on and after July 1,
3 2010 associated with the REP Capital Investment Allowance and the REP/VMP
4 Adjustment Provision. The REP Capital Investment Allowance revenue requirement of
5 \$163,663 translates into a percentage increase of 0.79% to base distribution rates. The
6 incremental O&M expense of \$1,073,092 (including interest) translates into a proposed
7 REP/VMP Adjustment Factor of \$0.00125 per kilowatt-hour. The VMP/REP
8 Adjustment Provision and REP Capital Investment Allowance revenue requirements and
9 rate design calculations are set forth in Schedules DET-1 and DET-2 respectively, to this
10 testimony. This filing also presents the reconciliation of the revenue related to the
11 existing REP/VMP Adjustment Factor that went into effect August 1, 2009 and will
12 continue through June 30, 2010.

13
14 **III. INCREMENTAL REP/VMP O&M EXPENSE**

15 **Q. Is the Company's request to recover the incremental REP/VMP O&M expense**
16 **incurred during fiscal year 2010 consistent with the terms of the comprehensive**
17 **settlement agreement approved by the Commission in Docket No. DG 06-107**
18 **("Settlement Agreement")?**

19 **A.** Yes. As required by the Settlement Agreement, on February 15, 2009 the Company
20 provided its proposed REP and VMP to Staff for fiscal year 2010 for Staff's review. The
21 elements that the REP and VMP must include and the process for Staff review are set
22 forth in Exhibit GSE-8 to the Settlement Agreement at pages 4 and 5. The Settlement

1 Agreement at page 5 of Exhibit GSE-8 establishes a base O&M expense amount
2 approximately equal to \$1,360,000 for fiscal years 2009 through 2013. Actual expenses
3 incurred by the Company in implementing the O&M components of the annual REP and
4 VMP, as agreed to with Staff, shall be reconciled to the base O&M amount of \$1,360,000
5 and shall be subject to the REP/VMP Adjustment Provision. Following review and
6 discussion, the Company and Staff agreed to an O&M budget of \$1,943,966 for hazard
7 tree removals for fiscal year 2010, which was filed with the Commission on December
8 23, 2009. As shown in the 2010 REP/VMP Report, the Company incurred \$2,407,770 in
9 REP/VMP O&M expenses during fiscal year 2010. The Company is seeking recovery of
10 the incremental O&M expense above the base amount of \$1,360,000, to the actual O&M
11 expenses incurred for fiscal year 2010 of \$2,407,770, or \$1,047,770 pursuant to Exhibit
12 GSE-8, Section I of the Settlement Agreement which allows for the recovery of
13 deviations that are reasonable and prudent.

14
15 **IV. REP CAPITAL INVESTMENT ALLOWANCE**

16 **Q. Is the calculation of the REP Capital Investment Allowance included in the**
17 **Company's proposal consistent with the terms of the Settlement Agreement?**

18 A. Yes, it is. The Company is proposing to recover the incremental revenue requirement of
19 \$163,663 associated with \$876,243 of capital investments associated with fiscal year
20 2010. The calculation mirrors the calculation agreed to in the Settlement Agreement as
21 shown in Exhibit GSE-8, Attachment 1 of that document.

22

1 **Q. Did the Company make any changes to the revenue requirement calculation from**
2 **that contained in the Settlement Agreement?**

3 A. Yes. The Company updated the composite depreciation rate and the property tax rate to
4 reflect the actual data for calendar year 2009. These new rates are reflected on Schedule
5 DET-1, page 3, lines 4 and 35, respectively.

6
7 **Q. How has the Company determined the capital investment amount included in the**
8 **REP Capital Investment Allowance revenue requirement calculation contained on**
9 **Schedule DET-1?**

10 A. Pursuant to the terms of the Settlement Agreement, Exhibit GSE-8 at Page 7,

11 “The Company shall track all capital investments made in accordance with
12 the REP for each fiscal year including FY 2008 through 2013. At the same
13 time that the Company makes its reconciliation filing for the REP/VMP
14 Adjustment reconciliation, the Company shall file a report detailing the
15 actual amount of capital investments made in accordance with
16 implementing the REP during the prior fiscal year. The report shall
17 include a calculation of the revenue requirement for adding these
18 additional capital investments into rate base, using the imputed capital
19 structure and rates set forth in Section 3.(C) of the Rate Plan, and as
20 illustrated on the accompanying Attachment 1. Provided that the
21 investments were made in accordance with the REP, the Company will be
22 allowed, subject to Commission approval, a permanent increase in its
23 distribution rates to recover the annual revenue requirement for those
24 investments. This permanent REP Capital Investment Allowance will take
25 effect for usage on and after July 1, at the same time as any REP/VMP
26 Adjustments are implemented for the preceding fiscal year as discussed in
27 section (D) above.”

28
29 As indicated in the 2010 REP/VMP Report, the Company invested \$876,243 in REP
30 capital investments in fiscal year 2010. The Settlement Agreement provides for the
31 recovery, subject to Commission approval, of revenue requirement associated with actual

1 capital investment. Therefore, the Company is basing the revenue requirement
2 calculation on the \$876,243 actual capital investment for fiscal year 2010.

3
4 **Q. Would you please walk through the revenue requirement calculation contained on**
5 **Schedule DET-1?**

6 A. Certainly. Lines 1 through 28 calculate the rate base upon which the Company's return
7 allowance is calculated. As shown on Line 1 and Line 2 in the "FY 2010" column, the
8 fiscal year 2010 annual and cumulative REP program spend is \$876,243 as previously
9 discussed. Lines 4 through 22 calculate the deferred tax reserve based on the
10 depreciation rate timing difference between book and tax depreciation rates. The
11 composite book depreciation rate was based on actual data for calendar year 2009 and
12 equals 3.71%. The tax depreciation rate reflects the MACRS 20 year utility property year
13 1 rate of 3.75%, the year 2 rate of 7.22 % and the year 3 rate of 6.68%. The resulting
14 cumulative book/tax timing difference is \$79,947. The cumulative deferred tax reserve
15 equals the cumulative book/tax timing difference times the effective federal and state tax
16 rate, incorporating a 8.5% state rate, of 40.53%, or \$32,399. The Company's year-end
17 net rate base of \$2,118,451, upon which the Company's return allowance is calculated, is
18 shown on Line 28 and consists of the cumulative REP capital investment through fiscal
19 year 2010, or \$2,326,243, accumulated book depreciation of \$175,394 and accumulated
20 deferred tax reserves of \$32,399.

21
22 **Q. Please continue.**

1 A. As agreed to in the Settlement Agreement, the return allowance for the REP capital
2 investment allowance for each July 1 rate adjustment is based on the prior fiscal year-end
3 rate base times the stipulated pre-tax weighted average cost of capital from the Settlement
4 Agreement as shown on Lines 43 through 49, or 11.91%. The resulting return allowance
5 equals the fiscal year-end rate base of \$2,118,451 times the stipulated pre-tax return rate
6 of 11.91%, or \$252,262 as shown on Line 33. Annual depreciation expense of \$86,304
7 and property taxes of \$66,676 are added to the return amount to arrive at the total revenue
8 requirement of \$405,242. The property tax amount is based on the actual ratio of
9 municipal tax expense to net plant in service for calendar year 2009 applied to the fiscal
10 year-end net plant in service, or the sum of lines 25 and 26.

11

12 **Q. What is reflected in the subsequent columns shown on page 3 of your Schedule**
13 **DET-1?**

14 A. The Company provided its proposed REP and VMP budgets and plan for fiscal year 2011
15 to Staff on February 12. Although the Company has not yet reached agreement with
16 Staff regarding the final budget to be implemented for fiscal year 2011, the REP
17 investment target for fiscal year 2011 was established at \$653,000. For illustrative
18 purposes, that target was maintained for fiscal year 2012 and actual investments for that
19 year were assumed to be at the targeted level. The calculation of the cumulative revenue
20 requirement which was previously described for fiscal year 2010 was repeated for each of
21 the subsequent fiscal years with incremental rate adjustments, equal to the cumulative

1 revenue requirement less the previous year's cumulative revenue requirement, shown on
2 Line 40 of page 3.

3
4 **V. SUMMARY**

5 **Q. Would you please summarize Schedule DET-1 to your testimony?**

6 A. Pages 1 of 3 provide a summary of estimated rate adjustments for the Incremental
7 VMP/REP O&M spend and REP capital investment allowance. The columns titled
8 "07/01/09" and "07/01/2010" represent actual data. The column titled "07/01/10" is the
9 basis for the rate adjustment to be implemented on July 1, 2010. For subsequent years
10 the annual rate adjustments are illustrative only and equal the sum of the previously
11 described annual Incremental VMP/REP O&M spend reflected on Page 2 of 3 and the
12 annual REP capital investment allowance reflected on Page 3 of 3. Those subsequent
13 year rate adjustments will be the subject of annual filings before the Commission. The
14 incremental annual revenue requirement to be recovered through the Company's
15 distribution rates commencing July 1, 2010 amounts to \$1,097,601.

16
17 **VI. RATE DESIGN**

18 **Q. Is the procedure for adjusting distribution rates for the REP Capital Investment**
19 **Allowance and REP/VMP Adjustment Provision consistent with the terms of the**
20 **Settlement Agreement?**

21 A. Yes. The rate design in Schedule DET-2 of my testimony is consistent with the terms of
22 the Settlement Agreement and is the same procedure used to adjust base distribution

1 charges for the rate reductions, pursuant to the Settlement Agreement, which took place
2 for usage on and after August 11, 2007 and for usage on and after January 1, 2008. It is
3 also the same procedure used to adjust base distribution rates associated with the REP
4 Capital Investment Allowance implemented for usage on and after August 1, 2009
5 following Commission approval of the Company's REP Capital Allowance for fiscal year
6 2009 in Order No. 24,998 in Docket DE 09-094.

7
8 **Q. Please describe the procedure for adjusting distribution rates for the REP Capital**
9 **Investment Allowance.**

10 A. The procedure for adjusting distribution rates is presented in Schedule DET-2. As
11 presented on Page 1 of Schedule DET-2, the Company simply divides the capital
12 investment allowance related to the REP on line (1) by the forecasted annual distribution
13 revenue for the twelve month period ended June 30, 2011 on line (2) to calculate the
14 percentage increase on line (3) which is then applied to each of the Company's base
15 distribution charge components. The calculation of the forecasted annual distribution
16 revenue is presented on Page 2 of Schedule DET-2.

17
18 **Q. Please describe the procedure for calculating the REP/VMP Adjustment Factor.**

19 A. The procedure for calculating the REP/VMP Adjustment Factor is also presented in
20 Schedule DET-2. As presented on Page 3 of Schedule DET-2, the Company simply
21 divides incremental O&M expense related to the REP and VMP, including interest on
22 Line (3), by the Company's estimated kWh deliveries for the twelve month period ended

1 June 30, 2011 on Line (4) to calculate the adjustment factor on Line (5) which is then
2 applied to all kWh's billed to customers. The calculation of interest is presented on Page
3 4 of Schedule DET-2. The calculation of the new base distribution rates as well as the
4 net proposed total distribution charges to be billed to customers is presented on Page 5 of
5 Schedule DET-2.
6

7 **Q. Has the Company included a reconciliation of the existing REP/VMP Adjustment**
8 **Factor?**

9 A. Yes. Pursuant to the Settlement Agreement, this reconciliation is only associated with
10 the recovery (or refund) of approved incremental O&M expense. This reconciliation is
11 presented in Schedule DET-3. Of the \$113,832 of fiscal year 2009 incremental O&M
12 expense above base O&M expense to be collected through the currently effective
13 REP/VMP Adjustment Factor of \$0.00014 per kWh, \$86,836 has been collected through
14 April 2010. Any remaining balance after the end of the recovery period, positive or
15 negative, will be reflected as an adjustment in the reconciliation of the proposed
16 REP/VMP Adjustment Factor in the month of July 2010.
17

18 **VII. EFFECTIVE DATE AND BILL IMPACT**

19 **Q. How and when is the Company proposing that these rate changes be implemented?**

20 A. Consistent with the Commission's rules on the implementation of rate changes, the
21 Company is proposing that these distribution rate changes be made effective for usage on
22 and after July 1, 2010.

