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STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

April 24, 2012 - 10:06 a.m.  
Concord, New Hampshire

NHPUC MAY 21 '12 PM 12:16

RE: DE 12-055  
UNITIL ENERGY SYSTEMS, INC.:  
*Step Adjustments regarding the  
Reliability Enhancement Program and  
the Vegetation Management Program.*

PRESENT: Chairman Amy L. Ignatius, Presiding  
Commissioner Robert R. Scott  
Commissioner Michael D. Harrington

Sandy Deno, Clerk

APPEARANCES: Reptg. Unitil Energy Systems, Inc.:  
Gary Epler, Esq.

Reptg. PUC Staff:  
Suzanne G. Amidon, Esq.  
Steven E. Mullen, Asst. Dir./Electric Div.

Court Reporter: Steven E. Patnaude, LCR No. 52

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I N D E X

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KEVIN SPRAGUE	
RAYMOND LETOURNEAU	
SARA SANKOWICH	
DAVID CHONG	

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**P R O C E E D I N G**

1  
2 CHAIRMAN IGNATIUS: I'd like to open the  
3 docket or the hearing in Docket DE 12-055, Unitil Energy  
4 System, Inc. This is a filing to address the Reliability  
5 Enhancement Program and Vegetation Management Program  
6 adjustments called for in a settlement agreement in 2011,  
7 that allows for 75 percent recovery of non-Reliability  
8 Enhancement Program plant in service in 2011, and other  
9 adjustments, and would also implement a Vegetation  
10 Management Program Storm Hardening Pilot Program, and make  
11 other reports that are required in the Settlement  
12 Agreement. We issued an order scheduling a hearing for  
13 today.

14 And, with that, let's take appearances.

15 MR. EPLER: Good morning, Chairman  
16 Ignatius and Commissioners. My name is Gary Epler. I'm  
17 the Chief Regulatory Counsel for Unitil Service Corp. and  
18 an attorney here for Unitil Energy Systems, Inc.

19 CHAIRMAN IGNATIUS: Good morning.

20 MS. AMIDON: Good morning. Suzanne  
21 Amidon, for Commission Staff. And, with me is Steve  
22 Mullen, the Assistant Director of the Electric Division.

23 CHAIRMAN IGNATIUS: Good morning, and  
24 welcome, everyone. We have an affidavit of publication,

1 it looks like, has been submitted. So, thank you. And, I  
2 see a panel of witnesses has been seated, which is good.

3 Are there any matters to address before  
4 we begin taking evidence?

5 MR. EPLER: No, I don't believe so,  
6 Chairman Ignatius. I have a very brief opening statement,  
7 and I'll introduce the witnesses. But I don't think  
8 there's anything preliminary at this time.

9 CHAIRMAN IGNATIUS: All right. If  
10 nothing else, then please go ahead, Mr. Epler.

11 MR. EPLER: Okay. Thank you. This is  
12 perhaps not necessarily a typical filing that gets set for  
13 hearing, because there's no prefiled testimony here. But,  
14 in discussing this matter with Staff, we thought it would  
15 be helpful to walk through the filing, particularly for  
16 Commissioners Scott and Harrington, to give some context  
17 for the changes and the rate recovery and to talk about  
18 some of the programs that the Company is investing in  
19 under the Settlement Agreement. And, also, to give the  
20 Commissioners an opportunity to meet some of the directors  
21 at Unitil that you may not normally meet.

22 So, with that, could I have the panel  
23 sworn please.

24 (Whereupon **Kevin Sprague**,

[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1                    **Raymond Letourneau, Sara Sankowich,** and  
2                    **David Chong** were duly sworn by the Court  
3                    Reporter.)

4                    MR. EPLER: Now, seated on the panel, I  
5                    guess from your right to the left, is David Chong, who's  
6                    the Director of Finance; Sara Sankowich, who is the System  
7                    Arborist, that's a new position at Unitil that was created  
8                    after the Settlement Agreement; Ray Letourneau, who is the  
9                    Director of Electric Operations; and Kevin Sprague, who is  
10                   the Director of Engineering. So, we still have a few  
11                   folks back at the office.

12                   Now, the Settlement Agreement provided  
13                   for a series of changes to Unitil's permanent distribution  
14                   revenues under the structure of a five-year Rate Plan and  
15                   earnings sharing agreement that began May 1st, 2011, and  
16                   that ends on April 30th, 2016. And, these rate changes  
17                   included initial changes to Unitil's permanent rates that  
18                   occurred on May 1st, 2011, plus an amount for prudently  
19                   incurred rate case expense and recoupment back to the date  
20                   of when temporary rates were set, and then three  
21                   additional annual step adjustments, which occur -- would  
22                   occur on May 1st, 2012, May 1st, 2013, and May 1st, 2014.

23                   So, the current filing is for the 2012  
24                   step adjustment. And, that includes removal of the rate

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1 recoupment and the rate case expense from distribution  
 2 revenues going forward, as recovery of those costs have  
 3 been completed. And, then, it includes the adjustments  
 4 under the Reliability Enhancement Program and the  
 5 Vegetation Management Program.

6 The Settlement also includes an earnings  
 7 sharing mechanism, which limits the Company's ability to  
 8 propose changes to distribution rates, and will result in  
 9 sharing of earnings if Unitil's earned return on equity  
 10 for distribution is greater than 10 percent.

**KEVIN SPRAGUE, SWORN**

**RAYMOND LETOURNEAU, SWORN**

**SARA SANKOWICH, SWORN**

**DAVID CHONG, SWORN**

**DIRECT EXAMINATION**

16 BY MR. EPLER:

17 Q. With that, if I could turn first to David Chong,  
 18 Director of Finance. And, he will point to the part of  
 19 the filing that actually has the calculations and show  
 20 where the various additions and subtractions to the  
 21 distribution rates occur.

22 A. (Chong) Thank you, Gary. Good morning, Commissioners.  
 23 I would like to turn your attention to Bates  
 24 Page 000086 of the filing. And, the name of the page

[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 is labeled "Schedule 2". As Gary indicated, the 2012  
2 step adjustment involves certain criteria of  
3 spending. One of the areas was "Non-REP Plant  
4 Additions", another area was "REP Plant Additions".  
5 And, the other areas involved "VMP historic" -- "VMP  
6 Spending" and "VMP Reconciliation", in addition to "REP  
7 Expense". But let me go through the schedule so I can  
8 kind of walk you through the numbers and show you how  
9 the step adjustment was calculated.

10 Beginning with the section titled  
11 "Non-REP Plant Additions Step Adjustment", our  
12 beginning Non-REP Net Plant in Service for the year  
13 2011, at the beginning of the year, was 143.3 million.  
14 We added 8.1 million of Non-REP plant additions during  
15 the year. And, the depreciation from those plant  
16 additions was 4.9 million. Which ended in a Non-REP  
17 Net Plant in Service for the end of the year of  
18 146.5 million.

19 The change in the plant in service over  
20 the year was 3.2 million. And, under the Settlement  
21 Agreement, 75 percent of that change was recoverable in  
22 the step adjustment. So, that 75 percent is equal up  
23 to \$2.4 million, which runs through the revenue  
24 requirement. The next calculation is the revenue

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1 requirement associated with the 2.4 million. It's  
2 calculated by applying the rate of return, in addition  
3 to the taxes, depreciation, and property tax associated  
4 with that amount. The total revenue requirement  
5 associated with the Non-REP plant additions portion of  
6 the step adjustment is equal to \$618,507.

7 If we go to the next section called "REP  
8 Plant Additions Step Adjustment", under the Settlement  
9 Agreement we were -- we were to recover REP additions  
10 throughout the year. And, the REP additions were  
11 1.2 million, less REP depreciation associated with that  
12 of negative 0.2 million, resulted in net REP plant  
13 additions of 1.4 million. And, once again, as -- we  
14 ran that through the revenue requirement calculation,  
15 multiplied that 1.4 amount by an associated rate of  
16 return, the income tax gross up and related  
17 depreciation and property taxes results in a revenue  
18 requirement of \$277,848 for the REP plant additions  
19 step.

20 The next section of the revenue  
21 requirement is entitled the "Other Step Adjustments".  
22 Under the Settlement Agreement last year, the May 2012  
23 step adjustment included a \$300,000 increase for REP  
24 operating and maintenance expenditures, and an

[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 increased VMP spending amount of \$950,000. And, the  
2 Settlement Agreement also provided for a "VMP  
3 Reconciliation". The amount shown here, "\$9,776",  
4 represents an undercollection from the amount recovered  
5 in rates throughout the year from that which the  
6 Company spent, and it also includes FairPoint billings  
7 that the Company also received. So, it's net of all of  
8 that. The last item is a "VMP Storm Hardening Pilot  
9 Program", that Sara will discuss in a moment, of  
10 "\$535,000".

