

**Fiscal Year 2009 (April 1, 2008 –  
March 31, 2009) Reliability  
Enhancement Plan (REP) and  
Vegetation Management Plan  
(VMP) Results and Reconciliation  
Filing**

**May 15, 2009**

**Submitted to:  
New Hampshire  
Public Utilities Commission**

**Submitted by:**

**nationalgrid**

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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 06-107<sup>1</sup> (“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 2009 (April 1, 2008-March 31, 2009). As required by the Settlement Agreement, 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 2009, including an explanation of differences from the fiscal year 2009 budget submitted to Staff on February 15, 2008; 2) A request for recovery of the incremental O&M expense of \$113,832 above the base O&M amount of \$1,360,000 through the REP/VMP Adjustment Provision to be included in rates effective for usage on and after July 1, 2009; 3) A request for a REP Capital Investment Allowance of \$75,740 which is the revenue requirement associated with \$500,000 of capital spending budgeted for fiscal year 2009 to be included in rates effective for usage on and after July 1, 2009; and 4) Calendar year 2008 reliability performance results. The Company is submitting the testimony of Catherine T. McDonough, Peter F. Altenburger and Sara M. Sankowich which provides further information regarding the Company’s actual O&M and capital expenditures made during fiscal year 2009. In addition, the testimony of David E. Tufts addresses the Company’s request for a rate increase associated with the REP/VMP Adjustment Provision and the REP Capital Investment Allowance described above, and includes a proposed rate design, typical bill impacts and clean and revised tariff pages.

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<sup>1</sup> See Order No. 24,777 (July 12, 2008).

## Section 1: Actual O&M Expenses

As set forth in the Settlement Agreement, the initial O&M budget for fiscal year 2009 was \$1,373,832. In addition, the Company and Staff agreed to an enhanced budget for hazard tree removals during fiscal year 2009 of \$100,000. Therefore, the total O&M budget for fiscal year 2009, including the enhanced budget for hazard trees was \$1,473,832. Actual O&M expenses incurred during implementation of the REP and VMP for fiscal year 2009 are shown in Tables 1, 2a, and 2b respectively. A breakdown of actual O&M expenses incurred in FY 09 by month is attached as Attachment 1 to this report. Attachment 2 to this report contains the work plan of completed VMP O&M activities by feeder. The combined actual O&M expenditure for REP and VMP activities was \$1,477,916. As explained in the testimony of Mr. Tufts, the Company is only proposing to recover \$113,832 of O&M in rates for usage on and after July 1, 2009 via the REP/VMP Adjustment Provision. Because the Company exceeded its total O&M budget for fiscal year 2009, this amount reflects the difference between the budgeted fiscal year 2009 O&M expenses of \$1,473,832 and the base O&M amount of \$1,360,000 set forth in the Settlement Agreement.

**Table 1. REP O&M Activities**

<b>Activities</b>	<b>FY2009 O&amp;M Investment Proposal</b>	<b>FY 2009 Actual O&amp;M Investment</b>
Inspection and Maintenance	\$20,000	\$16,663
O&M related to Capital Expenditures	\$62,140	\$45,520
<b>Total</b>	<b>\$82,140</b>	<b>\$62,183</b>

**Table 2a. VMP O&M Activities**

<b>Activities</b>	<b>FY2009 O&amp;M Investment Proposal</b>	<b>FY 2009 Actual O&amp;M Investment</b>
Spot Tree Trimming	\$35,000	\$35,607
Trouble and Restoration Maintenance	\$79,350	\$13,747
Planned Cycle Trimming	\$677,036	\$757,837
Cycle Trimming Police Detail Expenses	\$63,500	\$88,389
Hazard Tree Removal	\$274,806	\$204,915
Interim Trimming	\$80,000	\$16,907
Tree Planting	\$500	\$210
Sub-transmission Right of Way Clearing	\$68,000	\$181,395
Other Police Detail Expenses	\$13,500	\$10,160
<b>Total</b>	<b>\$1,291,692</b>	<b>\$1,309,167</b>

**Table 2b. Optional Enhanced O&M Activities**

<b>Activities</b>	<b>FY2009 REP Investment Proposal</b>	<b>FY 2009 Actual REP Investment</b>
Hazard Tree Removal	\$100,000	\$106,566
<b>Total</b>	<b>\$100,000</b>	<b>\$106,566</b>

**Section 2: Actual Capital Expenditures**

The Company's allowance for capital expenditures for fiscal year 2009 is \$500,000. Actual capital expenditures made to implement the REP during fiscal year 2009 are shown in Table 3 below. Although actual capital expenditures during fiscal year 2009 exceeded the budgeted amount, National Grid is only seeking recovery of the incremental revenue requirement associated with \$500,000 of capital investments in rates, as provided for in the Settlement Agreement.<sup>3</sup> As set forth in Mr. Tufts' testimony, the revenue requirement associated with fiscal year 2009 capital expenditures of \$500,000 is \$75,740.