1 **Q. Has the Company determined the impact of these rate changes on customer bills?**

2 A. Yes. These bill impacts are included as Schedule DET-4. Schedule DET-4 shows that
3 for a typical residential 500 kilowatt-hour Default Service customer, the bill impact of the
4 rates proposed for July 1, 2010, as compared to rates in effect today, is a bill increase of
5 \$0.70, or 1.1%, from \$66.39 to \$67.09. In addition, a bill comparison for a Default
6 Service residential customer with an average kilowatt-hour usage of 640, which is the
7 average monthly usage over the 12 months ending April 2010, has also been included on
8 Page 1 of Schedule DET-4. The total bill impact of the rates proposed in this filing, as
9 compared to rates in effect today, is a bill increase of \$0.91 or 1.1%, from \$85.57 to
10 \$86.48. For other customers, increases range from 1.0% to 1.2%.

11

12 **Q. Has the Company prepared revised tariff pages reflecting the proposed rates?**

13 A. Yes. The revised tariff pages are set forth in Schedule DET-5.

14

15 **VIII. CONCLUSION**

16 **Q. Does that conclude your testimony?**

17 A. Yes, it does.

Schedules
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Schedule DET-1	Revenue Requirements
Schedule DET-2	Rate Design
Schedule DET-3	Reconciliation of Recovery of FY 2009 Incremental O&M Expense Above Base O&M Expense
Schedule DET-4	Typical Bill Impacts
Schedule DET-5	Revised Tariff Pages

Granite State Electric Company
d/b/a National Grid
Docket No. DE 10-__
Witness: D.E. Tufts

Schedule DET-1
Revenue Requirement

**Granite State Electric Company
Incremental REP Program
Annual Rate Changes
FY 2010**

<u>Annual Incremental Rate Adjustments</u>		<u>07/01/2007</u>	<u>07/01/2008</u>	<u>07/01/2009</u>	<u>07/01/2010</u>	<u>07/01/2011</u>	<u>07/01/2012</u>
1	REP and VMP O&M Program	\$0	\$0	\$113,832	\$1,047,770	\$0	\$0
2							
3	REP Capital Program	\$0	\$165,840	\$75,740	\$163,663	\$102,296	\$98,117
4							
5	Total for Fiscal Year	\$0	\$165,840	\$189,572	\$1,211,433	\$102,296	\$98,117
6							
7	Termination of Prior Period O&M Recovery	\$0	\$0	\$0	(\$113,832)	(\$1,047,770)	\$0
8							
9	Net Change in Recovery	\$0	\$165,840	\$189,572	\$1,097,601	(\$945,474)	\$98,117

Notes:

Line 1 From Page 2 of 3 Line 15.

Line 3 From Page 3 of 3 Line 40.

Line 5 Line 1 + Line 3.

Line 7 Line 1

**Granite State Electric Company
Incremental VMP and REP O&M Program
Computation of Annual Revenue Requirement
FY 2010**

	<u>FY</u> <u>2008</u>	<u>FY</u> <u>2009</u>	<u>FY</u> <u>2010</u>	<u>FY</u> <u>2011</u>	<u>FY</u> <u>2012</u>	
<u>Incremental VMP and REP O&M Spend</u>						
1	Actual VMP and REP Program Spending	\$2,169,258	\$1,477,916	\$2,407,770	\$1,360,000	\$1,360,000
2						
3	Amount Subject to Proposed Recovery	\$1,950,000	\$1,473,832	\$2,407,770	\$1,360,000	\$1,360,000
4						
5	Amount Subject to Recovery	\$1,950,000	\$1,473,832	\$2,407,770	\$1,360,000	\$1,360,000
6						
7	VMP and REP Base Spending Level	\$1,950,000	\$1,360,000	\$1,360,000	\$1,360,000	\$1,360,000
8						
9	Total Revenue Requirement	<u>\$0</u>	<u>\$113,832</u>	<u>\$1,047,770</u>	<u>\$0</u>	<u>\$0</u>

Notes:

- Line 1 Actual VMP and REP program spending for fiscal years 2008, 2009 and 2010. Projected spending for all other years.
- Line 3 Approved FY 2010 program budget of \$1,943,066 pursuant to the Company's December 23, 2009 REP and VMP revised plan submission plus additional REP/VMP O&M spending of \$463,804. Approval of FY2011 is currently pending before the NHPUC.
- Line 5 Lesser of Line 1 and Line 3.
- Line 7 VMP and REP base spending level per Merger Settlement Agreement in Docket No. DG 06-107.
- Line 9 Line 5 minus Line 7.

**Granite State Electric Company
Incremental REP Capital Program
Computation of Revenue Requirement
FY 2010**

		<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>
<u>Deferred Tax Calculation</u>							
1	REP Program Annual Spend	/1	\$950,000	\$500,000	\$876,243	\$653,000	\$653,000
2	Cumulative REP Program Spend		\$950,000	\$1,450,000	\$2,326,243	\$2,979,243	\$3,632,243
3							
4	Book Depreciation Rate (a)		3.70%	3.72%	3.71%	3.71%	3.71%
5	20 YR MACRS Tax Depr. Rates		3.75%	7.22%	6.68%	6.18%	5.71%
6	Vintage Year Tax Depreciation:						
7	Year 1 Spend		\$35,625	\$68,581	\$63,432	\$58,682	\$54,274
8	Year 2 Spend			\$18,750	\$36,095	\$33,385	\$30,885
9	Year 3 Spend				\$32,859	\$63,256	\$58,507
10	Year 4 Spend					\$24,488	\$47,140
11	Year 5 Spend						\$24,488
12							
13	Annual Tax Depreciation		\$35,625	\$87,331	\$132,386	\$179,810	\$215,293
14	Cumulative Tax Depreciation		\$35,625	\$122,956	\$255,341	\$435,151	\$650,444
15							
16	Book Depreciation		\$35,150	\$53,940	\$86,304	\$110,530	\$134,756
17	Cumulative Book Depreciation		\$35,150	\$89,090	\$175,394	\$285,924	\$420,680
18							
19	Book/Tax Timer		\$475	\$33,866	\$79,947	\$149,228	\$229,764
20	Effective Tax Rate		40.53%	40.53%	40.53%	40.53%	40.53%
21							
22	Deferred Tax Reserve		\$192	\$13,724	\$32,399	\$60,474	\$93,112
23							
24	<u>Rate Base Calculation</u>						
25	Plant In Service		\$950,000	\$1,450,000	\$2,326,243	\$2,979,243	\$3,632,243
26	Accumulated Depreciation		(\$35,150)	(\$89,090)	(\$175,394)	(\$285,924)	(\$420,680)
27	Deferred Tax Reserve		(\$192)	(\$13,724)	(\$32,399)	(\$60,474)	(\$93,112)
28	Year End Rate Base		\$914,658	\$1,347,186	\$2,118,451	\$2,632,845	\$3,118,451
29							
30	<u>Revenue Requirement Calculation</u>						
31	Year End Rate Base		\$914,658	\$1,347,186	\$2,118,451	\$2,632,845	\$3,118,451
32	Pre-Tax ROR		11.91%	11.91%	11.91%	11.91%	11.91%
33	Return and Taxes		\$108,916	\$160,421	\$252,262	\$313,516	\$371,341
34	Book Depreciation		\$35,150	\$53,940	\$86,304	\$110,530	\$134,756
35	Property Taxes (b)	3.10%	\$21,773	\$27,218	\$66,676	\$83,493	\$99,558
36	Annual Revenue Requirement		\$165,840	\$241,579	\$405,242	\$507,539	\$605,656
37							
38	<u>Annual Rate Adjustment</u>						
39				<u>7/1/2008</u>	<u>7/1/2009</u>	<u>7/1/2010</u>	<u>7/1/2011</u>
40	Incremental Annual Rate Adjustment			\$165,840	\$75,740	\$163,663	\$102,296
41							\$98,117
42							
43	<u>Imputed Capital Structure (c)</u>						
44			Ratio	Rate	Weighted Rate	Pre Tax	
45	Long Term Debt		50.00%	7.54%	3.77%	3.77%	
46							
47	Common Equity		50.00%	9.67%	4.84%	8.14%	
48							
49			<u>100.00%</u>		<u>8.61%</u>	<u>11.91%</u>	

/1 Actual REP capital spending for FY2008, FY2009 and FY 2010 exceeded the REP program annual spend targets of \$950,000, \$500,000 and \$620,000, respectively.

(a) Actual 2009 Composite Depreciation rate for distribution property.

(b) Actual 2009 ratio of municipal tax expense to net plant in service.

(c) Capital structure per Merger Settlement in Docket DG 06-107, Exhibit 1, Section 3(c).

Granite State Electric Company
d/b/a National Grid
Docket No. DE 10-__
Witness: D.E. Tufts

Schedule DET-2
Rate Design

Granite State Electric Company
Rate Settlement
Procedure for Adjusting Distribution Rates for Capital Investment Allowance
Calculation of Percentage Adjustment to Distribution Rates
Rates Effective July 1, 2010

(1) Increase in Annual Revenue Requirement	\$163,663
(2) Forecasted Base Distribution Revenue	\$20,811,651
(3) Percentage of Adjustment to Distribution Rates	0.79%

- (1) Exhibit DET- 1, Page 1
- (2) Page 2, Forecasted Billing Units for the applicable period multiplied by current rates.
- (3) Line (1) ÷ Line (2)

Granite State Electric Company
Rate Settlement
Procedure for Adjusting Distribution Rates for Capital Investment Allowance
Calculation of Percentage Adjustment to Distribution Rates
Forecasted Distribution Revenue for Period from July 2010 through June 2011