11 The last portions of the step adjustment  
12 are recoupment. In last year's step, there was an  
13 amount of 1.2 million included in rates, and that  
14 amount is now being removed from rates to reflect the  
15 finalization of the recoupment. The last item included  
16 in the step adjustment is the "Rate Case Expense  
17 Adjustment" of negative "\$11,334". This reflects a  
18 true-up of the rate case expenses that were reflected  
19 in rates.

20 The "Grand Total Step Adjustment Revenue  
21 Requirement" of all these components is "\$1,469,304".

22 Q. Now, I thought we would turn to Kevin Sprague, Director  
23 of Engineering, and he can explain some of the REP  
24 expenditures that have occurred pursuant to the

1 Settlement Agreement.

2 A. (Sprague) Thank you. The REP, as it's designed, is  
3 meant to maintain or improve the reliability of the  
4 electric system. And, we kind of have our focus on  
5 several different areas. The first of those areas is  
6 system hardening, which is also known as trying to make  
7 the system more resilient to outages. These projects  
8 include equipment upgrades, installation of additional  
9 fuses, sectionalizers or reclosers, SCADA and  
10 automation projects, improvement to lightening  
11 protection, installation of animal protection, or other  
12 activities to mitigate specific outage causes.

13 The next, as part of the REP, would be  
14 an enhanced tree trimming. This is tree trimming  
15 that's above and beyond the normal cycle trimming and  
16 tends to be more aggressive. And, these -- this  
17 typically is completed in poor reliability areas as  
18 defined through engineering analysis.

19 The next area is asset replacement.  
20 This is replacing of aging components that are at risk  
21 of failure. And, these would typically include  
22 porcelain cutouts or insulators, transformers, circuit  
23 breakers, underground cable, wood poles, or other  
24 equipment, including spacer cable.

1                   And, the last area would be  
2                   reliability-based inspection and maintenance. These  
3                   are enhanced inspection and maintenance methods used to  
4                   detect and mitigate outages before they occur. New  
5                   technology, like infrared or radio frequency technology  
6                   used to identify equipment, and also software  
7                   applications used to better manage our inspection and  
8                   maintenance and reliability programs.

9                   The way that our REP is broken down is  
10                  between O&M and capital. And, I'll start with the O&M  
11                  portion. The Settlement allowed for \$300,000 in  
12                  O&M-related REP spending. About 200,000 of this is  
13                  what I described above to be "enhanced tree trimming".  
14                  This enhanced tree trimming, again, is more -- more  
15                  aggressive than our normal cycle trim. It's specific  
16                  to certain areas, could be certain streets or certain  
17                  neighborhoods that have experienced less than -- less  
18                  than desired reliability.

19                  The remaining 100,000 is proposed to be  
20                  used to complete a pilot program for infrared survey of  
21                  our distribution system. Now, infrared survey has been  
22                  around for a while, but it's typically used in  
23                  substation or subtransmission right-of-way type of  
24                  applications. We're trying to take this technology and

[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 use it on the distribution system. And, what infrared  
2 survey would do is enable us to identify bad  
3 connections or potentially failing equipment before an  
4 outage occurs, so that we can -- so that we can replace  
5 that equipment and forgo having an outage.

6 The capital portion of the REP is based  
7 upon engineering analysis. Our Engineering Group  
8 evaluates the reliability performance on a daily,  
9 monthly, quarterly, and annual basis. This analysis is  
10 conducted by specific engineers that have  
11 responsibility over our Capital and our Seacoast  
12 operating centers. So, they have a knowledge and an  
13 intimacy with the system that they're evaluating.  
14 They're evaluating reliability based upon worst  
15 outages, worst performing circuits, or poor-performing  
16 reliability areas. The engineers use GIS, our GIS  
17 system to spatially represent outages, so that they can  
18 determine pockets of poor -- of reliability concerns.  
19 The engineers then design projects to address these  
20 reliability concerns. And, their projects are aimed at  
21 (1) eliminating the possible cause for an outage, (2)  
22 reducing the size of the outage, or (3) improving the  
23 restoration time.

24 All of the projects that are designed

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[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 have an estimated cost, an estimated customer minutes  
2 saved, and a saved customer minute -- saved customer  
3 interruptions. Then, all of these projects are ranked  
4 together on a cost/benefit basis. And, the resulting  
5 shape of that is a curve, with the projects, if you  
6 were to consider the left-most side of the curve would  
7 be the projects with the highest cost/benefit ratio --  
8 the highest benefit-to-cost ratio. And, as the curve  
9 hits -- that hits the knee and starts to flatten out,  
10 those would be projects that have a higher cost and a  
11 lower benefit.

12 So, 2011 was the first year that we had  
13 entered into an REP program through the Settlement  
14 Agreement, that was approved I believe it was in May of  
15 2011. The Settlement Agreement allows for  
16 \$1.75 million. In actuality, as Mr. Chong identified,  
17 we spent something less than that, and that was due to  
18 projects that had been started that weren't completed  
19 by the end of the year, and, as such, are carried over  
20 into 2012.

21 The types of projects that we  
22 implemented or constructed in 2011 were distribution  
23 pole replacements that were required due to our annual  
24 pole inspections; the installation of reclosers; taking

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[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 a single phase line and turning it into a three phase  
2 line and replacing open wire with a second -- with a  
3 spacer cable; the addition of cutouts and fusing to  
4 reduce the size of outages; and the replacement of four  
5 and a quarter inch porcelain suspension insulators.

6 The 2012 projects that we have proposed  
7 include the installation of sectionalizers, again, to  
8 reduce the size of potential outages. We have a couple  
9 of circuits along the beach that tend -- that are  
10 constructed on the same pole line, due to, essentially,  
11 real estate concerns, that were increasing the phase  
12 spacing on because of high winds. We have an area  
13 where we're challenged to get trimming rights, and  
14 we're replacing some overhead construction with  
15 underground construction. Again, we're adding cutout  
16 and fuse locations. And, we're building a substation  
17 getaway. The circuits that leave the substation that  
18 are constructed with an early vintage spacer cable,  
19 that has recently showed signs of degradation and needs  
20 to be replaced.

21 So, that's all I have on the REP portion  
22 of this.

23 Q. Okay. Before I turn to Sara Sankowich to discuss the  
24 VMP program, I thought I would just give a little

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1 perspective on that as to how it arose. As a result of  
2 the investigation of the Massachusetts Department of  
3 Public Utilities into Fitchburg Gas & Electric Light  
4 Company, that's our sister affiliate in Massachusetts,  
5 Fitchburg's response to the December 2008 Ice Storm,  
6 the Company was required to issue an RFP and to hire a  
7 vegetation management consultant company to come up  
8 with a vegetation management plan for Fitchburg. The  
9 Company went through that process and hired a  
10 consultant. And, we were very pleased with the result  
11 and the insight that was gained through that process,  
12 and decided to extend that to Unitil Energy Systems to  
13 go through the same process and come up with a proposed  
14 vegetation management plan.

15 So, that's the genesis of what happened.  
16 And, one of the high recommendations in that proposal  
17 -- in their report was to hire a system arborist, and  
18 then continue with the implementation of a program that  
19 was outlined in the report.

20 So, with that, I'll turn it over to  
21 Sara.

22 A. (Sankowich) Thank you. With that being said, as it's  
23 almost a year to the date that I've been with the  
24 Company and the Vegetation Management Program is

[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 progressing forward with implementation of a five year  
2 pruning maintenance cycle and hazard tree removal.

3 I do have one note as part of the  
4 filing. On Bates Page 000005, state the "5-year single  
5 phase trim cycle with [a] 8-foot side and 10-foot top  
6 trim zone". And, that's actually being implemented as  
7 a "10-foot side and a 15-foot trim zone", as agreed  
8 upon after the Settlement.

9 CMSR. HARRINGTON: Could you tell me --  
10 "10 and 15"?

11 WITNESS SANKOWICH: Ten and fifteen,  
12 yes. Correct.

13 **BY THE WITNESS:**

14 A. (Sankowich) So, with that program moving forward, in  
15 2011, 112.58 miles of line were pruned and 530 trees  
16 were removed. In addition, subtransmission clearing,  
17 mid-cycle pruning, and reliability-driven work was  
18 completed as well. The total 2011 spend was  
19 approximately 1.73 million for all those projects. For  
20 2012, we have a proposed base program spend projected  
21 at 2.819 million. We have put 235.6 miles of pruning  
22 out to bid at favorable results, with an estimate of  
23 1,050 hazard trees to be removed for this year. The  
24 subtransmission clearing, the reliability-focused work,

[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 and the mid-cycle work will continue as planned. And,  
2 these programs are all in line with the step adjustment  
3 and the intended focus of improved vegetation  
4 management response and tree-related reliability and  
5 safety for normal conditions and typical inclement  
6 weather as seen on our system.

7 With that being said, recently New  
8 Hampshire has seen its fair share of major and  
9 catastrophic storm events recently, and that has led  
10 the Company to do some thinking about storm response  
11 and possible prevention. The customer effect and the  
12 cost of storm restoration and repair is very high. We  
13 understand that.