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<sup>3</sup> See Settlement Agreement (Granite State Rate Plan, Exhibit GSE-8 at p. 7-8).

**Table 3. Actual 2009 Capital Investment Expenditures**

<b>Projects</b>	<b>FY 2009 Goal</b>	<b>FY 2009 Actuals</b>	<b>FY2009 Capital Investment Budget</b>	<b>FY 2009 Actual Capital Investment</b>
Feeder Hardening	28	27	\$234,000	\$261,564
<b>Asset Replacement</b>			\$266,000	\$281,665
- Reclosers	3	3		
- Cutouts: Installing new cutouts on side taps and replacing potted porcelain cutouts	500	497		
<b>Total</b>			<b>\$500,000</b>	<b>\$543,229</b>

### **Section 3: Differences from Fiscal Year 2009 REP & VMP Budgets**

Factors contributing to differences between the proposed fiscal year 2009 REP and VMP budgets (\$500,000 and \$1,473,832 respectively) and actual REP and VMP expenditures for fiscal year 2009 are discussed below:

#### REP

The budget for capital investment work performed during fiscal year 2009 was based on per unit costs that have risen since the time the FY09 budget was generated, leading to slightly higher spending than planned. The Company also fell slightly below its goal to harden 28 feeder miles during FY09. This occurred because the Company attempted to split the work of the Salem Depot 9L3 feeder between FY09 and FY10 while maintaining project continuity to control costs. Fourteen of the twenty-eight feeder hardening miles planned for FY09 were on the Salem Depot 9L3 feeder. These fourteen miles also represent half of the total length of the 9L3 feeder. The remaining half of this feeder is part of the feeder hardening proposed for FY10, as indicated in plans submitted to Staff on February 17, 2009. The Company met its goal to install three reclosers in FY09, although it fell slightly below its goal to replace 500 cutouts. Cutout replacements are performed on a per feeder basis. The 497

cutouts replaced as part of REP for FY09 were located on seven full feeders. Three cutouts in the original budget were not replaced due to the inefficiency of writing a new work order for partial feeder work. However, more than three additional cutouts have been replaced by field personnel in the course of normal business conducted outside of the REP program during FY09.

### VMP

Overall, actual expenses incurred for base VMP O&M activities (\$1,309,167) were \$17,475 greater than originally proposed (\$1,291,692). The activity categories where actual expenses were less than anticipated involved trouble and restoration calls, interim trimming, and other police detail expenses. These activities are demand based, and the Company experienced less demand for these activities during fiscal year 2009 than anticipated. The Company also spent less on total base hazard tree removal costs than anticipated. This was due to the lower volume of hazard trees actually found on the circuits identified in the program. Therefore, there were 199 fewer trees removed than originally estimated. However, all of the trees originally identified in the off-cycle Enhanced Hazard Tree Removal activity category were removed. Cycle pruning, cycle pruning police detail expenses, and sub-transmission right of way clearing exceeded the anticipated spend. This was due to a higher cost per mile of contracted bid work (\$4,297.35) than was planned (\$3,839.16). Finally, actual expenses for the one-day Arbor Day event that constitutes the tree planting activity were less than the \$500 budgeted for the event.

#### Section 4: Calendar Year 2008 Reliability Results

As required pursuant to the Settlement Agreement, National Grid is providing the results of its calendar year 2008 reliability performance showing the effects of excluding weather events that qualify for exclusion under the IEEE Standard 1366 definition of a Major Event Day as well as the effects of excluding weather events that qualify for exclusion under the PUC Major Storm Definition historically used by the Commission for the Company. Customers Interrupted, Customer Minutes Interrupted, system average interruption duration index (“SAIDI”), system average interruption frequency index (“SAIFI”), and customer average interruption duration index (“CAIDI”) statistics are provided in Table 4 for calendar year 2008.

**Table 4. Calendar Year 2008 Reliability Results**

Exclusions <sup>1</sup>	Customers Interrupted CI	Customer Minutes Interrupted CMI	SAIFI	SAIDI	CAIDI
PUC Major Storm <sup>2</sup>	91,212	8,607,195	2.25	212	94
IEEE Major Event Days <sup>3</sup>	94,529	9,754,618	2.33	240	103

1. Only events involving 1 or more customers and more than 5 minutes are included in the calculated statistics.

2. PUC Major Storm: [(CI >= 15 % of Customers Served and 30 concurrent events) or (45 concurrent events)], PUC days excluded in 2008 are 6/29, 12/11 – 12/18.