Rate Class	Distribution Rate Component	Current	Forecasted	Forecasted	
		Base Distribution Charges (a)	Units (b)	Revenue (c)	
D	Customer Charge	\$4.32	407,139	\$1,758,839	
	1st 250 kWh	\$0.01629	90,117,610	\$1,468,016	
	Excess 250 kWh	\$0.04242	161,192,939	\$6,837,804	
	Off Peak kWh	\$0.01558	7,083,572	\$110,362	
	Farm kWh	\$0.02533	1,067,744	\$27,046	
	D-6 kWh	\$0.01629	963,574	\$15,697	
	Interruptible Credit IC-1	(\$4.81)	2,530	(\$12,169)	
	Interruptible Credit IC-2	(\$6.42)	407	(\$2,613)	
D-10	Customer Charge	\$7.42	5,162	\$38,302	
	On Peak kWh	\$0.04709	1,995,365	\$93,962	
	Off Peak kWh	\$0.00000			
G-1	Customer Charge	\$92.27	1,516	\$139,867	
	Demand Charge	\$4.03	852,521	\$3,435,659	
	On Peak kWh	\$0.00133	145,130,139	\$193,023	
	Off Peak kWh	\$0.00000			
	Credit for High Voltage Delivery > 2.4 kv	(\$0.26)	288,493	(\$75,008)	
	Credit for High Voltage Metering			(\$52,006)	
	Optional Charge			\$18,843	
G-2	Customer Charge	\$24.70	9,910	\$244,769	
	Demand Charge	\$4.45	530,452	\$2,360,511	
	All kWh	\$0.00031	151,878,413	\$47,082	
	Credit for High Voltage Delivery > 2.4 kv	(\$0.26)	424	(\$110)	
	Credit for High Voltage Metering			(\$530)	
		Optional Charge			\$2,918
G-3	Customer Charge	\$5.47	65,016	\$355,639	
	All kWh	\$0.03052	88,240,084	\$2,693,087	
	Minimum Charge > 25 kVA	\$1.61			
M	Luminaire Charge				
	<u>Lamp Code</u>				
	010	\$67.00	26	\$1,742	
	003	\$48.49	350	\$16,972	
	004	\$58.96	506	\$29,834	
	005	\$111.50	72	\$8,028	
	006	\$211.55	1	\$212	
	023	\$123.31	39	\$4,809	
	024	\$212.93	2	\$426	
	070	\$50.19	2173	\$109,063	
	072	\$60.84	1619	\$98,500	
	074	\$106.83	592	\$63,243	
	075	\$139.20	251	\$34,939	
	077	\$107.78	308	\$33,196	
	078	\$148.79	473	\$70,378	
	079	\$70.07	369	\$25,856	
		<u>Pole and Accessory Charge</u>			
		<u>Pole and Accessory Code</u>			
		P	\$59.14	138	\$8,161
		R	\$61.24	248	\$15,188
	C	\$103.85	112	\$11,631	
	D	\$173.50	0	\$0	
	F	\$123.84	97	\$12,012	
	T	\$149.22	129	\$19,249	
	All kWh	\$0.00000			
T	Customer Charge	\$5.59	16,671	\$93,188	
	All kWh	\$0.01994	23,056,944	\$459,755	
	Interruptible Credit IC-1	(\$4.81)	3,113	(\$14,974)	
	Interruptible Credit IC-2	(\$6.42)	99	(\$636)	
V	Minimum Charge	\$5.84	282	\$1,649	
	All kWh	\$0.02816	363,712	\$10,242	
				\$20,811,651	

(a) Per currently effective tariffs
(b) Company Forecast
(c) Column (a) x Column (b)

Granite State Electric Company
Rate Settlement
Calculation of Reliability Enhancement Program and Vegetation Management Plan Adjustment Factor
Rates Effective July 1, 2010

(1) Incremental O&M Expense Above Base O&M Expense	\$1,047,770
(2) Estimated Interest During Recovery Period	<u>\$25,494</u>
(3) Incremental O&M Expense Above Base O&M Expense Including Interest	\$1,073,264
(4) Estimated kWh deliveries	855,910,960
(5) Reliability Enhancement Program and Vegetation Management Plan Adjustment Factor	\$0.00125

(1) Exhibit DET- 1, Page 1

(2) Page 4

(3) Line (1) + Line (2)

(4) Per Company forecast

(5) Line (3) ÷ Line (4), truncated after 5 decimal places

Granite State Electric Company
Calculation of Interest on FY 2010 Incremental O&M Expense Above Base O&M Expense

	Beginning Balance With Interest (a)	Estimated Recovery (b)	Ending Balance (c)	Balance Subject to Interest (d)	Effective Interest Rate (e)	Interest (f)	Cumulative Interest (g)
April 2010	(\$1,047,770)		(\$1,047,770)	(\$1,047,770)	3.25%	(\$2,796)	(\$2,796)
May	(\$1,050,566)		(\$1,050,566)	(\$1,050,566)	3.25%	(\$2,804)	(\$5,600)
June	(\$1,053,370)		(\$1,053,370)	(\$1,053,370)	3.25%	(\$2,811)	(\$8,411)
July	(\$1,056,181)	\$88,015	(\$968,166)	(\$1,012,174)	3.25%	(\$2,701)	(\$11,113)
August	(\$970,867)	\$88,261	(\$882,607)	(\$926,737)	3.25%	(\$2,473)	(\$13,586)
September	(\$885,080)	\$88,508	(\$796,572)	(\$840,826)	3.25%	(\$2,244)	(\$15,830)
October	(\$798,816)	\$88,757	(\$710,059)	(\$754,437)	3.25%	(\$2,013)	(\$17,843)
November	(\$712,072)	\$89,009	(\$623,063)	(\$667,568)	3.25%	(\$1,782)	(\$19,625)
December	(\$624,845)	\$89,264	(\$535,581)	(\$580,213)	3.25%	(\$1,548)	(\$21,173)
January 2011	(\$537,130)	\$89,522	(\$447,608)	(\$492,369)	3.25%	(\$1,314)	(\$22,487)
February	(\$448,922)	\$89,784	(\$359,138)	(\$404,030)	3.25%	(\$1,078)	(\$23,566)
March	(\$360,216)	\$90,054	(\$270,162)	(\$315,189)	3.25%	(\$841)	(\$24,407)
April	(\$271,003)	\$90,334	(\$180,669)	(\$225,836)	3.25%	(\$603)	(\$25,010)
May	(\$181,271)	\$90,636	(\$90,636)	(\$135,954)	3.25%	(\$363)	(\$25,372)
June	(\$90,999)	\$90,999	\$0	(\$45,499)	3.25%	(\$121)	(\$25,494)

- (a) April 2010 per Page 3, Line (1); all other months = prior month Column (c) + prior month Column (f)
- (b) Column (a) ÷ number of remaining months in recovery period
- (c) Column (a) + Column (b)
- (d) Average of Column (a) and Column (c)
- (e) Interest rate on customer deposits
- (f) Column (d) x [(1 + Column (e)) ^ (1 ÷ 12) - 1]
- (g) Prior month Column (g) + Current month Column (f)

Granite State Electric Company
Rate Settlement
Procedure for Adjusting Distribution Rates for Capital Investment Allowance & Incremental O&M Expense
Rates Effective July 1, 2010

Rate Class	Distribution Rate Component	Current Base Distribution Charges (a)	Proposed Distribution % Increase (b)	Proposed Base Distribution Charges (c)	Current Business Profits Surcharge (d)	Current Default Service Cost Reclassification Distribution Credit (e)	Proposed REP & VMP Operations & Maintenance Adjustment Factor (f)	Proposed Total Distribution Charges (g)
D	Customer Charge	\$4.32	0.79%	\$4.35				\$4.35
	1st 250 kWh	\$0.01629	0.79%	\$0.01641	\$0.00057	(\$0.00017)	\$0.00125	\$0.01806
	Excess 250 kWh	\$0.04242	0.79%	\$0.04275	\$0.00057	(\$0.00017)	\$0.00125	\$0.04440
	Off Peak kWh	\$0.01558	0.79%	\$0.01570	\$0.00057	(\$0.00017)	\$0.00125	\$0.01735
	Farm kWh	\$0.02533	0.79%	\$0.02553	\$0.00057	(\$0.00017)	\$0.00125	\$0.02718
	D-6 kWh	\$0.01629	0.79%	\$0.01641	\$0.00057	(\$0.00017)	\$0.00125	\$0.01806
	Interruptible Credit IC-1	(\$4.81)	0.79%	(\$4.84)				(\$4.84)
	Interruptible Credit IC-2	(\$6.42)	0.79%	(\$6.47)				(\$6.47)
D-10	Customer Charge	\$7.42	0.79%	\$7.47				\$7.47
	On Peak kWh	\$0.04709	0.79%	\$0.04746	\$0.00057	(\$0.00008)	\$0.00125	\$0.04920
	Off Peak kWh	\$0.00000	0.79%	\$0.00000	\$0.00057	(\$0.00008)	\$0.00125	\$0.00174
G-1	Customer Charge	\$92.27	0.79%	\$92.99				\$92.99
	Demand Charge	\$4.03	0.79%	\$4.06				\$4.06
	On Peak kWh	\$0.00133	0.79%	\$0.00134	\$0.00057	\$0.00000	\$0.00125	\$0.00316
	Off Peak kWh	\$0.00000	0.79%	\$0.00000	\$0.00057	\$0.00000	\$0.00125	\$0.00182
	Credit for High Voltage Delivery > 2.4 kv	(\$0.26)	0.79%	(\$0.26)				(\$0.26)
G-2	Customer Charge	\$24.70	0.79%	\$24.89				\$24.89
	Demand Charge	\$4.45	0.79%	\$4.48				\$4.48
	All kWh	\$0.00031	0.79%	\$0.00031	\$0.00057	\$0.00000	\$0.00125	\$0.00213
	Credit for High Voltage Delivery > 2.4 kv	(\$0.26)	0.79%	(\$0.26)				(\$0.26)
G-3	Customer Charge	\$5.47	0.79%	\$5.51				\$5.51
	All kWh	\$0.03052	0.79%	\$0.03076	\$0.00057	(\$0.00017)	\$0.00125	\$0.03241
	Minimum Charge > 25 kVA	\$1.61	0.79%	\$1.62				\$1.62
M	Luminaire Charge							
	<u>Lamp Code</u>							
	010	\$67.00	0.79%	\$67.52				\$67.52
	003	\$48.49	0.79%	\$48.87				\$48.87
	004	\$58.96	0.79%	\$59.42				\$59.42
	005	\$111.50	0.79%	\$112.38				\$112.38
	006	\$211.55	0.79%	\$213.22				\$213.22
	023	\$123.31	0.79%	\$124.28				\$124.28
	024	\$212.93	0.79%	\$214.61				\$214.61
	070	\$50.19	0.79%	\$50.58				\$50.58
	072	\$60.84	0.79%	\$61.32				\$61.32
	074	\$106.83	0.79%	\$107.67				\$107.67
	075	\$139.20	0.79%	\$140.29				\$140.29
	077	\$107.78	0.79%	\$108.63				\$108.63
	078	\$148.79	0.79%	\$149.96				\$149.96
	079	\$70.07	0.79%	\$70.62				\$70.62
	Pole and Accessory Charge							
	<u>Pole and Accessory Code</u>							
	P	\$59.14	0.79%	\$59.60				\$59.60
	R	\$61.24	0.79%	\$61.72				\$61.72
	C	\$103.85	0.79%	\$104.67				\$104.67
	D	\$173.50	0.79%	\$174.87				\$174.87
	F	\$123.84	0.79%	\$124.81				\$124.81
	T	\$149.22	0.79%	\$150.39				\$150.39
	All kWh	\$0.00000	0.79%	\$0.00000	\$0.00057	\$0.00000	\$0.00125	\$0.00182
T	Customer Charge	\$5.59	0.79%	\$5.63				\$5.63
	All kWh	\$0.01994	0.79%	\$0.02009	\$0.00057	(\$0.00007)	\$0.00125	\$0.02184
	Interruptible Credit IC-1	(\$4.81)	0.79%	(\$4.84)				(\$4.84)
	Interruptible Credit IC-2	(\$6.42)	0.79%	(\$6.47)				(\$6.47)
V	Minimum Charge	\$5.84	0.79%	\$5.88				\$5.88
	All kWh	\$0.02816	0.79%	\$0.02838	\$0.00057	(\$0.00009)	\$0.00125	\$0.03011