14 And, so, in an effort to test the  
15 ability of the Company to reduce overall major storm  
16 effect and restoration cost, the Company is proposing a  
17 Vegetation Management Storm Pilot Program for an  
18 additional \$535,000. This program is intended to  
19 reduce tree exposure along critical portions of our  
20 circuits. And, we would take into account local  
21 critical infrastructure as we do that. And, we'd be  
22 removing tree overhang and performing intensive hazard  
23 tree assessments and removal along these critical  
24 portions of our circuits.

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1                   The Company has targeted three circuits  
2                   in the Seacoast area relative to previous storm  
3                   performance, reliability concerns, and an expressed  
4                   public desire for additional tree work. And, the  
5                   Company will assess the cost to implement the  
6                   reliability effects and the public acceptance of this  
7                   work, in order to determine if all or part of the  
8                   program could be implemented into the standard  
9                   Vegetation Management Program to gain some increased  
10                  reliability benefit and reduce cost in major storm  
11                  events.

12 BY MR. EPLER:

13 Q.   And, is it correct that we'll be working closely with  
14       the towns where those circuits are located?

15 A.   (Sankowich) That's correct. Yes.

16 Q.   And, which towns are they?

17 A.   (Sankowich) It's mostly in Plaistow, and extends a  
18       little bit into Newton and Atkinson. We basically  
19       follow the circuit as it leaves the substation. So,  
20       that's the towns that are affected. We will be working  
21       very closely with the towns to locate critical  
22       infrastructure and make sure that we have the critical  
23       portion of our circuits taken care of in the pilot.

24 Q.   And, are these areas that have had a number of outages

1 in recent storms?

2 A. (Sankowich) Yes. They were some of the areas that saw  
3 outages during recent storm events and, looking at the  
4 reliability, were very good candidates for this type of  
5 work. It was looked at in the field. And, the tree  
6 canopy and the tree exposure is very high, and it lends  
7 itself well to testing the effects of removing the  
8 canopy and removing some of the side exposure from  
9 hazard trees.

10 Q. There's been some discussion and some reference to a  
11 type of clearing called "ground-to-sky clearing". Is  
12 this a type of that or is it different? If you can  
13 explain what we'll be doing.

14 A. (Sankowich) Yes. It's a type of ground-to-sky  
15 clearing. In many cases, we will be removing all  
16 overhang, which would be considered "ground-to-sky", as  
17 the term is used. In some cases, where there is  
18 healthy, structurally sound branches, we would be able  
19 to leave those. It would be a case-by-case basis. But  
20 most of area will be undergoing overhang removal, where  
21 possible.

22 Q. And, as you indicated, one of the key components here  
23 is to gauge what the public acceptance of such a  
24 program is?

[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 A. (Sankowich) That is correct.

2 Q. Given that it goes beyond the normal clearance?

3 A. (Sankowich) Yes. This is well beyond our normal scope  
4 of work. So, there's a large public factor, in  
5 addition to a cost factor, that comes along with this  
6 type of work. And, we will be removing large branches  
7 and trees from along roads and scenic areas. So, the  
8 public is impacted in this situation. And, the towns  
9 that we chose have expressed a desire to have  
10 additional tree work. So, that's another reason for  
11 choosing the spot that we did. We think that it would  
12 be a good spot for a pilot, and testing reaction in an  
13 area that has expressed interest already.

14 Q. Okay. And, maybe just to give a little context to  
15 this, I'm not sure if anyone, if either Mr. Sprague or  
16 Mr. Letourneau could talk about this. But is one of  
17 the reasons we're looking at this, and this particular  
18 system hardening measure, because of some of the  
19 developments we see in terms of ability to get the --  
20 to get the crews we need during a storm, so we're  
21 looking at not just being reactive to storms, but  
22 trying to look more towards system hardening?

23 A. (Letourneau) Yes, that's correct. With the multiple  
24 events that New England has experienced in the last

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[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 several years, multiple storm events, it's getting  
2 increasingly more difficult to obtain outside resources  
3 to come in and effect storm restoration. We're finding  
4 it -- that we have to reach further and further with  
5 each event, and every time we reach further and  
6 further, it's more costly. You have to pay  
7 mobilization costs for these crews to get here, you  
8 have to pay demobilization costs for these crews when  
9 they go home. And, each of the states are facing these  
10 issues. In Massachusetts, as well as New Hampshire,  
11 when there is a region-wide event that is forecasted,  
12 many of the companies are what we would call "locking  
13 down" these resources early. And, again, it's becoming  
14 that much more expensive for us to effect restoration  
15 and manage these events.

16 So, one of the aspects of the storm  
17 hardening or the Pilot Program is to take a look at  
18 trying to prevent the damage in the first place. One  
19 of the things that we do at the beginning of every  
20 storm event is to perform damage assessments. Damage  
21 assessment is utilized as one of the factors in  
22 determining our estimated time of restoration. "How  
23 long will it take us to return service to our  
24 customers?"

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[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1                   The other factor that plays into that is  
2                   the number of resources you have on the system. And,  
3                   of course, all of that is predicated upon the amount of  
4                   damage that you have. So that, if you can develop a  
5                   pilot program that is able to demonstrate that we can  
6                   actually, I don't think we can ever prevent 100 percent  
7                   of the damage, but we can certainly limit the amount of  
8                   damage that we see on some of our major circuits,  
9                   particularly when we're looking at critical  
10                  infrastructure for our municipals. Then, we'll  
11                  ultimately have less damage during these major storm  
12                  events, we'll require less outside resources, and  
13                  ultimately results in less cost to the Company, and a  
14                  shorter duration event. So, that's definitely one of  
15                  the aspects of this pilot that we want to measure.

16                  MR. EPLER: Okay. Thank you. Thank  
17                  you, Commissioners. In terms of an overview, we've  
18                  completed the presentation that we had prepared to give.  
19                  We're available for questions. And, I believe the Staff  
20                  may have some questions. Thank you.

21                  CHAIRMAN IGNATIUS: Thank you.  
22                  Ms. Amidon.

23                  MS. AMIDON: Thank you. First, I was  
24                  going to ask Attorney Epler, if you were going to ask that

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1 your filing be marked for identification as "Exhibit 1" in  
2 this?

3 MR. EPLER: Sure. Yes.

4 MS. AMIDON: Okay.

5 MR. EPLER: I wasn't sure if that was  
6 required, since these were required filings. But, yes, if  
7 that would help the record, certainly. If the filing  
8 that's dated "February 29th, 2012" can be marked as the  
9 Company's "Exhibit Number 1".

10 CHAIRMAN IGNATIUS: All right. Let's do  
11 that. And, that includes the report and all of the --

12 MR. EPLER: Yes, it does.

13 CHAIRMAN IGNATIUS: -- tariff pages and  
14 attachments?

15 MR. EPLER: Right.

16 (The document, as described, was  
17 herewith marked as **Exhibit 1** for  
18 identification.)

19 **CROSS-EXAMINATION**

20 BY MS. AMIDON:

21 Q. Prior to the hearing, I provided the panel with copies  
22 of a document, which is responses to Staff Technical  
23 Session Data Requests, with a cover letter signed by  
24 Attorney Epler dated "April 11th, 2012". Does everyone

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1 on the panel have that?

2 A. (Sprague) Yes.

3 A. (Letourneau) Yes.

4 A. (Sankowich) Yes.

5 Q. And, do you agree that that document is what I  
6 described, that it's in response to Staff Technical  
7 Session Data Requests?

8 A. (Sprague) Yes.

9 A. (Letourneau) Yes.

10 A. (Sankowich) Yes.

11 A. (Chong) Yes.

12 MS. AMIDON: Thank you. And, madam  
13 Chairman, I'd like this marked for identification as  
14 "Exhibit 2".

15 CHAIRMAN IGNATIUS: Mr. Epler, no  
16 objection to that?

17 MR. EPLER: I have no objection. Thank  
18 you.

19 CHAIRMAN IGNATIUS: We'll mark that for  
20 identification as "Exhibit 2".

21 (The document, as described, was  
22 herewith marked as **Exhibit 2** for  
23 identification.)

24 MS. AMIDON: With your permission, I

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1 would like to ask Mr. Mullen to conduct the  
2 cross-examination of the witnesses.

3 CHAIRMAN IGNATIUS: That's fine.

4 BY MR. MULLEN:

5 Q. Good morning. What I'd like to do is just start at the  
6 beginning of this, of Exhibit 1, and go through some  
7 questions as we make our way through. I'll try not to  
8 bounce around too much. On what's marked as Bates  
9 Page 000004, it's titled "Reliability Enhancement  
10 Program and Vegetation Management Program Annual Report  
11 2011". Am I correct that, in addition to reporting on  
12 what happened during 2011, this also provides the  
13 Company's plans for 2012?