3. IEEE Major Event Days: Using IEEE criteria, days excluded in 2008 are 6/29, 12/11-12/15

As shown in figure 1, the improvement trend in reliability performance continues.

After a notable improvement in 2007, the SAIFI metric rose somewhat in 2008 due to broken tree limbs and a rise in intentional outages to improve longer term reliability performance.

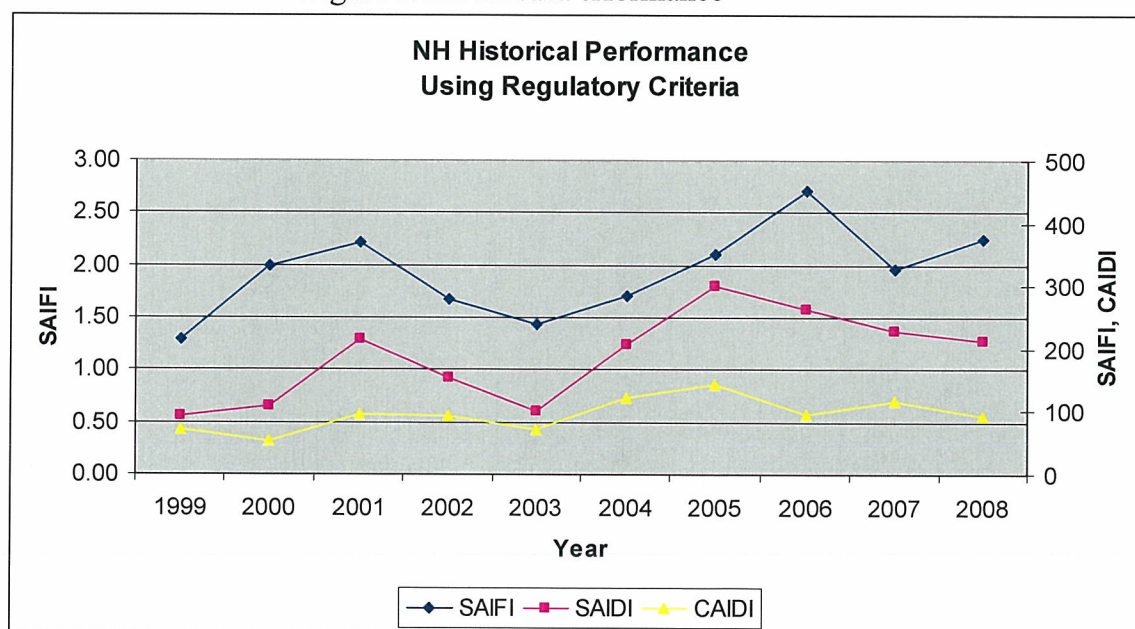
Even so, reliability performance in 2008 as measured by SAIFI was still more favorable than performance in 2006. It is also notable that the SAIFI metric year-to-date in 2009 is 50%



below the five-year year-to-date average and comparable to the average performance of this metric in the pre-2005 period.

The improvement trend in reliability as measured by SAIDI, an even broader measure of reliability performance, is even more compelling. In 2008, SAIDI was down for the third year in a row. Moreover, the improvement in SAIDI has continued into 2009. As of April, SAIDI was running 62% below the year-to-date average, and is close to the Company's pre-2005 performance level on SAIDI. The Company will continue its efforts to make sure that the improvement in reliability is sustained. While the number of events caused by broken trees in 2008 was significant, the benefits of recent tree trimming activities is evident in the fact that the number of events caused by tree growth in 2008 was significantly below the level experienced prior to 2005. It is important to note that many of the benefits that will accrue from REP and VMP investments made during fiscal year 2009 will not be fully reflected in reliability performance indices until the end of calendar year 2009.