- (a) Per currently effective tariffs
- (b) Page 1, Line (3)
- (c) Column (a) x (1+Column (b))
- (d) Distribution Energy Charges include a Business Profits Tax Surcharge of \$0.00057 per kWh for usage on and after 8/1/01
- (e) Per Default Service Cost Reclassification Adjustment Provision
- (f) Page 3, Line (5)
- (g) Column (c) + Column (d) + Column (e) + Column (f)

Granite State Electric Company
d/b/a National Grid
Docket No. DE 10-__
Witness: D.E. Tufts

Schedule DET-3
Reconciliation of Recovery of FY 2009 Incremental
O&M Expense Above Base O&M Expense

Granite State Electric Company
Reconciliation of Recovery of FY 2009 Incremental O&M Expense Above Base O&M Expense

	Beginning Balance With Interest (a)	Recovery (b)	Adjustment (c)	Ending Balance (d)	Balance Subject to Interest (e)	Effective Interest Rate (f)	Interest (g)	Cumulative Interest (h)
April 2009	(\$113,832)			(\$113,832)	(\$113,832)	3.25%	(\$304)	(\$304)
May	(\$114,136)			(\$114,136)	(\$114,136)	3.25%	(\$305)	(\$608)
June	(\$114,440)			(\$114,440)	(\$114,440)	3.25%	(\$305)	(\$914)
July	(\$114,746)			(\$114,746)	(\$114,746)	3.25%	(\$306)	(\$1,220)
August	(\$115,052)	\$6,388		(\$108,664)	(\$111,858)	3.25%	(\$299)	(\$1,519)
September	(\$108,963)	\$10,431		(\$98,532)	(\$103,747)	3.25%	(\$277)	(\$1,795)
October	(\$98,809)	\$9,563		(\$89,246)	(\$94,027)	3.25%	(\$251)	(\$2,046)
November	(\$89,497)	\$9,588		(\$79,909)	(\$84,703)	3.25%	(\$226)	(\$2,272)
December	(\$80,135)	\$10,171		(\$69,964)	(\$75,050)	3.25%	(\$200)	(\$2,473)
January 2010	(\$70,164)	\$11,554		(\$58,611)	(\$64,388)	3.25%	(\$172)	(\$2,645)
February	(\$58,782)	\$9,773		(\$49,009)	(\$53,896)	3.25%	(\$144)	(\$2,788)
March	(\$49,153)	\$9,825		(\$39,329)	(\$44,241)	3.25%	(\$118)	(\$2,907)
April	(\$39,447)	\$9,544		(\$29,902)	(\$34,675)	3.25%	(\$93)	(\$2,999)
May	(\$29,995)	\$0		(\$29,995)	(\$29,995)	3.25%	(\$80)	(\$3,079)
June	(\$30,075)	\$0		(\$30,075)	(\$30,075)	3.25%	(\$80)	(\$3,159)
July	(\$30,155)	\$0		(\$30,155)	(\$30,155)	3.25%	(\$80)	(\$3,240)

Revised Schedule DET-2, page 4, Docket DE 09-094

- (a) Page 2
- (b)
- (c) Column (a) + Column (b)
- (d) Average of Column (a) and Column (d)
- (e) Interest rate on customer deposits
- (f) $\text{Column (e)} \times [(1 + \text{Column (f)}) ^ (1 \div 12) - 1]$
- (g) Prior month Column (h) + Current month Column (g)
- (h)

Granite State Electric Company
Reconciliation of Recovery of FY 2009 Incremental O&M Expense Above Base O&M Expense

	kWh Deliveries (a)	Current REP/VMP Adjustment Factor (b)	Current REP/VMP Adjustment Factor Revenues (c)
August	45,627,665	\$0.00014	\$6,388
September	74,505,408	\$0.00014	\$10,431
October	68,305,841	\$0.00014	\$9,563
November	68,484,277	\$0.00014	\$9,588
December	72,650,778	\$0.00014	\$10,171
January 2010	82,527,210	\$0.00014	\$11,554
February	69,806,978	\$0.00014	\$9,773
March	70,176,311	\$0.00014	\$9,825
April	68,172,939	\$0.00014	\$9,544
May	0	\$0.00014	\$0
June	0	\$0.00014	\$0
July	0	\$0.00014	\$0

- (a) Crystal Report CR97982A
- (b) Revised Schedule DET-2, page 4, Docket DE 09-094
- (c) Column (a) x Column (b)

Granite State Electric Company
d/b/a National Grid
Docket No. DE 10-__
Witness: D.E. Tufts

Schedule DET-4
Typical Bill Impacts

Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate D Default Service Customers
 Without Water Heater Control
 0% Off-Peak

kWh Split
 On-Peak 100.00%
 Off-Peak 0.00%

Monthly kWh	On-Peak kWh	Off-Peak kWh	(1)		(2)		(1) vs (2)			
			Total	Present Rates Default Service	Retail Delivery	Total		Proposed Rates Default Service	Retail Delivery	
200	200	0	\$26.53	\$14.31	\$12.22	\$26.80	\$14.31	\$12.49	\$0.27	1.0%
350	350	0	\$45.81	\$25.04	\$20.77	\$46.29	\$25.04	\$21.25	\$0.48	1.0%
500	500	0	\$66.39	\$35.78	\$30.61	\$67.09	\$35.78	\$31.31	\$0.70	1.1%
640	640	0	\$85.57	\$45.79	\$39.78	\$86.48	\$45.79	\$40.69	\$0.91	1.1%
750	750	0	\$100.67	\$53.66	\$47.01	\$101.73	\$53.66	\$48.07	\$1.06	1.1%
1,000	1,000	0	\$134.96	\$71.55	\$63.41	\$136.38	\$71.55	\$64.83	\$1.42	1.1%

Proposed Rates

Customer Charge		\$4.32
Distribution Charge		\$0.01806
1st 250 kWh	kWh x	\$0.04440
excess of 250 kWh	kWh x	\$0.01735
Off Peak kWh	kWh x	\$0.01811
Transmission Charge	kWh x	\$0.00070
Stranded Cost Charge	kWh x	\$0.00330
System Benefits Charge	kWh x	\$0.00055
Electricity Consumption Tax	kWh x	
<u>Supplier Services</u>		
Default Service	kWh x	\$0.07155

Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate D Default Service Customers
 With 6 Hour Water Heater Control

kWh Split
 On-Peak 80.00%
 Off-Peak 20.00%

Monthly KWh	On-Peak kWh	Off-Peak kWh	(1)		(2)		(1) vs (2)			
			Total	Present Rates Default Service	Retail Delivery	Total		Proposed Rates Default Service	Retail Delivery	
200	160	40	\$21.68	\$14.31	\$7.37	\$21.93	\$14.31	\$7.62	\$0.25	1.2%
350	280	70	\$39.12	\$25.04	\$14.08	\$39.55	\$25.04	\$14.51	\$0.43	1.1%
500	400	100	\$58.89	\$35.78	\$23.11	\$59.55	\$35.78	\$23.77	\$0.66	1.1%
750	600	150	\$91.84	\$53.66	\$38.18	\$92.83	\$53.66	\$39.17	\$0.99	1.1%
1,000	800	200	\$124.78	\$71.55	\$53.23	\$126.13	\$71.55	\$54.58	\$1.35	1.1%

Present Rates

Customer Charge		\$4.32
Distribution Charge		
1st 250 kWh	kWh x	\$0.01683
excess of 250 kWh	kWh x	\$0.04296
Off Peak kWh	kWh x	\$0.01612
Transmission Charge	kWh x	\$0.01811
Stranded Cost Charge	kWh x	\$0.00070
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055
Interruptible Credit #1		(\$4.81)

Proposed Rates

Customer Charge		\$4.35
Distribution Charge		
1st 250 kWh	kWh x	\$0.01806
excess of 250 kWh	kWh x	\$0.04440
Off Peak kWh	kWh x	\$0.01735
Transmission Charge	kWh x	\$0.01811
Stranded Cost Charge	kWh x	\$0.00070
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055
Interruptible Credit #1		(\$4.84)
<u>Supplier Services</u>		
Default Service	kWh x	\$0.07155

Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate D Default Service Customers
 With 6 Hour Water Heater Control

kWh Split
 On-Peak 60.00%
 Off-Peak 40.00%

Monthly KWh	On-Peak kWh	Off-Peak kWh	(1)		(2)		(1) vs (2)			
			Total	Present Rates Default Service	Retail Delivery	Total		Proposed Rates Default Service	Retail Delivery	
200	120	80	\$20.05	\$14.31	\$5.74	\$20.28	\$14.31	\$5.97	\$0.23	1.1%
350	210	140	\$36.67	\$25.04	\$11.63	\$37.08	\$25.04	\$12.04	\$0.41	1.1%
500	300	200	\$54.60	\$35.78	\$18.82	\$55.21	\$35.78	\$19.43	\$0.61	1.1%
750	450	300	\$86.20	\$53.66	\$32.54	\$87.15	\$53.66	\$33.49	\$0.95	1.1%
1,000	600	400	\$117.81	\$71.55	\$46.26	\$119.09	\$71.55	\$47.54	\$1.28	1.1%

Present Rates

Customer Charge		\$4.32
Distribution Charge		
1st 250 kWh	kWh x	\$0.01683
excess of 250 kWh	kWh x	\$0.04296
Off Peak kWh	kWh x	\$0.01612
Transmission Charge	kWh x	\$0.01811
Stranded Cost Charge	kWh x	\$0.00070
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055
Interruptible Credit #2		(\$6.42)

Proposed Rates

		\$4.35
		\$0.01806
		\$0.04440
		\$0.01735
		\$0.01811
		\$0.00070
		\$0.00330
		\$0.00055
		(\$6.47)

Supplier Services

Default Service	kWh x	\$0.07155
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Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate D-10 Default Service Customers

kWh Split
 On-Peak 80.00%
 Off-Peak 20.00%

Monthly KWh	On-Peak kWh	Off-Peak kWh	(1)		(2)		(1) vs (2)			
			Total	Present Rates Default Service	Retail Delivery	Total		Proposed Rates Default Service	Retail Delivery	
700	560	140	\$97.55	\$50.09	\$47.46	\$98.58	\$50.09	\$48.49	\$1.03	1.1%
1,000	800	200	\$136.17	\$71.55	\$64.62	\$137.62	\$71.55	\$66.07	\$1.45	1.1%
1,300	1,040	260	\$174.80	\$93.02	\$81.78	\$176.68	\$93.02	\$83.66	\$1.88	1.1%
1,600	1,280	320	\$213.40	\$114.48	\$98.92	\$215.71	\$114.48	\$101.23	\$2.31	1.1%
1,900	1,520	380	\$252.04	\$135.95	\$116.09	\$254.76	\$135.95	\$118.81	\$2.72	1.1%

Present Rates

Customer Charge		\$7.42
Distribution Charge		
On Peak kWh	kWh x	\$0.04772
Off Peak kWh	kWh x	\$0.00063
Transmission Charge	kWh x	\$0.01435
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Proposed Rates

Customer Charge		\$7.47
Distribution Charge		
On Peak kWh	kWh x	\$0.04920
Off Peak kWh	kWh x	\$0.00174
Transmission Charge	kWh x	\$0.01435
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Supplier Services