14 A. (Sprague) That is correct.

15 Q. So, flipping through the pages, you give details about  
16 the amount of costs you incurred for the various  
17 activities, identify particular circuits that were  
18 trimmed. As we go to Page -- Bates Page 000013, that's  
19 where we start talking about the Storm Hardening Pilot  
20 that was described earlier. On Bates Page 000014,  
21 there's a "Table 13". There's three circuits  
22 identified there. And, I believe you testified that  
23 those were selected based on past history, as well as  
24 working with the towns. Could you describe, are these

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1 all located -- are they in heavily wooded areas? Are  
2 they sparsely wooded? Could you just give a brief  
3 description of those.

4 A. (Sankowich) Sure. These circuits are in mostly heavy  
5 wooded areas to some moderately wooded areas. The tree  
6 and vegetation changes as it goes along on certain  
7 roads, becomes a little bit more open in some spots,  
8 but there is a significant amount of overhang along  
9 many of the major portions.

10 Q. What voltages are these circuits?

11 A. (Sankowich) They are 34.5 kV and 13.8.

12 Q. In part of your description, you said one of the things  
13 that's going to have to be assessed is customer  
14 "acceptance". And, for the roughly 15 scheduled miles  
15 that you have on these circuits, are you going to need  
16 a lot of customer permissions to trim or are these on  
17 dedicated right-of-ways already?

18 A. (Sankowich) We will need a fair amount of customer  
19 permissions. The overhang removal is largely in town  
20 right-of-way, but any whole tree removal would be on  
21 private property. We would need customer support of  
22 some of these programs. So, part of the cost of the  
23 program includes education material and outreach about  
24 the program, the benefits of doing the work.

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[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 Q. Right under Table 13, it reads "Cost for this pilot  
2 program was calculated using a weighted cost per mile  
3 estimate for pruning and tree removal including  
4 customer outreach and education materials, work  
5 planning, notification, and monitoring, plus an  
6 addition of traffic control costs." If I did the math  
7 right, that comes to a little over 36,000 a mile, is  
8 that right?

9 A. (Sankowich) That's correct.

10 Q. How does that compare to what I would call "normal  
11 trimming" per mile?

12 A. (Sankowich) Our normal trimming cost per mile now run  
13 about \$8,000 per mile without traffic control. And, we  
14 add an additional 20 to 25 percent traffic control  
15 costs on top of that.

16 Q. So, could you -- what's the -- is it mainly the removal  
17 of additional trees and limbs that's causing all the  
18 extra costs? Could you explain, what's causing the  
19 bulk of the change there?

20 A. (Sankowich) The cost driver of this work is really the  
21 amount of vegetation that we'll be removing. And, the  
22 actual cost for doing the removal and removal of the  
23 wood associated with it. That would be the bulk of the  
24 increased costs.

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1 Q. You state that you're going to assess the success of  
2 this program using a "cost/benefit analysis". And, I  
3 assume that's going to happen at the end of this annual  
4 period?

5 A. (Sankowich) Yes. It would be after the program has  
6 been completed, and after the onset of our next storm  
7 event, where we can look at the performance of these  
8 circuits in relation to other circuits nearby.

9 Q. And, what happens if you don't have any major storm  
10 events during that period? How do you assess the  
11 effectiveness?

12 A. (Sankowich) There will be some benefit to regular  
13 reliability in minor storm events as well. And, there  
14 will be benefit through costs related to normal damage  
15 related to tree failures from our normal system  
16 occurrences.

17 Q. The paragraph just above Table 13 provides a little  
18 more description about how you're going to target the  
19 portions of the circuit. Could you just go into detail  
20 with that a little bit more?

21 A. (Sankowich) Sure. We target the critical sections of a  
22 circuit. And, so, for that, it starts at the  
23 substation, and goes out towards our first protection  
24 device. That area of our circuit affects the most

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1 customers. If there was to be a tree or limb failure  
2 in that section, all the customers would be without  
3 power. So, that would be our most intensive work area,  
4 our Level 1. And, so, in that area, we would be doing  
5 the most intensive ground-to-sky or overhang removal  
6 and hazard tree removal. And, we would continue out  
7 from the first protection device with the same  
8 intensity level to the second protection device, as  
9 long as there are over 500 customers served at that  
10 point. When we do hit the 500 customer limit, we would  
11 then do hazard tree removal and a less intense  
12 ground-to-sky removal out to the remaining three phase  
13 on that circuit.

14 Q. These circuits, are they all three phase?

15 A. (Sankowich) They all have three phase, yes. These  
16 circuits are longer than listed in the table. This  
17 represents the three phase mileage that will actually  
18 be worked on.

19 Q. Would it be possible to provide subsequent to the  
20 hearing just some circuit maps of these three circuits,  
21 just so we have -- so the Commission has a better idea  
22 of exactly where this would take place?

23 A. (Sankowich) Yes.

24 MR. MULLEN: Thank you. I'd like to

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1 make that a record request.

2 CHAIRMAN IGNATIUS: Does it need to be  
3 an exhibit in the file or simply something that the Staff  
4 has on hand to evaluate? I take it this is for evaluating  
5 in the future?

6 MR. MULLEN: Yes.

7 CHAIRMAN IGNATIUS: So, it may end up  
8 being more important as part of another docket. So, I'm  
9 just wondering, is it maybe just something that you can  
10 work with with the Company, rather than making it a formal  
11 exhibit at this time?

12 MR. MULLEN: That works for me.

13 CHAIRMAN IGNATIUS: Thank you.

14 BY MR. MULLEN:

15 Q. The last sentence you have on Page 14, in relation to  
16 this Pilot Program, talks about, potentially, if it's  
17 successful, incorporating it into the Vegetation  
18 Management Program going forward. And, would there be  
19 -- do you envision there being a set amount of dollars  
20 for this type of thing going forward or would it be  
21 based on particular circuits chosen for that year? How  
22 would you figure out how much to put in each year?

23 A. (Sankowich) I think it would depend on what circuits  
24 were chosen. I think that would be the most prudent

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1 use of cost analysis for future pieces. Because actual  
2 field conditions vary so widely, it might be better  
3 suited to actually look at the field conditions and  
4 choose the circuits specifically for this program  
5 beforehand. And, I think there might be some  
6 components that we could roll into specification pieces  
7 for some of the hazard tree removal, and that would be  
8 a small set incremental cost to the cost per mile. So,  
9 if we said, in our critical portions of all of our  
10 circuits, Level 1, we are going to do a more intense  
11 hazard tree removal, because we found the best results  
12 from that with the pilot, then we could expect a  
13 specific set amount cost per mile increase for that  
14 specific component of the pilot. I think the  
15 ground-to-sky portion would be a circuit-by-circuit  
16 basis, because that would be the bulk of the cost for  
17 removal.

18 Q. And, one final question on this. You've spoken with  
19 municipal officials. Have you started any customer  
20 outreach beyond that? Or, you're, of course, waiting  
21 to see if you get approval first, I'm sure, but --

22 A. (Sankowich) Yes. We have not done any customer  
23 outreach for the program as we have not begun it at all  
24 yet.

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1 Q. Starting on Bates Page 000015, Section 3.1 is labeled  
2 "Reliability Studies". These were studies that were  
3 required as a part of the Settlement Agreement in DE  
4 10-055, is that correct?

5 A. (Sprague) That is correct.

6 Q. Could you just give a brief summary of the three  
7 studies that were done, and, going forward, what  
8 actions may be taken as a result of those studies?

9 A. (Sprague) Sure. The first study that was completed is  
10 what's labeled as an "Un-fused Lateral Study". These  
11 are portions of the circuit where you might have one or  
12 two sections of line that tap off of the -- of the main  
13 line and to serve a customer or a group of customers.  
14 An evaluation was done on our system and found that  
15 there were 140 of these unprotected laterals, which is  
16 out of more than 7,300 potential locations. So, it's a  
17 very small percentage. But these are areas that there  
18 was some concern expressed by Staff that, if there were  
19 problems on these un-fused laterals, that the outage  
20 could be larger than necessary. So, the Engineering  
21 Group actually reviews the trouble reports on a daily  
22 basis. Any locations where there are un-fused laterals  
23 that have had a problem, engineering work requests are  
24 developed immediately to get fuses put on those

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1 un-fused laterals. So, these 140 are locations that  
2 haven't experienced problems over the past several  
3 years. Going forward, we complete our circuit  
4 analysis, our distribution circuit analysis, which is  
5 primarily for voltage and loading concerns. But,  
6 during that analysis, we do that on a three year  
7 rotating cycle. So, every circuit is reviewed once  
8 every three years at a minimum. As we go through these  
9 circuits over the next three years, we will be adding  
10 fuses to these 140 locations.

11 Q. And, by adding fuses, that should help improve  
12 reliability in those particular areas?

13 A. (Sprague) Theoretically, if there was an outage on that  
14 section, it would minimize the size of the outage.

15 Q. Okay. Thank you.

16 A. (Sprague) The next study is what's considered a "Fuse  
17 Coordination Study". Again, these are routinely  
18 completed as part of our distribution circuit analysis  
19 on a three year rotating cycle. The reason for a Fuse  
20 Coordination Study is to optimize the protection on the  
21 circuit. Make sure that we have as many fusing  
22 locations as we can get out there so that we can  
23 minimize the size of all the outages. And, this is  
24 something that the Company has done and will continue

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1 to do into the future.