Figure 1. Historical Performance



VMP Operating and Maintenance Activities  
Fiscal Year 2009 Actuals by Month  
May 15th Reconciliation Filing  
Attachment 1

Activity Description	April	May	June	July	August	September	October	November	December	January	February	March	Grand Total
Spot Tree Trimming	\$106.13	\$7,698.94	\$5,523.35	\$3,328.31	\$1,076.83	\$1,814.03	\$3,813.37	\$4,132.16	\$2,709.63	\$1,023.63	\$804.14	\$3,577.00	\$35,607.52
Trouble and Restoration Maintenance	\$866.14	\$593.72	\$1,143.50	\$0.00	\$0.00	\$681.41	\$2,368.89	\$360.99	\$805.25	\$1,330.28	\$787.24	\$4,809.30	\$13,746.72
Planned Cycle Trimming	\$3,922.79	\$60,586.20	\$0.00	\$137,053.17	\$0.00	\$0.00	\$43,039.09	\$24,306.93	\$50,177.39	\$31,713.01	\$0.00	\$407,038.24	\$757,836.82
Cycle Trimming Police Detail Expenses	\$6,462.50	\$18,915.78	\$11,767.48	\$3,760.00	\$0.00	\$4,512.00	\$9,870.00	\$6,870.54	\$1,620.00	\$2,368.00	\$0.00	\$22,242.50	\$88,388.80
Base Hazard Tree Removal	\$11,913.79	\$24,306.48	\$7,371.57	\$15,057.17	\$5,147.93	\$907.01	\$18,221.25	\$27,291.05	\$33,014.92	\$5,878.28	\$885.63	\$54,919.42	\$204,914.50
Enhanced Hazard Tree Removal	\$0.00	\$46.15	\$190.15	\$95.60	\$0.00	\$17,469.53	\$0.00	\$0.00	\$958.17	\$73,943.76	\$13,863.07	\$0.00	\$106,566.43
Interim Trimming	\$0.00	\$0.00	\$0.00	\$405.03	\$0.00	\$0.00	\$0.00	\$0.00	\$389.68	\$0.00	\$1,279.25	\$14,832.85	\$16,906.81
Tree Planting	\$0.00	\$0.00	\$0.00	\$210.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$210.00
Sub-Transmission Right of Way Clearing	\$0.00	\$0.00	\$0.00	\$0.00	\$29,530.60	\$46,308.78	\$8,446.01	\$0.00	\$53,890.37	\$39,488.60	\$0.00	\$3,730.98	\$181,395.34
Other Police Detail Expenses	\$648.00	\$634.50	\$168.00	\$696.00	\$0.00	\$0.00	\$2,249.25	\$1,176.75	\$526.59	\$1,955.84	\$841.50	\$1,263.44	\$10,159.87
Total	\$23,919.35	\$112,781.77	\$26,164.05	\$160,605.28	\$35,755.36	\$71,692.76	\$88,007.86	\$64,138.42	\$144,092.00	\$157,701.40	\$18,460.83	\$512,413.73	\$1,415,732.81

FY 09 Vegetation Management Program - Completed Workplan  
May 15th Reconciliation Filing  
Attachment 2

<b>Planned Circuit Trimming</b>					
District	CO_DIST_FDR	Substation_Name	FY09 Planned Miles	FY09 Completed Miles	Hazard Trees Rmvd
Charlestown	41_43_12L1	Vilas Bridge	114.51	114.51	341
Salem	41_42_14L1	PELHAM 14	26.98	26.98	129
Lebanon	41_41_1L1	LEBANON 1	16.02	16.02	40
Lebanon	41_41_15H1	MONROE 15	11.89	11.89	147
Lebanon	41_41_16L2	MOUNT SUPPORT 16	4.58	4.58	0
Lebanon	41_41_6L4	HANOVER 6	1.20	1.20	0
Lebanon	41_41_1L4	LEBANON 1	1.17	1.17	0
<b>Totals</b>			<b>176.35</b>	<b>176.35</b>	<b>657</b>
<b>Optional Enhanced O&amp;M Budget Off-Cycle Hazard Tree Removal Feeders</b>					
Lebanon	41_41_7L2	ENFIELD #7			103
Charlestown	41_43_12L2	VILAS BRIDGE			71
					<b>174</b>
<b>Sub-Transmission Clearing</b>					
Sub-Transmission Line	Description	FY09 Planned Acres	FY09 Planned Miles	FY09 Completed Acres	FY09 Completed Miles
1303/1304	Hanover to Lebanon	95.6	6.3	95.6	6.3
1303/1304	Sachem Jct. to Mt. Support Substation	10.0	0.5	10.0	0.5
GSE Line	Poverty Lane to True Rd.	22.0	2.3	22.0	2.3
Enfield Line	Lebanon #1 Substation to Enfield Substation	65.0	7.4	65.0	7.4
Locke Line	Rte. 135 to Locke Farm	15.0	1.2	15.0	1.2
<b>Totals</b>		<b>207.6</b>	<b>17.7</b>	<b>207.6</b>	<b>17.7</b>