Default Service	kWh x	\$0.07155
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Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate D-10 Default Service Customers

kWh Split
 On-Peak 70.00%
 Off-Peak 30.00%

Monthly KWh	kWh Split		Present Rates Default Service	Retail Delivery	Proposed Rates Default Service	Retail Delivery	Overall Increase (Decrease) Amount	%
	On-Peak kWh	Off-Peak kWh						
700	490	210	\$94.25	\$44.16	\$50.09	\$45.18	\$1.02	1.1%
1,000	700	300	\$131.45	\$59.90	\$71.55	\$61.32	\$1.42	1.1%
1,300	910	390	\$168.69	\$75.67	\$93.02	\$77.49	\$1.82	1.1%
1,600	1,120	480	\$205.87	\$91.39	\$114.48	\$93.63	\$2.24	1.1%
1,900	1,330	570	\$243.10	\$107.15	\$135.95	\$109.80	\$2.65	1.1%

Present Rates

Customer Charge		\$7.42
Distribution Charge		
On Peak kWh	kWh x	\$0.04772
Off Peak kWh	kWh x	\$0.00063
Transmission Charge	kWh x	\$0.01435
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Proposed Rates

Customer Charge		\$7.47
Distribution Charge		
On Peak kWh	kWh x	\$0.04920
Off Peak kWh	kWh x	\$0.00174
Transmission Charge	kWh x	\$0.01435
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Supplier Services

Default Service	kWh x	\$0.07155
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Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate D-10 Default Service Customers

kWh Split
 On-Peak 60.00%
 Off-Peak 40.00%

Monthly KWh	On-Peak kWh	Off-Peak kWh	(1)		(2)		(1) vs (2)			
			Total	Present Rates Default Service	Retail Delivery	Total		Proposed Rates Default Service	Retail Delivery	
700	420	280	\$90.96	\$50.09	\$40.87	\$91.94	\$50.09	\$41.85	\$0.98	1.1%
1,000	600	400	\$126.74	\$71.55	\$55.19	\$128.13	\$71.55	\$56.58	\$1.39	1.1%
1,300	780	520	\$162.56	\$93.02	\$69.54	\$164.34	\$93.02	\$71.32	\$1.78	1.1%
1,600	960	640	\$198.33	\$114.48	\$83.85	\$200.51	\$114.48	\$86.03	\$2.18	1.1%
1,900	1,140	760	\$234.15	\$135.95	\$98.20	\$236.73	\$135.95	\$100.78	\$2.58	1.1%

Present Rates

Customer Charge		\$7.42
Distribution Charge		
On Peak kWh	kWh x	\$0.04772
Off Peak kWh	kWh x	\$0.00063
Transmission Charge	kWh x	\$0.01435
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Proposed Rates

Customer Charge		\$7.47
Distribution Charge		
On Peak kWh	kWh x	\$0.04920
Off Peak kWh	kWh x	\$0.00174
Transmission Charge	kWh x	\$0.01435
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Supplier Services

Default Service	kWh x	\$0.07155
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Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate G-3 Default Service Customers

Hours Use

Monthly kWh	(1)		(2)		Overall Increase (Decrease) Amount	Overall %
	Total	Present Rates Default Service	Total	Proposed Rates Default Service		
600	\$79.63	\$42.93	\$36.70	\$42.93	\$0.85	1.1%
800	\$104.35	\$57.24	\$47.11	\$57.24	\$1.12	1.1%
1,200	\$153.79	\$85.86	\$67.93	\$85.86	\$1.66	1.1%
1,500	\$190.88	\$107.33	\$83.55	\$107.33	\$2.07	1.1%
2,000	\$252.67	\$143.10	\$109.57	\$143.10	\$2.74	1.1%

Present Rates

Customer Charge		\$5.47
Distribution Charge	kWh x	\$0.03106
Transmission Charge	kWh x	\$0.01644
Stranded Cost Charge	kWh x	\$0.00070
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Proposed Rates

		\$5.51
		\$0.03241
		\$0.01644
		\$0.00070
		\$0.00330
		\$0.00055

Supplier Services

Default Service	kWh x	\$0.07155
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Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate T Default Service Customers

Monthly kWh	(1)		(2)		Overall Increase (Decrease) Amount %			
	Total	Present Rates Default Service	Retail Delivery	Proposed Rates Default Service		Retail Delivery		
600	\$73.78	\$42.93	\$30.85	\$74.57	\$42.93	\$31.64	\$0.79	1.1%
800	\$96.50	\$57.24	\$39.26	\$97.55	\$57.24	\$40.31	\$1.05	1.1%
1,200	\$141.96	\$85.86	\$56.10	\$143.51	\$85.86	\$57.65	\$1.55	1.1%
1,500	\$176.06	\$107.33	\$68.73	\$177.99	\$107.33	\$70.66	\$1.93	1.1%
2,000	\$232.87	\$143.10	\$89.77	\$235.43	\$143.10	\$92.33	\$2.56	1.1%

Present Rates

Customer Charge		\$5.59			
Distribution Charge	kWh x	\$0.02058			\$5.63
Transmission Charge	kWh x	\$0.01696			\$0.02184
Stranded Cost Charge	kWh x	\$0.00070			\$0.01696
System Benefits Charge	kWh x	\$0.00330			\$0.00070
Electricity Consumption Tax	kWh x	\$0.00055			\$0.00330
					\$0.00055

Proposed Rates

<u>Supplier Services</u>					
Default Service	kWh x	\$0.07155			\$0.07155

Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate V Default Service Customers

Monthly kWh	(1)		(2)		Overall Increase (Decrease) Amount %
	Total	Present Rates Default Service	Total	Proposed Rates Default Service	
600	\$73.72	\$42.93	\$74.52	\$42.93	\$0.80 1.1%
800	\$98.29	\$57.24	\$99.36	\$57.24	\$1.07 1.1%
1,200	\$147.43	\$85.86	\$149.02	\$85.86	\$1.59 1.1%
1,500	\$184.31	\$107.33	\$186.31	\$107.33	\$2.00 1.1%
2,000	\$245.72	\$143.10	\$248.38	\$143.10	\$2.66 1.1%

Proposed Rates

Minimum Charge		\$5.88
Distribution Charge	kWh x	\$0.02878
Transmission Charge	kWh x	\$0.01797
Stranded Cost Charge	kWh x	\$0.00071
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Present Rates

Minimum Charge		\$5.84
Distribution Charge	kWh x	\$0.02878
Transmission Charge	kWh x	\$0.01797
Stranded Cost Charge	kWh x	\$0.00071
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Supplier Services

Default Service	kWh x	\$0.07155
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Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate G-1 Default Service Customers

Hours Use kWh Split
 250 On-Peak 60.00%
 Off-Peak 40.00%

kW	Monthly kWh	kWh Split		(1)		(2)		Overall Increase (Decrease) Amount	Overall Increase (Decrease) %		
		On-Peak kWh	Off-Peak kWh	Total	Default Service	Retail Delivery	Total			Default Service	Retail Delivery
200	50,000	30,000	20,000	\$5,596.67	\$3,643.50	\$1,953.17	\$5,659.19	\$3,643.50	\$2,015.69	\$62.52	1.1%
300	75,000	45,000	30,000	\$8,348.87	\$5,465.25	\$2,883.62	\$8,442.29	\$5,465.25	\$2,977.04	\$93.42	1.1%
400	100,000	60,000	40,000	\$11,101.07	\$7,287.00	\$3,814.07	\$11,225.39	\$7,287.00	\$3,938.39	\$124.32	1.1%
500	125,000	75,000	50,000	\$13,853.27	\$9,108.75	\$4,744.52	\$14,008.49	\$9,108.75	\$4,899.74	\$155.22	1.1%
1,000	250,000	150,000	100,000	\$27,614.27	\$18,217.50	\$9,396.77	\$27,923.99	\$18,217.50	\$9,706.49	\$309.72	1.1%

Present Rates

Customer Charge		\$92.27
Distribution Charge		
On Peak kWh	kWh x	\$0.00204
Off-Peak kWh	kWh x	\$0.00071
Distribution Demand Charge	kW x	\$4.03
Transmission Charge	kWh x	\$0.01505
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Proposed Rates

Customer Charge		\$92.99
Distribution Charge		
On Peak kWh	kWh x	\$0.00316
Off-Peak kWh	kWh x	\$0.00182
Distribution Demand Charge	kW x	\$4.06
Transmission Charge	kWh x	\$0.01505
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Supplier Services

Default Service	kWh x	\$0.07287
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Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate G-1 Default Service Customers

Hours Use kWh Split
 350 On-Peak 50.00%
 Off-Peak 50.00%

kW	Monthly kWh	kWh Split		(1)		(2)		Overall Increase (Decrease) Amount	Overall %		
		On-Peak kWh	Off-Peak kWh	Total	Present Rates Default Service	Retail Delivery	Total			Proposed Rates Default Service	Retail Delivery
200	70,000	35,000	35,000	\$7,466.72	\$5,100.90	\$2,365.82	\$7,551.49	\$5,100.90	\$2,450.59	\$84.77	1.1%
300	105,000	52,500	52,500	\$11,153.95	\$7,651.35	\$3,502.60	\$11,280.74	\$7,651.35	\$3,629.39	\$126.79	1.1%
400	140,000	70,000	70,000	\$14,841.17	\$10,201.80	\$4,639.37	\$15,009.99	\$10,201.80	\$4,808.19	\$168.82	1.1%
500	175,000	87,500	87,500	\$18,528.40	\$12,752.25	\$5,776.15	\$18,739.24	\$12,752.25	\$5,986.99	\$210.84	1.1%
1,000	350,000	175,000	175,000	\$36,964.52	\$25,504.50	\$11,460.02	\$37,385.49	\$25,504.50	\$11,880.99	\$420.97	1.1%

	Present Rates	Proposed Rates
Customer Charge	\$92.27	\$92.99
Distribution Charge		
On Peak kWh	\$0.00204	\$0.00316
Off-Peak kWh	\$0.00071	\$0.00182
Distribution Demand Charge	\$4.03	\$4.06
Transmission Charge	\$0.01505	\$0.01505
Stranded Cost Charge	\$0.00069	\$0.00069
System Benefits Charge	\$0.00330	\$0.00330
Electricity Consumption Tax	\$0.00055	\$0.00055

Supplier Services
 Default Service \$0.07287

Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate G-1 Default Service Customers

Hours Use kWh Split
 450 On-Peak 45.00%
 Off-Peak 55.00%

kW	Monthly kWh	kWh Split		(1)		(2)		Overall Increase (Decrease) Amount	Overall Increase (%)
		On-Peak kWh	Off-Peak kWh	Total	Default Service	Total	Default Service		
200	90,000	40,500	49,500	\$9,337.44	\$6,558.30	\$2,779.14	\$9,444.46	\$6,558.30	\$2,886.16
300	135,000	60,750	74,250	\$13,960.02	\$9,837.45	\$4,122.57	\$14,120.20	\$9,837.45	\$4,282.75
400	180,000	81,000	99,000	\$18,582.60	\$13,116.60	\$5,466.00	\$18,795.93	\$13,116.60	\$5,679.33
500	225,000	101,250	123,750	\$23,205.18	\$16,395.75	\$6,809.43	\$23,471.67	\$16,395.75	\$7,075.92
1,000	450,000	202,500	247,500	\$46,318.10	\$32,791.50	\$13,526.60	\$46,850.34	\$32,791.50	\$14,058.84

Present Rates

Customer Charge		\$92.27
Distribution Charge		
On Peak kWh	kWh x	\$0.00204
Off Peak kWh	kWh x	\$0.00071
Distribution Demand Charge	kW x	\$4.03
Transmission Charge	kWh x	\$0.01505
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Proposed Rates

Customer Charge		\$92.99
Distribution Charge		
On Peak kWh	kWh x	\$0.00316
Off Peak kWh	kWh x	\$0.00182
Distribution Demand Charge	kW x	\$4.06
Transmission Charge	kWh x	\$0.01505
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Supplier Services