2 The last one was Recloser Studies. This  
3 is a -- these studies are for locations where a  
4 recloser could be installed in such a way to maybe  
5 eliminate a sustained outage by the recloser having the  
6 ability to automatically de-energize and energize the  
7 circuit, in order to eliminate or try to eliminate the  
8 fault. Sometimes when a tree branch falls on the line,  
9 there's the initial arc, initial fault. The recloser  
10 opens, that allows the branch to fall off at times.  
11 The recloser close back in automatically, so the  
12 customers only see a temporary outage of, you know, 10  
13 to 15 seconds, as opposed to a sustained outage.  
14 Again, these reclosers -- these studies are completed  
15 as part of our annual analysis of the circuits, and  
16 also our annual reliability analysis.

17 And, I believe, in 2011, we had eight  
18 projects where we implemented reclosers on the UES  
19 system. And, in 2012, we have four other projects  
20 proposed for the addition of reclosers.

21 Q. Thank you. On Bates Page 000018, we start getting into  
22 the Reliability Enhancement Program Operation &  
23 Maintenance Expenditures. And, there's a term there  
24 that's called "enhanced tree trimming". Could you

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1 please compare and contrast that to what is (a)  
2 normally done for tree trimming, and (b) what is  
3 proposed in the Storm Hardening Pilot?

4 A. (Sankowich) Sure. Our "normal tree trimming" is done  
5 with a 10-foot/15-foot window, with incompatible brush  
6 species removal and risk tree assessment on the  
7 sideline. That's our "normal trimming".

8 "Enhanced tree trimming" is more  
9 aggressive or intensive trimming and clearing,  
10 involving an expanded trim zone and more intensive  
11 hazard tree removal. So, we'd be removing more  
12 overhang than just the 15 feet. It would also be  
13 removing more hazard trees, but would be assuming less  
14 risk, less risk on these portions of lines.

15 Q. And, that's done, as it says here, through -- you  
16 target particular areas based on "engineering  
17 analysis"?

18 A. (Sankowich) That's correct, based on engineering  
19 analysis.

20 Q. Moving through this report, there's -- before I get to  
21 that, on Bates Page 000021, Mr. Sprague, you said  
22 something before about the "curve hitting the knee" and  
23 how you evaluate projects. If we look at Chart 1,  
24 could you explain how you select particular projects

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1 based on that "curve hitting the knee"?

2 A. (Sprague) Yes, I can. This is actually the curve that  
3 I was trying to have you visualize in my opening  
4 remarks. You see two curves here. One is based upon  
5 the left-most Y axis, which is a cumulative customer  
6 minutes of savings, and one is for the right-most Y  
7 axis, which is a cumulative customer interruption  
8 savings. So, each of the projects, which are signified  
9 by the points on the curve, are plotted, and they're  
10 plotted based upon the estimated saved customer minutes  
11 or saved customer interruptions per the base cost of  
12 the project.

13 Those projects are then ranked in order  
14 of the highest benefit and plotted on this curve. So,  
15 as you can see, as you get out towards the tail-end of  
16 the curve, the projects have less benefit, meaning less  
17 saved customer minutes or less saved customer  
18 interruptions, for the cost of the project. Because  
19 our overall goal for our reliability program, which  
20 encompasses not only capital projects, but also tree  
21 trimming and so forth, is to implement the most  
22 cost-effective solution. Sometimes that solution is  
23 simple cycle trimming. Sometimes it's enhanced tree  
24 trimming. Sometimes the most cost-effective solution

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1 is actually a capital project, where we're installing  
2 equipment or changing the configuration of the system  
3 in order to eliminate or reduce outage time.

4 CHAIRMAN IGNATIUS: Mr. Sprague, before  
5 you go on, I'm sorry to interrupt, but rather than making  
6 you go back to this later. Can you just define how, like  
7 an interruption versus minutes per customer, is it a  
8 single interruption of any duration? Is an interruption  
9 minutes the actual minutes you're out or what?

10 WITNESS SPRAGUE: Correct. So, any time  
11 a customer would see an outage of more than five minutes,  
12 that's considered an "interruption". And, that's based  
13 upon the 300 rules, I believe, the Puc 300 rules. Once  
14 that customer receives an interruption, a timer starts.  
15 So, for every minute that that customer is out, that's a  
16 customer minute. So, if a customer is out for ten  
17 minutes, that would be ten customer minutes. And, then,  
18 obviously, you add the whole group of customers together  
19 that are part of that, any given outage. So, when the  
20 engineers are designing these projects, they're looking at  
21 historical outages. And, basing their project, saying "if  
22 our project was installed before this time period, what is  
23 the estimated savings that these customers might  
24 experience, from both an interruption standpoint and also

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1 a customer minute standpoint?"

2 BY CHAIRMAN IGNATIUS:

3 Q. Well, can I just see if I understand. Are you saying  
4 that in the normal course you would have, let's just  
5 pick the 700,000 level of customer interruptions,  
6 that's 700,000 customers or people who have had  
7 multiple outages over the course of how long a period  
8 of time?

9 A. No. Right. The "700,000" is a customer minute number.  
10 So, you could have 700 customers for a thousand minutes  
11 in one outage. You could have 70,000 --

12 Q. Well, your chart doesn't look like that. You've got  
13 the square boxes say it's "interruptions", and the  
14 triangles are "minutes", is that right?

15 A. (Sprague) Correct. So, if we were to implement -- so,  
16 take the square boxes. So, if you go -- the first box  
17 is somewhere around 150,000, and that's for little  
18 money. So, if we were to implement that project, we're  
19 estimating that we would save 150,000 customer minutes  
20 off of the system total for the year. Still not sure  
21 I'm --

22 Q. Well, I'm not sure how you get -- you keep going from  
23 "interruptions" to "minutes", and they're two different  
24 lines. And, so, why the --

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1 A. (Sprague) Right. For any --

2 Q. Let me ask you a different question.

3 A. (Sprague) Okay.

4 Q. In a standard year, and it's probably in here and I  
5 just have forgotten, in a standard year, how many  
6 customer interruptions do you experience within Unitil?

7 A. (Sprague) Oh, I'm not sure I have that number off the  
8 top of my head.

9 Q. Do you have it in minutes?

10 A. (Sprague) For -- yes. If you give me a second, I can  
11 calculate that.

12 MR. MULLEN: Mr. Sprague, if you look at  
13 Bates Page 000027, Table 18, will that give you the  
14 information?

15 WITNESS SPRAGUE: Yes.

16 **BY THE WITNESS:**

17 A. (Sprague) So, if we turn to Bates Page 000027, which is  
18 "Table 18", the third column you see says "Customer  
19 Hours". So, if you take this "233,671" and multiply it  
20 by 60, to convert that from hours to minutes, that  
21 would be the equivalent customer minutes for the year.

22 BY CHAIRMAN IGNATIUS:

23 Q. And, the "interruptions" are the events that led to  
24 those hours of being out, the next line over?

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1 A. (Sprague) Correct.

2 CHAIRMAN IGNATIUS: All right. Thank  
3 you.

4 CMSR. HARRINGTON: I wanted to follow up  
5 on that quickly.

6 BY CMSR. HARRINGTON:

7 Q. The table on 18, is that associated with the four  
8 storms listed on Page 7 -- I'm sorry, Table 18, the  
9 four storms listed on Page 000026 before that?

10 A. (Sprague) No. I believe that those --

11 Q. Or is this just --

12 A. (Sprague) No. I believe Table 18 is excludes -- is  
13 exclusive of those storms.

14 Q. Okay. This is everything but the major storms?

15 A. (Sprague) Correct.

16 Q. Okay. And, getting back to your chart on Bates  
17 Page 000021, I understand what you're showing here, but  
18 I'm trying to figure out where the -- what's the basis  
19 for determining the number of outages and customer  
20 minutes? I mean, it's --

21 A. (Sprague) Right.

22 Q. Are you projecting -- I'm just trying to get how this  
23 is done. Do you project out, you say, "based on the  
24 present system that we have out there with our present

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1 maintenance programs, we project we will have X amount  
2 of customer minutes, if we stick with our normal  
3 program that we've done in the past or in customer  
4 interruptions", and then you're saying that, "with this  
5 enhanced program, if we spend additional monies, as you  
6 go across the X axis, that that will reduce those  
7 accordingly"?

8 A. (Sprague) Yes. These are -- these savings are all  
9 based upon historical outages. So, when we do our  
10 analysis, we look back in an 18-month window. So, we  
11 say, "if we were to implement a given project within  
12 that 18-month window of history, we would estimate that  
13 the benefit would have been X number of customer  
14 minutes and X number of customer interruptions."

15 Q. So, you get down to that level. So, in other words, if  
16 you take a specific section of distribution line  
17 someplace, and you say "these two miles had X amount of  
18 outages caused by let's just say limbs falling on them  
19 over the last couple of years. So, if we go ahead and  
20 do this enhanced vegetation management program, we will  
21 eliminate 75 percent of X, and then the cost will be  
22 this, and then you can translate that into customer  
23 minutes in outages"?

24 A. (Sprague) Exactly.

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1 Q. So, it's acting on a specific section of line?

2 A. (Sprague) Exactly.

3 CMSR. HARRINGTON: Okay. I didn't get  
4 that from reading this. Thank you.

5 WITNESS SPRAGUE: Okay.

6 CHAIRMAN IGNATIUS: And, I figured out  
7 my problem, which I'm sure you explained, of the Y axis on  
8 the right versus the Y axis on the left, and I didn't get  
9 it. Thank you. I thought we had over 700,000 customer  
10 interruptions, --

11 WITNESS SPRAGUE: No, no, no.

12 CHAIRMAN IGNATIUS: -- and your data  
13 didn't seem to match that.

14 WITNESS SPRAGUE: Right.

15 CHAIRMAN IGNATIUS: Got it. So, I'm  
16 sorry, we kind of hijack your questioning.

17 MR. MULLEN: That's fine. It's better  
18 that everyone understand what we're looking at.

19 BY MR. MULLEN:

20 Q. Now, on Bates Page 000022 to 000023, that's a list of  
21 reliability enhancement projects that were completed  
22 during 2011, correct?

23 A. (Sprague) Correct.

24 Q. And, then, on Bates Page 000024, that's the projects

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1 planned for 2012?

2 A. (Sprague) Correct.

3 Q. Now, earlier there was discussion that there were  
4 certain projects that were not, I'll call it, "closed  
5 to plant" at the end of the year of 2011. Are those  
6 included on either one of these lists?

7 A. (Sprague) No, they're not. They're actually included  
8 on Exhibit 2, which is titled as "Page 1 of 1", which  
9 is Staff Request 1-1. This identifies five projects  
10 that were originally started in 2011, but not finished,  
11 the projects weren't finalized, and will be finalized  
12 in 2012.

13 Q. So, these projects, the costs of which will be closed  
14 to plant during 2012, those will be included in next  
15 year's step adjustment?

16 A. (Sprague) Correct.

17 Q. By the same token, for the projects listed on Bates  
18 Page 000024 that are planned for 2012, it's possible  
19 that some of these may not be completed by the end of  
20 2012, and those would carry to the year after?

21 A. (Sprague) That is correct.

22 Q. Okay. Turning to Bates Page 000025, Figure 2, could  
23 one of you describe what's shown in Figure 2.

24 A. (Sprague) Okay. So, Figure 2 is a combined view of

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1 reliability from 2000 to 2011. This is exclusive of  
2 major storm events that meet the PUC Major Storm  
3 criteria, scheduled outages and off-system power  
4 supply. And, what you see here is, again, another --  
5 another chart that has multiple Y axes. The axis on  
6 the left is what's called "SAIDI", or the "System  
7 Average Interruption Duration Index". And, in normal  
8 speak, that's, if you take the average customer on our  
9 system, they would have experienced -- SAIDI says how  
10 many minutes of outage time they, on average, they  
11 would experience, I mean, in that given year.

12 "SAIFI", which is on the right-most Y  
13 axis, is the "System Average Interruption Frequency  
14 Index". And, this is the measure of how many, on  
15 average, how many interruptions a given customer  
16 experiences for a given year.

17 Q. Now, if I was to draw a trend line from left to right  
18 on that graph, what would the slope of that line tell  
19 me?

20 A. (Sprague) The slope of the line, and I believe the  
21 reason why we had proposed this Reliability Enhancement  
22 Program, is over the ten or eleven year period, from  
23 2000 to 2011, it shows a decreasing reliability,  
24 meaning customers are tending to experience more

1 outages and longer duration.

2 Q. And, you said earlier that this was a "combined" graph.

3 So, if I turn you to Exhibit 2, the response to Staff

4 1-3, there are two pages with color graphs in there?

5 A. (Sprague) Correct.

6 Q. So, by "combined", could you explain what you mean by

7 "combined"?

8 A. (Sprague) Yes. The Staff 1-3, Attachment 1 and

9 Attachment 2 show -- is for our Capital and our

10 Seacoast operating centers. So, if you were to take

11 the combined effect of these two and add them together,

12 you would get Figure 2 on Bates Page 000025.

13 Q. And, by looking at these separately, it helps you draw

14 some conclusions that might not be as evident as

15 looking at a combined graph?

16 A. (Sprague) That is true. When we do our reliability

17 analysis, we actually complete our reliability analysis

18 per operating center, and projects are defined per

19 operating center. That, I believe, if you were to draw

20 a trend line through both of these over this same time

21 frame, they would still both be indicating a worsening

22 trend in reliability.

23 Q. Yes. As I look at Attachment 2, for the Seacoast, you

24 know, the lines appear to be up and down. If I look at

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1 Attachment 1 for the Capital, could you explain, is  
2 there any major reasons for what has happened from 2009  
3 through 2011?

4 A. (Sprague) From 2009 to 2011, the Capital system  
5 experienced some, I don't know if you'd say "odd" types  
6 of outages, but, during that time frame, they  
7 experienced several vehicle type of accidents, which  
8 ended up being very long duration, very big circuits,  
9 that took a long time to repair. One was a -- like a  
10 dump body type of truck, drove out of a driveway, out  
11 in Epsom, grabbed the telephone wire and pulled down  
12 several poles. And, you know, that circuit serves, I  
13 forget off the top of my head, but I believe it's over  
14 2,000 customers. So, you know, once you start getting  
15 those long duration type of outages, the customer  
16 minutes add up very quickly, and thus the SAIDI impact  
17 on the system increases drastically.

18 So, I'm not saying that these are, you  
19 know, as repetitive events as trees or something that  
20 can be as easily remedied. But, in that time frame, it  
21 seems they had a little bit of a stretch of bad luck.

22 A. (Letourneau) We also had a microburst, if you recall,  
23 in that time frame, that effected our distribution  
24 circuit in?

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[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 A. (Sprague) Bow.

2 A. (Letourneau) -- in Bow, which was, again, a very  
3 unusual event. But it literally picked up trailers in  
4 a trailer park across the road from our sub -- from our  
5 circuit, and actually caused quite a bit of damage.  
6 And, it's one of those events that doesn't ever rise to  
7 an exclusionary event, because it's just a small area,  
8 and it's, you know, it's one interruption, essentially,  
9 that ended up creating quite a bit of customer minutes  
10 and adding to that total as well.

11 Q. Along that line, if we refer back to Bates Page 000026  
12 of Exhibit 1, at the top of the page you list some  
13 factors that are not included in the graphs. And, in  
14 Table 17, you discuss some other storms that don't  
15 qualify as "major storms", for instance, the microburst  
16 that Mr. Letourneau just mentioned. So, could one of  
17 you just please address, so it's clear, what's on the  
18 graphs that we were just looking at and what is not?

19 A. (Sprague) Yes. If you look at Bates Page 000026, under  
20 Item 4.2, where it says "Summary of 2011 Performance",  
21 you'll see four bullets. You see a "June 9th-Lighting  
22 Storm" and "August 28th", which was "Hurricane Irene",  
23 "October 29th", which was the October snowstorm, and  
24 "November 23rd", which was, I believe, the Thanksgiving

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1 snowstorm. Those four events rose to the -- or, met  
2 the PUC Major Storm criteria and have been removed from  
3 the data that you're looking at.

4 The five events down below,  
5 "February 25th", "April 1st", "September 5th", "October  
6 27th", and "December 8th", those are included in the  
7 information on the charts.

8 Q. Basically, if I look at the top of Page 000026, there's  
9 a definition of "major storms". So, the ones that are  
10 not included in the graphs qualify as "major storms",  
11 and the ones in Table 17 do not?

12 A. (Sprague) Correct.

13 Q. And, the idea there is, if you include major storms,  
14 the graph might be skewed quite a bit?

15 A. (Sprague) Correct.

16 Q. Thank you. Just quickly, turning to Bates Page 000027,  
17 similar to what we just discussed with the graphs, am I  
18 correct to say that Table 18 is combined for the  
19 Capital and Seacoast regions?

20 A. (Sprague) That is correct.

21 Q. And, Exhibit 2, in the response to Staff 1-4, you've  
22 provided separate information for the Capital and  
23 Seacoast regions?

24 A. (Sprague) That is correct.

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1 Q. Now, without getting into a lot of detail in the  
2 studies, I just want to make sure, in case anybody's  
3 going through these, to try and clarify something. If  
4 I look at Bates Page 000040, could someone address  
5 what's shown in Table 2, "Contribution of  
6 Subtransmission Outages"?