Default Service	kWh x	\$0.07287
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Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate G-1 Default Service Customers

Hours Use kWh Split
 450 On-Peak 40.00%
 Off-Peak 60.00%

kW	Monthly kWh	kWh Split		(1)		(2)		Overall Increase (Decrease) Amount	Overall %	
		On-Peak kWh	Off-Peak kWh	Total	Retail Delivery	Total	Proposed Rates Default Service			Retail Delivery
200	90,000	36,000	54,000	\$9,331.45	\$2,773.15	\$9,438.43	\$6,558.30	\$2,880.13	\$106.98	1.1%
300	135,000	54,000	81,000	\$13,951.04	\$4,113.59	\$14,111.15	\$9,837.45	\$4,273.70	\$160.11	1.1%
400	180,000	72,000	108,000	\$18,570.63	\$5,454.03	\$18,783.87	\$13,116.60	\$5,667.27	\$213.24	1.1%
500	225,000	90,000	135,000	\$23,190.22	\$6,794.47	\$23,456.59	\$16,395.75	\$7,060.84	\$266.37	1.1%
1,000	450,000	180,000	270,000	\$46,288.17	\$13,496.67	\$46,820.19	\$32,791.50	\$14,028.69	\$532.02	1.1%

Present Rates

Customer Charge		\$92.27
Distribution Charge		
On Peak kWh	kWh x	\$0.00204
Off-Peak kWh	kWh x	\$0.00071
Distribution Demand Charge	kW x	\$4.03
Transmission Charge	kWh x	\$0.01505
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Proposed Rates

Customer Charge		\$92.99
Distribution Charge		
On Peak kWh	kWh x	\$0.00316
Off-Peak kWh	kWh x	\$0.00182
Distribution Demand Charge	kW x	\$4.06
Transmission Charge	kWh x	\$0.01505
Stranded Cost Charge	kWh x	\$0.00069
System Benefits Charge	kWh x	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055

Supplier Services

Default Service	kWh x	\$0.07287
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Hours Use 200

kW	Monthly kWh	(1)		(2)		Overall Increase (Decrease) Amount	Overall Increase (Decrease) %
		Total	Default Service	Total	Default Service		
20	4,000	\$492.34	\$291.48	\$497.57	\$291.48	\$52.23	1.1%
50	10,000	\$1,193.80	\$728.70	\$1,206.59	\$728.70	\$12.79	1.1%
75	15,000	\$1,778.35	\$1,093.05	\$1,797.44	\$1,093.05	\$19.09	1.1%
100	20,000	\$2,362.90	\$1,457.40	\$2,388.29	\$1,457.40	\$25.39	1.1%
150	30,000	\$3,532.00	\$2,186.10	\$3,569.99	\$2,186.10	\$37.99	1.1%

<u>Present Rates</u>		<u>Proposed Rates</u>	
Customer Charge			\$24.89
Distribution Charge	kWh x	\$0.00102	\$0.00213
Distribution Demand Charge	kW x	\$4.45	\$4.48
Transmission Charge	kWh x	\$0.01622	\$0.01622
Stranded Cost Charge	kWh x	\$0.00070	\$0.00070
System Benefits Charge	kWh x	\$0.00330	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055	\$0.00055

Supplier Services

Default Service kWh x \$0.07287

Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate G-2 Default Service Customers

Hours Use 250

		(1)		(2)		(1) vs (2)	
		/-----/ /-----/		/-----/		/-----/	
		Present Rates		Proposed Rates		Overall	
		Default Service		Default Service		Increase (Decrease)	
		Total	Retail Delivery	Total	Retail Delivery	Amount	%
kW	20	\$587.00	\$222.65	\$593.34	\$228.99	\$6.34	1.1%
	50	\$1,430.46	\$519.58	\$1,446.03	\$535.15	\$15.57	1.1%
	75	\$2,133.34	\$767.03	\$2,156.59	\$790.28	\$23.25	1.1%
	100	\$2,836.20	\$1,014.45	\$2,867.14	\$1,045.39	\$30.94	1.1%
	150	\$4,241.96	\$1,509.33	\$4,288.28	\$1,555.65	\$46.32	1.1%

		Present Rates	Proposed Rates
Customer Charge		\$24.70	\$24.89
Distribution Charge	kWh x	\$0.00102	\$0.00213
Distribution Demand Charge	kW x	\$4.45	\$4.48
Transmission Charge	kWh x	\$0.01622	\$0.01622
Stranded Cost Charge	kWh x	\$0.00070	\$0.00070
System Benefits Charge	kWh x	\$0.00330	\$0.00330
Electricity Consumption Tax	kWh x	\$0.00055	\$0.00055

Supplier Services

Default Service	kWh x	\$0.07287	\$0.07287
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Granite State Electric Company
 Proposed July 1, 2010 Rates
 Calculation of Monthly Typical Bill
 Impact on Rate G-2 Default Service Customers

Hours Use 300

kW	Monthly kWh	(1)		(2)		Overall Increase (Decrease) Amount	Overall Increase (Decrease) %
		Total	Default Service	Total	Default Service		
20	6,000	\$681.66	\$437.22	\$689.11	\$437.22	\$7.45	1.1%
50	15,000	\$1,667.10	\$1,093.05	\$1,685.44	\$1,093.05	\$18.34	1.1%
75	22,500	\$2,488.31	\$1,639.58	\$2,515.73	\$1,639.58	\$27.42	1.1%
100	30,000	\$3,309.50	\$2,186.10	\$3,345.99	\$2,186.10	\$36.49	1.1%
150	45,000	\$4,951.90	\$3,279.15	\$5,006.54	\$3,279.15	\$54.64	1.1%

	Present Rates	Proposed Rates
Customer Charge	\$24.70	\$24.89
Distribution Charge	\$0.00102	\$0.00213
Distribution Demand Charge	\$4.45	\$4.48
Transmission Charge	\$0.01622	\$0.01622
Stranded Cost Charge	\$0.00070	\$0.00070
System Benefits Charge	\$0.00330	\$0.00330
Electricity Consumption Tax	\$0.00055	\$0.00055

<u>Supplier Services</u>	
Default Service	\$0.07287

Granite State Electric Company
d/b/a National Grid
Docket No. DE 10-__
Witness: D.E. Tufts

**Schedule DET-5
Revised Tariff Pages**

<u>Revised Page</u>	<u>Superseded Page</u>	<u>Rate Schedule</u>
Ninth Revised Page 35	Superseding Eighth Revised Page 35	Rate D
Fifth Revised Page 36	Superseding Fourth Revised Page 36	Rate D
Sixth Revised Page 37	Superseding Fifth Revised Page 37	Rate D
Eleventh Revised Page 39	Superseding Tenth Revised Page 39	Rate D
Ninth Revised Page 40	Superseding Eighth Revised Page 40	Rate D-10
Ninth Revised Page 43	Superseding Eighth Revised Page 43	Rate D-10
Fifth Revised Page 44	Superseding Fourth Revised Page 44	Rate G-1
Tenth Revised Page 45	Superseding Ninth Revised Page 45	Rate G-1
Fifth Revised Page 50	Superseding Fourth Revised Page 50	Rate G-2
Sixth Revised Page 55	Superseding Fifth Revised Page 55	Rate G-3
Ninth Revised Page 57	Superseding Eighth Revised Page 57	Rate G-3
Fifth Revised Page 59	Superseding Fourth Revised Page 59	Rate M
Sixth Revised Page 60	Superseding Fifth Revised Page 60	Rate M
Sixth Revised Page 66	Superseding Fifth Revised Page 66	Rate T
Ninth Revised Page 68	Superseding Eighth Revised Page 68	Rate T
Fifth Revised Page 70	Superseding Fourth Revised Page 70	Rate V
Ninth Revised Page 72	Superseding Eighth Revised Page 72	Rate V
Sixty-fourth Revised Page 84	Superseding Sixty-third Revised Page 84	Summary of Rates

DOMESTIC SERVICE RATE D

AVAILABILITY

Retail Delivery Service under this rate is available for all domestic purposes in an individual private dwelling or an individual apartment and for farm purposes. If electricity is delivered through more than one meter, the charge for electricity delivered through each meter shall be computed separately under this rate.

CHARACTER OF SERVICE

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

RATE PER MONTH

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service

Customer Charge

~~\$4.324.35~~ per month

Distribution Energy Charges

Regular Use

~~1.6291.641~~ cents per kilowatt-hour for the first 250 kilowatt-hours

~~4.2424.275~~ cents per kilowatt-hour for the excess of 250 kilowatt-hours

For customers who received service under the off-peak provisions of the Domestic Service Rate D prior to April 1, 1991, the following rates shall apply:

Off-Peak Use: 16 Hour Control

For all electricity separately metered and delivered between the hours of 11:00 p.m. on each day and 7:00 a.m. on the next day, the price of such electricity shall be:

~~1.5581.570~~ cents per kilowatt-hour if a Customer has installed an electric water heater of a type approved by the Company, and electricity delivered to such water heater is supplied only under this rate.

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Off-Peak Use: 6 Hour Control

For all electricity separately metered and subject to the Company's right to limit the operation of the bottom water heating element up to 6 hours a day, the price of such electricity shall be:

~~1.629~~^{1.641} cents per kilowatt-hour if a Customer has installed an electric water heater of a type approved by the Company, and electricity delivered to such water heater is supplied only under this rate.

Farm use

The availability of the Farm Use Section is limited to those locations which were served under the Farm Use Section of Domestic Rate D, N.H.P.U.C. No. 8 - Electricity immediately prior to the effective date of this rate. For such farm customers, where all electricity is supplied by the Company, the RATE PER MONTH is modified as follows:

~~2.533~~^{2.553} cents per kilowatt-hour for all Regular Use kilowatt-hours in excess of the greater of the following:

- (a) 500 kilowatt-hours
- (b) 100 kilowatt-hours per kilovolt-ampere of transformer capacity needed to serve the Customer

APPROVED TYPES OF WATER HEATERS FOR USE UNDER PROVISIONS OF
OFF-PEAK USE CLAUSE OF DOMESTIC RATE D

The specifications for an approved type of water heater for all domestic applications are as follows:

- (1) It shall be of standard manufacture and have a capacity and corresponding heating elements as specified below:

<u>Approx.</u> <u>Tank Size</u> <u>Gallons</u>	<u>Rating</u> <u>Top Unit</u> <u>Watts</u>	<u>Rating</u> <u>Bottom Unit</u> <u>Watts</u>
80*	4500	3000
100 to 120	4500	4500
150	5000	5000

*Water heaters of less than 80 gallons with top and bottom heating elements of not more than 4500 watts each may be installed at the Company's option, with the permission of the Regional Executive.

- (2) It shall be equipped with a top and bottom heating element, each controlled by a separate thermostatic switch. The thermostatic switch for the top element shall be of a double-throw type so connected as to

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permit operation of only one heating element at a time. The thermostat for the bottom element shall be of single-pole, single-throw type. The top and bottom units shall be designed for nominal 240-volt operation.

- (3) It shall have a pressure rating of not less than 250 pounds-per-square-inch test.
- (4) It shall be equipped as purchased with an approved fuel cut-off type temperature limit switch having its temperature sensitive element in contact with tank surface within 12 inches of top and so connected as to completely disconnect the heating elements from the power supply.
- (5) The thermostats for the top and the bottom heating units shall have a range of temperature settings extending from 120 degrees to 170 degrees Fahrenheit with the bottom element setting maintaining approximately a 10-degree differential above the setting of the top element.
- (6) The water heater and the installation thereof shall conform to the National Electric Code, to any State of local requirements, and to those of the Company.