7 A. (Sprague) Yes. This table is a little hard to follow.  
8 What this table is trying to identify was the impact  
9 that subtransmission line outages or lines that feed  
10 substations, the impact that those outages have on  
11 individual circuits. So, this table inadvertently  
12 makes it look like we have a lot of outage events on  
13 the subtransmission system. And, it's just -- that's  
14 not the case. That's just the way that it's organized;  
15 it's organized by circuit, and not by subtransmission  
16 line. So, if you were to combine the first four lines,  
17 those are all a "37 Line" event.

18 Q. So, when it says for those four circuits that are on  
19 that line that there were "2 events" showing for each  
20 circuit, those were really the same two events?

21 A. (Sprague) Those were the same two events.

22 Q. Okay. It affected the same subtransmission line, but  
23 those circuits are all on that line?

24 A. (Sprague) Correct.

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1 Q. Okay. And, just moving to Attachment -- I may just go  
2 with Bates Page numbers instead. If we go to Bates  
3 Pages 000085 and 000086, Mr. Chong, I want you to get  
4 back in here. Looking at Schedule 2 on Bates  
5 Page 000086, down in the middle of the page, two lines  
6 down from the subheading that says "REP Plant Additions  
7 Step Adjustment", there's a line that says "Less: REP  
8 Depreciation", and it's shown as a negative, and it's  
9 additive to the amount above that. Now, am I correct  
10 that typically depreciation is shown as a reduction,  
11 correct?

12 A. (Chong) Yes. That's correct.

13 Q. So, in looking at Page 000085, the second table, the  
14 details of the depreciation calculation, am I correct  
15 that the reason why there's what looks like an anomaly  
16 here of an addition is mainly related to the cost of  
17 removal of certain projects?

18 A. (Chong) That's correct. We book cost removal --  
19 (Court reporter interruption.)

20 **CONTINUED BY THE WITNESS:**

21 A. (Chong) That is correct. We book cost removal and  
22 accumulated depreciation.

23 BY MR. MULLEN:

24 Q. So, on Page 000085, while it shows that there's a small

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1 amount of depreciation for those various projects, as  
2 we look at the line that says "Total Depreciation",  
3 it's really the net effect of depreciation, which works  
4 one way, and cost of removal, which goes the other way?

5 A. (Chong) That's correct.

6 Q. And, finally, right near the bottom of Page 000086,  
7 there's a "Rate Case Expense Adjustment" that you  
8 addressed in your opening comments of a little over  
9 \$11,000?

10 A. (Chong) Yes.

11 Q. And, that was a result, as it says in Footnote 3, of  
12 the Staff's audit of those rate case expenses?

13 A. (Chong) Yes, that's correct.

14 Q. And, the Company agreed with those adjustments?

15 A. (Chong) We did.

16 MR. MULLEN: Thank you. I have nothing  
17 further.

18 CHAIRMAN IGNATIUS: Thank you.  
19 Commissioner Harrington, any questions?

20 CMSR. HARRINGTON: Yes. Just a couple.  
21 Sort of just some general ones, and whoever is the most  
22 appropriate can answer these, I guess.

23 BY CMSR. HARRINGTON:

24 Q. When we're looking at those graphs before, when we were

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1 talking about the projections of how many interruptions  
2 and total minutes of the lost customer connection would  
3 be saved, and I'm guessing it's probably too early to  
4 actually have any results yet, because this is from  
5 year 2011, when this started?

6 A. (Witness Sprague nodding in the affirmative.)

7 Q. So, -- and nodding doesn't work, he will tell you in a  
8 second.

9 A. (Sprague) That is correct.

10 Q. But, when you do get results, which presumably will be  
11 fairly shortly, you'll be analyzing what happened in  
12 2011 based on your expenditures and your estimates,  
13 what is your product going to be then? Are you going  
14 to come out with something that says "we estimated that  
15 we would save, you know, X amount of interruptions on  
16 this particular one mile section of line, and, in fact,  
17 the results were something different"? Obviously, it's  
18 not going to be exactly right, because you're dealing  
19 with averages here.

20 A. (Sprague) Right. It's really kind of a difficult -- a  
21 difficult analysis to complete, because there are  
22 different events that happen every year. What we would  
23 generally do is, if we implement a project in one year,  
24 the next year we would -- we would generally review

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1 that to see if the types of outages that we were trying  
2 to eliminate were eliminated. You know, if we did  
3 trimming in a certain area, we'd double check that area  
4 and say "did we reduce the amount of tree-related  
5 problems?"

6 To get down to the exact number of  
7 events that we might have eliminated, it's almost  
8 impossible to get that number, because of the variation  
9 in the weather and the conditions on a yearly basis.

10 Q. Now, in the weather, I know that that would tend to  
11 lend itself to a normalization approach. But, and  
12 looking at some of your other things, like car  
13 accidents and the squirrel population, I'm not quite  
14 sure how you could normalize something like that to  
15 determine your base year. So, I'm assuming that there  
16 is really no way to normalize these from year to year?

17 A. (Sprague) Not really, no.

18 Q. Okay. All right. So, the idea, I'm just trying to  
19 figure what we're going to get as a product as a result  
20 of this. There will be some type of analysis that will  
21 go back and say, you know, "based on what we've spent  
22 and the amount of actual interruptions and minutes  
23 lost, we think it was, you know, it's possible,  
24 obviously, this is doing us some good based on this."

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1 A. (Sprague) Right.

2 Q. Because, I mean, it is possible you could go back and  
3 look at this and say "we spent a lot of money on  
4 vegetation management, and it really didn't change  
5 things too much. So, maybe this isn't the wider --  
6 wisest course of action." That's what I'm trying to  
7 sort of get to.

8 A. (Sprague) Sure.

9 Q. Is how would you assess this to make it -- to go and  
10 then go back and reevaluate your program in upcoming  
11 years and say, "okay, what should we do different?"

12 A. (Sprague) Sure. As Mr. Mullen indicated earlier, if  
13 you look at the trend of our system level performance  
14 from a SAIDI and SAIFI standpoint, our goal is to take  
15 an upward slope and to move that to flat, and then to  
16 decreasing. And, I believe that it's going to be that,  
17 that level of view on this, to see "is the program, you  
18 know, the combined program, successful or not?"

19 A. (Letourneau) And, when it comes to some of the specific  
20 programs, like vegetation control, some of the programs  
21 are easier to measure, and vegetation control is one of  
22 them. We know how many tree-related outages we have in  
23 a year, we know how many customer minutes are  
24 attributed to tree-related outages. So, that's

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1 something we can really target and look at for a  
2 reduction in our tree-related outages. For other types  
3 of target programs, like four and a quarter inch disk  
4 that Mr. Sprague spoke about earlier, we track how many  
5 outages are associated with that type of equipment.  
6 So, if we're out and we're replacing that type of  
7 equipment, we should expect a corresponding reduction  
8 in outages associated with those types of equipment.

9 Q. Okay. And, just a couple of other questions then. On  
10 the "un-fused laterals" you mentioned, I'm assuming  
11 that, given the numbers, that this is a policy that you  
12 do not install any new laterals un-fused? I mean you,  
13 back then, you never mentioned that, I'm assuming it's  
14 the case?

15 A. (Sprague) Yes. These are historic laterals that have  
16 been un-fused for a period of time.

17 Q. And, you mentioned, you know, "infrared surveys", I  
18 assume a lot of these are at a substation level on  
19 transformer connections, *etcetera*. Is this something  
20 that you've never done in the past or you're just doing  
21 with a higher frequency or --

22 A. (Sprague) We've always done our substations and our  
23 subtransmission lines on an annual basis. What we're  
24 doing is we're taking that same technology and putting

1           it out on -- or, moving it to our distribution  
2           circuits. Which, up to this point, has really never  
3           been done, and it's rather a new approach across the  
4           industry, to take that technology and use it on the  
5           distribution system.

6   Q.    So, I assume you're looking for hot spots in  
7           connections mostly then?

8   A.    (Sprague) Exactly.

9   Q.    Okay. And, just kind of switching gears here a little  
10          bit on the vegetation management. Most of the  
11          discussion, and, in fact, it was almost exclusively, it  
12          sounds like, on distribution level. I mean, we have  
13          had problems in the past, in the Ice Storm, as well as,  
14          not necessarily in your service area, but in the  
15          October Snowstorm, I believe it was in Connecticut,  
16          where we actually lost transmission lines due to trees  
17          coming down. Is any part of this program looking at  
18          that? I know it's a little harder program to deal  
19          with, because you're talking about, you know, much  
20          bigger trees further away.

21   A.    (Sankowich) Yes. The Reliability Enhancement Program  
22          portion, through engineering, is focused on the  
23          subtransmission. So, their recommendations were to  
24          focus on the reliability-related improvements coming

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1 from doing enhanced tree trimming on the  
2 subtransmission lines.

3 Q. Okay. When you say "subtransmission lines", is that  
4 transmission lines --

5 A. (Sprague) Right. And, for Unitil, --

6 Q. Yes.

7 A. (Sprague) -- everything that we own is classified as  
8 "distribution".

9 Q. Okay. Because it's under 69.9, is that it?

10 A. (Sprague) Yes.

11 Q. Okay.

12 A. (Sprague) The highest, the highest voltage level that  
13 we have is 34 and a half kV. However, we have some  
14 lines that act like --

15 Q. Transmission.

16 A. (Sprague) -- "transmission lines". Still 34 and a half  
17 kV, express lines through the woods, serving  
18 substations.