The Customer shall provide a separate circuit for the water heater, of ample capacity and designed for 240-volt operation, to which no equipment other than the water heater shall be connected. Specific water heating connection diagrams for each type of service and rate application are available from the Company.

INTERRUPTIBLE CREDITS

The Company will provide, own and maintain a suitable switch designed to control the operation of selected appliances so that the appliance may operate only during the hours chosen by the Company.

If the Customer has installed an electric water heater of a type approved by the Company, and permits the Company to control the operation of the water heater for the specified number of hours per day and during emergency situations, the Customer will receive the following credit each month:

	<u>Control hrs./day</u>	<u>Credit</u>
IC-1	6	\$4.814.84
IC-2	16	\$6.426.47

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ELECTRIC ASSISTANCE PROGRAM

Eligible customers taking service under this rate will receive a discount as provided on Page 86 of this Tariff of which this rate is a part. Eligibility shall be determined in accordance with the Electric Assistance Program Provision on Page 86 of this Tariff. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

SYSTEM BENEFITS CHARGE ADJUSTMENT PROVISION

Customers taking service under this rate will be charged a System Benefits Charge as provided on Page 77 of the Tariff of which this rate is a part. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

MINIMUM CHARGE

\$~~4.324~~^{3.35} per month Customer Charge.

BIMONTHLY BILLING

The Company reserves the right to read meters and render bills on a bimonthly basis. When bills are rendered bimonthly, the Customer Charge, the kilowatt-hours stated in each block and the Minimum Charge shall be multiplied by two.

TERMS OF PAYMENT

The above rate is net, billed monthly or bimonthly and payable upon presentation of the bill.

TERMS AND CONDITIONS

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

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DOMESTIC SERVICE RATE D-10
OPTIONAL PEAK LOAD PRICING RATE

AVAILABILITY

Retail Delivery Service under this rate is available for all domestic purposes in an individual private dwelling or an individual apartment and for farm purposes to selected customers presently served under Rate D.

If electricity is delivered through more than one meter, the charge for electricity delivered through each meter shall be computed separately under this rate. The availability of this rate will be subject to the Company's ability to obtain the necessary meters and to render such service.

CHARACTER OF SERVICE

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location.

RATE PER MONTH

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service

Customer Charge

~~\$7.427~~⁴⁷ month

Distribution Energy Charges

On-Peak ~~4.7094~~⁷⁴⁶ cents per kilowatt-hour

Off-Peak 0.000 cents per kilowatt-hour

Peak hours will be from 8:00 a.m. to 9:00 p.m. daily on Monday through Friday excluding holidays.

Off-Peak hours will be from 9:00 p.m. to 8:00 a.m. daily Monday through Friday, and all day on Saturdays, Sundays, and holidays.

The holidays will be: New Year's Day, President's Day, Memorial Day, Independence Day, Columbus Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day. All holidays will be the nationally observed day.

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ELECTRIC ASSISTANCE PROGRAM

Eligible customers taking service under this rate will receive a discount as provided on Page 86 of this Tariff of which this rate is a part. Eligibility shall be determined in accordance with the Electric Assistance Program Provision on Page 86 of this Tariff. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

SYSTEM BENEFITS CHARGE ADJUSTMENT PROVISION

Customers taking service under this rate will be charged a System Benefits Charge as provided on Page 77 of the Tariff of which this rate is a part. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

MINIMUM CHARGE

~~\$7,427.47~~ per month Customer Charge

TERMS OF PAYMENT

The above rate is net, billed monthly or bimonthly and payable upon presentation of the bill.

TERMS OF AGREEMENT

The agreement for service under this rate will continue for an initial term of one year if electricity can be properly delivered to a Customer without an uneconomic expenditure by the Company. The agreement may be terminated at any time on or after the expiration date of the initial term by twelve (12) months prior written notice.

TERMS AND CONDITIONS

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

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GENERAL SERVICE TIME-OF-USE RATE G-1

AVAILABILITY

Retail Delivery Service under this rate is available for all purposes except resale, subject to the provisions of this section. A Customer will take delivery service on this rate if the Company estimates that its average use will be greater than or equal to 200 kW of Demand.

A Customer may be transferred from rate G-1 at its request or at the option of the Company if the customer's 12 month average monthly demand is less than 180 kW of Demand for 3 consecutive months.

If electricity is delivered through more than one meter, except at the Company's option, the charge for electricity delivered through each meter shall be computed separately under this rate. If any electricity is delivered hereunder at a given location, then all electricity delivered by the Company at such location shall be furnished hereunder, except such electricity as may be delivered under the provisions of the Limited Commercial Space Heating Rate V.

The actual delivery of service and the rendering of bills under this rate is contingent upon the installation of the necessary time-of-use metering equipment by the Company; subject to both the availability of such meters from the Company's supplier and the conversion or installation procedures established by the Company.

All customers served on this rate must elect to take their total electric service under the time-of-use metering installation as approved by the Company. If delivery is through more than one meter, except at the Company's option, the Monthly Charge for service through each meter shall be computed separately under this rate.

CHARACTER OF SERVICE

Service supplied under this rate will be 60 cycle, three-phase alternating current normally at a nominal voltage of 120/208, 277/480, 2400, 4160, 4800, 7200, 13,200 and 13,800 volts.

All voltages are not available in every area.

RATE PER MONTH

The Rate Per Month will be the sum of the applicable Customer, Demand and Energy Charges subject to the adjustments in this tariff.

Rates for Retail Delivery Service

Customer Charge

~~\$92,279~~^{\$92,279.99} per month.

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Distribution Demand Charge

\$~~4.034~~^{0.06} per kW of Peak Hours Demand per Month

Distribution Energy Charges

Peak Hours Use ~~0.1330~~^{0.134} cents per Kilowatt-hour

Off-Peak Hours Use 0.000 cents per Kilowatt-hour

Peak hours will be from 8:00 a.m. to 9:00 p.m. daily on Monday through Friday excluding holidays.

Off-Peak hours will be from 9:00 p.m. to 8:00 a.m. daily Monday through Friday, and all day on Saturdays, Sundays, and holidays.

The holidays will be: New Year's Day, President's Day, Memorial Day, Independence Day, Columbus Day, Labor Day, Veteran's Day, Thanksgiving Day and Christmas Day. All holidays will be the nationally observed day.

TRANSMISSION SERVICE COST ADJUSTMENT

Transmission service is available to all retail Customers taking service under this rate. For those Customers, the Transmission Energy Charge shall be calculated in accordance with the Company's Transmission Service Cost Adjustment Provision as provided on Page 79 of the Tariff of which this rate is a part. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

STRANDED COST ADJUSTMENT

All energy billed under this rate is subject to a Stranded Cost Energy Charge which rate shall be adjusted from time to time in accordance with the Company's Stranded Cost Adjustment Provision as provided on Page 80 of the Tariff of which this rate is a part. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

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GENERAL LONG HOUR SERVICE RATE G-2

AVAILABILITY

Retail Delivery Service under this rate is available for all purposes except resale, subject to the provisions of this section. A Customer will take delivery service on this rate if the Company estimates that its average use will be greater than or equal to 20 kW of Demand but is less than 200 kW of Demand. If electricity is delivered through more than one meter, except at the Company's option, the charge for electricity delivered through each meter shall be computed separately under this rate.

A customer may be transferred from rate G-2 at its request or at the option of the Company if the customer's twelve (12) month average monthly demand is less than 18 kW of demand for three consecutive months.

If any electricity is delivered hereunder at a given location, then all electricity delivered by the Company at such location shall be furnished hereunder, except such electricity as may be delivered under the provisions of the Limited Commercial Space Heating Rate V.

CHARACTER OF SERVICE

Service supplied under this rate will be 60 cycle, three-phase alternating current normally at a nominal voltage of 120/208, 277/480, 2400, 4160, 4800, 7200, 13,200 and 13,800 volts.

All voltages are not available in every area.

RATE PER MONTH

The Rate Per Month will be the sum of the applicable Customer, Demand and Energy Charges subject to the adjustments in this tariff.

Rates for Retail Delivery Service

Customer Charge

~~\$24.70~~^{\$24.89} per month.

Distribution Demand Charge

~~\$4.45~~^{\$4.48} per kilowatt of Demand per Month

Distribution Energy Charge

0.031 cents per kilowatt-hour

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GENERAL SERVICE RATE G-3

AVAILABILITY

Retail Delivery Service under this rate is available for all purposes except for resale. A Customer will take delivery service on this rate if the Company estimates that its average use will be less than 20 kW of demand. If electricity is delivered through more than one meter, except at the Company's option, the charge for electricity delivered through each meter shall be computed separately under this rate.

CHARACTER OF SERVICE

Service supplied under this rate will be 60 cycle, alternating current either:

- (a) Single-phase normally three-wire at a nominal voltage of 120/240 volts.
- (b) Three-phase secondary normally at a nominal voltage of 120/208, or 277/480 volts.
- (c) Three-phase primary normally at a nominal voltage of 2400, 4160, 4800, 7200, 13,200 or 13,800 volts.

All voltages are not available in every area.

RATE PER MONTH

The rate per month will be the sum of the Customer and Energy Charges subject to the adjustments in this tariff:

Rates for Retail Delivery Service

Customer Charge

~~\$5.475.51~~ per month.

Distribution Energy Charge

~~3.0523.076~~ cents per kilowatt-hour.

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SYSTEM BENEFITS CHARGE ADJUSTMENT PROVISION

Customers taking service under this rate will be charged a System Benefits Charge as provided on Page 77 of the Tariff of which this rate is a part. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

MINIMUM CHARGE

~~\$5.475.51~~ per Month Customer Charge

However, if the KVA transformer capacity needed to serve a customer exceeds 25 KVA, the minimum charge will be increased by ~~\$1.611.62~~ for each KVA in excess of 25 KVA.

BIMONTHLY BILLING

The Company reserves the right to read meters and render bills on a bimonthly basis. When bills are rendered bimonthly, the Customer Charge and the Minimum Charge shall be multiplied by two.

TERMS OF PAYMENT

The above rate is net, billed monthly or bimonthly and payable upon presentation of the bill.

TERM OF AGREEMENT

A Customer served under this rate must provide the Company with one-year prior written notice before installing additional on-site, non-emergency generation for its own use. This notice provision shall be waived with respect to the installation of on-site non-emergency generation from renewable energy resources. Renewable energy resources shall mean fuel cells (including natural gas powered fuel cells), and emerging power generation technologies that produce electricity from wind energy, solar energy, small-scale hydro power, ocean power, landfill gas, sustainably managed biomass, and future clean renewable technologies.

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OUTDOOR LIGHTING SERVICE RATE M

AVAILABILITY

Public Lighting

Available for Street or Highway lighting to any town, city or fire district.

Installations on limited access highways and the access and egress ramps thereto are subject to the Special Rate Conditions of this tariff.

Private Lighting

Available to private customers for outdoor lighting where necessary fixtures can be supported on existing poles and where such service can be supplied from existing secondary distribution facilities.

In special circumstances outlined in the pole and accessory section below, the Company will install a wooden pole.

RATE

Luminaire Charge

<u>Size of Street Light Lumens</u>	<u>Wattage</u>	<u>Lamp Code</u>	<u>Annual Distribution Price Per Unit</u>
<u>Sodium Vapor</u>			
4,000	50	70	\$50.19 <u>50.58</u>
9,600	100	72	\$60.84 <u>61.32</u>
27,500	250	74	\$106.83 <u>107.67</u>
50,000	400	75	\$139.20 <u>140.29</u>
9,600(Post Top)	100	79	\$70.07 <u>70.62</u>
27,500(Flood)	250	77	\$107.78 <u>108.63</u>
50,000(Flood)	400	78	\$148.79 <u>149.96</u>
<u>Incandescent</u>			
1,000	103	10	\$67.00 <u>67.52</u>

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<u>Size of Street Light Lumens</u>	<u>Lamp Wattage</u>	<u>Code</u>	<u>Annual Distribution Price Per Unit</u>
<u>Mercury Vapor</u>			
4,000	100	03	\$48.49 <u>48.87</u>
8,000	175	04	\$58.96 <u>59.42</u>
22,000	400	05	\$111.50 <u>112.38</u>
63,000	1,000	06	\$211.55 <u>213.22</u>
22,000(Flood)	400	23	\$123.31 <u>124.28</u>
63,000(Flood)	1,000	24	\$212.93 <u>214.61</u>

No further installation or relocation of Incandescent and Mercury Vapor lights will be made after the effective date of this rate, unless specific permission is received from the Commission's Chief Engineer.

POLE AND ACCESSORY CHARGE

An additional annual charge enumerated below will be applied where the Company is requested to furnish a suitable wood pole for the sole purpose of supporting a luminaire. If at a future date the pole is used for any purpose approved by the Company in addition to supporting a street and/or floodlight luminaire, the pole charge will be terminated. This pole may not be more than one (1) span from the existing secondary service located along a roadway or thoroughfare, and must be reachable for mechanized equipment.

<u>Overhead Service</u>	<u>Code</u>	<u>Annual Price Per Unit</u>
Wood Poles	P	\$59.14 <u>59.60</u>
<u>Underground Service</u>		
<u>Non-Metallic</u>		
Fiber glass wo/Base	R	\$61.24 <u>61.72</u>
Fiber glass w/Base <25 ft.	C	\$103.85 <u>104.67</u>
Fiber glass w/Base >=25 ft.	D	\$173.50 <u>174.87</u>
Metal Poles wo/Base	F	\$123.84 <u>124.81</u>
Metal Poles w/Base	T	\$149.22 <u>150.39</u>

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RATE PER MONTH

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff.

Rates for Retail Delivery Service

Customer Charge

~~\$5,595.63~~ per Month

Distribution Energy Charge

~~1,9942.009~~ cents per kilowatt-hour

INTERRUPTIBLE CREDITS

The Company will provide, own and maintain a suitable switch designed to control the operation of selected appliances so that the appliance may operate only during the hours chosen by the Company.

If the Customer has installed an electric water heater of a type approved by the Company, and permits the Company to control the operation of the water heater for the specified number of hours per day and during emergency situations, the Customer will receive the following credit each month:

	<u>Control hrs./day</u>	<u>Credit</u>
IC-1	6	\$4,814.84
IC-2	16	\$6,426.47

TRANSMISSION SERVICE COST ADJUSTMENT

Transmission service is available to all retail Customers taking service under this rate. For those Customers, the Transmission Energy Charge shall be calculated in accordance with the Company's Transmission Service Cost Adjustment Provision as provided on Page 79 of the Tariff of which this rate is a part. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

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ELECTRIC ASSISTANCE PROGRAM

Eligible customers taking service under this rate will receive a discount as provided on Page 86 of this Tariff of which this rate is a part. Eligibility shall be determined in accordance with the Electric Assistance Program Provision on Page 86 of this Tariff. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

SYSTEM BENEFITS CHARGE ADJUSTMENT PROVISION

Customers taking service under this rate will be charged a System Benefits Charge as provided on Page 77 of the Tariff of which this rate is a part. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

MINIMUM CHARGE

~~\$5,595.63~~ per Month Customer Charge

BIMONTHLY BILLING

The Company reserves the right to read meters and render bills on a bimonthly basis. When bills are rendered bimonthly, the Minimum Charge shall be multiplied by two.

TERMS OF PAYMENT

The above rate is net, billed monthly or bimonthly and payable upon presentation of the bill. However, customers may elect in writing to pay on a Budget Billing Plan available on application to the Company.

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LIMITED COMMERCIAL SPACE HEATING RATE V

AVAILABILITY

The availability of this rate is limited to the following customers: 1) those who immediately prior to the effective date of this rate were served under Commercial Space Heating Rate V, N.H.P.U.C. No. 8 - Electricity and are presently receiving service under this rate, and 2) those who requested service under this rate prior to May 1, 1982.

To such customers, delivery service under this Limited Commercial Space Heating Rate V is available for space heating in buildings other than residences, where the Customer's premises are heated exclusively by electricity.

Air conditioning used in addition to electric space heating at this same location may also be served under this rate, provided that electricity is the sole source of energy, and all the requirements for these purposes are metered hereunder.

Electric space heating equipment shall be permanently installed and be of a type and size approved by the Company.

Service under this rate will be metered separately.

Any other use of electricity must be taken under an applicable general service rate.

This rate is not available to seasonal customers, or for resale or auxiliary service.

CHARACTER OF SERVICE

Service supplied under this rate will be single phase, 60 cycle, alternating current, normally three-wire service at a nominal voltage of 120/240 volts or three-wire 120/208 volts, whichever is available at the location, or other voltages where available by special arrangement with the Company.

RATE PER MONTH

The rate per month will be the sum of the applicable Customer and Energy Charges subject to the adjustments in this tariff.

Rates for Retail Delivery Service

Minimum Charge

~~\$5,845.88~~ per Month

Distribution Energy Charge

~~2,8162.838~~ cents per kilowatt-hour

Issued: ~~August 3, 2009~~

Issued by: /s/ Thomas B. King

Effective: ~~August 1, 2009~~ July 1, 2010

Thomas B. King
Title: President

(Issued in Compliance with Order No. ~~24,998~~ _____ in Docket DE ~~09-09410-~~ _____ dated ~~July 31, 2009~~ _____)

SYSTEM BENEFITS CHARGE ADJUSTMENT PROVISION

Customers taking service under this rate will be charged a System Benefits Charge as provided on Page 77 of the Tariff of which this rate is a part. A summary of energy charges in effect, with all adjustments, is provided on Page 84 of this Tariff.

MINIMUM CHARGE

~~\$5,845.88~~ per Month Customer Charge

TERMS OF PAYMENT

The above rate is net, billed monthly and payable upon presentation of the bill. However, customers may elect in writing to pay on a Budget Billing Plan available on application to the Company.

TERM OF AGREEMENT

A Customer served under this rate must provide the Company with one-year prior written notice before installing additional on-site, non-emergency generation for its own use. This notice provision shall be waived with respect to the installation of on-site non-emergency generation from renewable energy resources. Renewable energy resources shall mean fuel cells (including natural gas powered fuel cells), and emerging power generation technologies that produce electricity from wind energy, solar energy, small-scale hydro power, ocean power, landfill gas, sustainably managed biomass, and future clean renewable technologies.

TERMS AND CONDITIONS

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

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GRANITE STATE ELECTRIC COMPANY
 RATES EFFECTIVE JULY 1, 2010
 FOR USAGE ON AND AFTER JULY 1, 2010

Rate	Blocks	Distribution Charge (1), (2), (3), (4)	Electricity Consumption Tax	Transmission Charge	Systems Benefits Charge	Stranded Cost Charge	Total Retail Delivery Services
D	Customer Charge	\$4.35					\$4.35
	1st 250 kWh	\$0.01806	\$0.00055	\$0.01811	\$0.00330	\$0.00070	\$0.04072
	Excess 250 kWh	\$0.04440	\$0.00055	\$0.01811	\$0.00330	\$0.00070	\$0.06706
	Off Peak kWh	\$0.01735	\$0.00055	\$0.01811	\$0.00330	\$0.00070	\$0.04001
	Farm kWh	\$0.02718	\$0.00055	\$0.01811	\$0.00330	\$0.00070	\$0.04984
	D-6 kWh	\$0.01806	\$0.00055	\$0.01811	\$0.00330	\$0.00070	\$0.04072
D-10	Customer Charge	\$7.47					\$7.47
	On Peak kWh	\$0.04920	\$0.00055	\$0.01435	\$0.00330	\$0.00069	\$0.06809
	Off Peak kWh	\$0.00174	\$0.00055	\$0.01435	\$0.00330	\$0.00069	\$0.02063
G-1	Customer Charge	\$92.99					\$92.99
	Demand Charge	\$4.06					\$4.06
	On Peak kWh	\$0.00316	\$0.00055	\$0.01505	\$0.00330	\$0.00069	\$0.02275
	Off Peak kWh	\$0.00182	\$0.00055	\$0.01505	\$0.00330	\$0.00069	\$0.02141
G-2	Customer Charge	\$24.89					\$24.89
	Demand Charge	\$4.48					\$4.48
	All kWh	\$0.00213	\$0.00055	\$0.01622	\$0.00330	\$0.00070	\$0.02290
G-3	Customer Charge	\$5.51					\$5.51
	All kWh	\$0.03241	\$0.00055	\$0.01644	\$0.00330	\$0.00070	\$0.05340
M	All kWh see tariff for luminaires & pole charges	\$0.00182	\$0.00055	\$0.00990	\$0.00330	\$0.00071	\$0.01628
T	Customer Charge	\$5.63					\$5.63
	All kWh	\$0.02184	\$0.00055	\$0.01696	\$0.00330	\$0.00070	\$0.04335
V	Minimum Charge	\$5.88					\$5.88
	All kWh	\$0.03011	\$0.00055	\$0.01797	\$0.00330	\$0.00071	\$0.05264

- (1) Distribution Energy Charges include a Business Profits Tax Surcharge of \$0.00057 per kWh for usage on and after 8/1/01
 (2) Distribution Energy Charges include the following credits per kWh in accordance with page 93 of the tariff for usage on and after 5/1/06
- | Rate Class | Credit per kWh |
|------------|----------------|
| D | (\$0.00017) |
| D-10 | (\$0.00008) |
| G-3 | (\$0.00017) |
| T | (\$0.00007) |
| V | (\$0.00009) |
- (3) Distribution Energy Charges include a Reliability Enhancement Program and Vegetation Management Plan Adjustment Factor of \$0.00125 per kWh for usage on and after 7/1/10

System Benefits Charge-Energy Efficiency	\$0.00150	Effective 1/15/10, usage on and after
System Benefits Charge-Statewide Energy Assistance Program	\$0.00180	Effective 1/15/10, usage on and after
Total System Benefits Charge	\$0.00330	
Transmission Cost Adjustment Factor	various	Effective 1/1/10, usage on and after
Stranded Cost Adjustment Factor	various	Effective 1/1/10, usage on and after
Default Service Charge		
Residential & Small Commercial (D, D-10, G-3, M, T, V)	\$0.07155	Effective 5/1/10, usage on and after
Medium / Large Commercial & Industrial (G-1, G-2)	\$0.07120	Effective 5/1/10, usage on and after
	\$0.06910	Effective 6/1/10, usage on and after
	\$0.07287	Effective 7/1/10, usage on and after
Electricity Consumption Tax	\$0.00055	Effective 5/1/01, usage on and after

Issued: _____ Issued by: Thomas B. King
 Effective: July 1, 2010 Title: Thomas B. King
President

(Issued in Compliance with Order No. _____ in Docket No. DE 10-____ dated _____)