19 Q. Okay. I see what you're saying.

20 A. (Sprague) We call that, in right-of-ways, that are  
21 maintained like right-of-ways, we refer to them like  
22 "subtransmission lines".

23 Q. So, it's transmission by any other name, but it's just  
24 a little smaller in voltage?

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1 A. (Sprague) Exactly.

2 Q. Okay. And, those are included in the program then?

3 A. (Sprague) Yes. The enhanced trimming that Ms.  
4 Sankowich was talking about actually identified three  
5 subtransmission lines for that enhanced trimming.

6 Q. And, you had mentioned you hadn't gotten out to the  
7 point of actually asking for permission to trim on some  
8 of these things yet. Do you anticipate this is going  
9 to be a problem? I mean, there's always that  
10 back-and-forth in New Hampshire on the law that allows  
11 someone to say "no, you can't trim my trees on my  
12 property, even if it's going to take out these power  
13 lines." Do you have any feel for what's there or,  
14 because of recent outages that the whole state  
15 experienced, that people will be a little more  
16 cooperative on that?

17 A. (Sankowich) We feel that there will be some push-back  
18 from certain customers. And, that education and  
19 reminding them of the events that just happened will be  
20 a good tool to be able to turn them around. We hope to  
21 get as much cooperation as possible, but there are  
22 always certain customers that don't agree with  
23 everything that's going on. So, we do anticipate that  
24 there will be some push-back. But we think that,

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1 because of the recent storm events, that we will have  
2 more favorable reaction to the work that's happening.

3 CMSR. HARRINGTON: Okay. Thank you.

4 CHAIRMAN IGNATIUS: Commissioner Scott.

5 CMSR. SCOTT: Again, whoever feels most  
6 -- who would like to answer the question, you may,  
7 obviously.

8 BY CMSR. SCOTT:

9 Q. First, I want to ask the obvious question. When we  
10 look at the frequency and duration curve we were just  
11 discussing, again, the obvious to me is why is this  
12 increasing?

13 A. (Sprague) The one thing that we didn't show as part of  
14 this, which was actually shown when we were going  
15 through our rate case and recommending the REP program,  
16 is, over the past decade, we have seen an increase in  
17 the number of severe weather events. Now, I'm not  
18 talking necessarily the Ice Storm and, you know, these  
19 excludable snowstorms, but what we're seeing is an  
20 increase in the number of thunderstorms. And, you  
21 know, those mid-size storms which come through create a  
22 lot of damage, but not enough to kind of reach that  
23 exclusionary level. And, you can see the effect of  
24 that in this chart.

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1 A. (Sankowich) From a vegetation management perspective,  
2 the forests are also aging. We have aging forests that  
3 tends to drop branches and limbs. And, that's, you  
4 know, happening over the course of these years as well.

5 Q. That's kind of where my question was leading. Has  
6 there historically been programs that would address, I  
7 assume, obviously, routine maintenance of the lines and  
8 cutting and that type of thing, and has that fallen  
9 off? Is that what we're seeing also or --

10 A. (Sankowich) There's historically been a program to  
11 manage vegetation management, and that's continuing.  
12 It's just expanded due to the consultants that came in  
13 and did an assessment. And, they looked at the age of  
14 the forest, the growth-type species, and recommended  
15 some improvements related to what they found in the  
16 actual field studies. It's just advanced to meet  
17 what's actually happening in the field.

18 Q. Also, I wonder if you could articulate a little bit  
19 more on the difference between "system hardening" and  
20 "routine replacement and upgrades"?

21 A. (Sprague) Right. So, a "routine replacement and  
22 upgrade" would be for a particular type of equipment.  
23 The industry, over the past eight to ten years, has  
24 experienced an increase in the failure rate of potted

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1 porcelain cutouts. At various levels, companies have  
2 chosen to address this concern by replacing these, to  
3 eliminate the possibility of outages. That would be --  
4 that would be like a "normal" kind of replacement.

5 A "system hardening" project would be  
6 something more along the lines of trying to eliminate  
7 an outage. For instance, replacing open wire with  
8 spacer cable that would be more resilient to tree  
9 contact, and less likely to cause an outage if a tree  
10 came in contact with it. That would be a type of  
11 "system hardening" activity.

12 Another type of system hardening  
13 activity might be a recloser. You know, allowing that  
14 automated reclosing cycle to try to clear the fault  
15 before it becomes a sustained outage. Or even, you  
16 know, more advanced, a distribution automation scheme  
17 that could sense where the fault is, automatically  
18 sectionalize and transfer load between circuits, and  
19 kind of almost self-heal itself and minimize that, you  
20 know, outage to the smallest amount of customers.

21 Q. That's helpful. Thanks. Also, and you've alluded to  
22 it, obviously, and it's -- reliability, obviously, is  
23 very important for the customers. I assume you've also  
24 looked at the cost of the plans we're talking about

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1 with the cost of repair to bring, you know, restoral?

2 A. (Letourneau) Yes.

3 A. (Sprague) Yes. I mean, I'm not sure I could hand you  
4 an analysis that says that. But we have our annual  
5 budget for responding to these smaller type weather  
6 events. And, obviously, the fewer outages we have, the  
7 less cost that we're going to have responding to these  
8 other events.

9 Q. Thank you. And, on the Vegetation Management Plan, I  
10 notice that the brush removal, you have a statement, I  
11 forget where it is, basically, that, for 2012, you're  
12 not going to be doing that, is that correct?

13 A. (Sankowich) Yes. That has not begun yet. We're  
14 working through the step adjustment. So, it  
15 concentrated on bringing the program to a five year  
16 cycle immediately. That was the driver for the basic  
17 maintenance. And, the hazard tree removal was the  
18 other major important piece. As we progress forward  
19 with our program, we'll be introducing the brush  
20 removal, which is more of an avoided cost of pruning in  
21 the future, and that will begin next year.

22 Q. That led to my question, basically. I assume,  
23 obviously, it's cheaper to cut down a sappling than it  
24 is a tree. So, I assume, and I don't know, but, long

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1 term, that's the better, more cost-effective approach,  
2 I assume?

3 A. (Sankowich) Yes. And, we do have brush removal built  
4 into our pruning on our five year pruning program. We  
5 are doing brush removal, with herbicide application to  
6 reduce the regrowth, again, the avoided cost of  
7 pruning. The brush removal program targets larger  
8 species that have been left to grow longer that require  
9 more time and effort to remove, rather than just  
10 incompatible small brush. So, we are doing a portion  
11 of the brush program, which is built into our regular  
12 program. And, we'll begin the second phase, which is  
13 really the removal of even larger incompatible species,  
14 so they don't have to be pruned in the future.

15 Q. And, along the same lines, and Commissioner Harrington  
16 alluded to it also, with brush removal and all this,  
17 are you -- I guess it's already been asked, I guess, I  
18 mean, is brush removal itself, rather than just tree  
19 trimming, is that the -- have the same potential for  
20 residential resistance? Have you seen that?

21 A. (Sankowich) Yes. There is some residential resistance  
22 as well. They like buffer-type areas. So, to combat  
23 that, we've looked at maintained versus unmaintained  
24 areas. And, it's required in all unmaintained areas,

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1 which is not in front of a customer's house, to remove  
2 100 percent of all the brush. In the maintained areas,  
3 we also require the removal, unless there is a customer  
4 restriction for that type of work. And, we are trying  
5 to track and document how much customer restriction we  
6 have related to that. So far, it's been fairly good.  
7 Most customers are okay with removing directly  
8 underneath the line. It's going the ten feet out that  
9 sometimes has restrictions, and we might only be able  
10 to go five or eight feet out, instead of ten feet. But  
11 we remove as much as we can while we're there.

12 CMSR. SCOTT: Thank you. That's all my  
13 questions.

14 CHAIRMAN IGNATIUS: Thank you. A couple  
15 more questions.

16 BY CHAIRMAN IGNATIUS:

17 Q. Mr. Sprague, talking about the infrared pilot program,  
18 you had said that it was something that was fairly new  
19 in the industry and was getting -- in the report it  
20 talks about it becoming more reliable in identifying  
21 problems. Do you know any other utilities that have  
22 been using infrared out into the distribution system  
23 the way you're planning to use it?

24 A. (Letourneau) I think I can field that question.

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1 Q. That's fine.

2 A. (Letourneau) I know that PSNH has a fairly expanded  
3 program on distribution infrared. We've had meetings  
4 with them to talk about their program, how it's  
5 administered, and the success of their program. That's  
6 the only -- that's the only utility that I'm aware of  
7 at this point that's done it on distribution. There  
8 may be others.

9 Q. And, they have used it enough now to have some data  
10 that makes it seem reliable to you to give it a shot on  
11 your system?

12 A. (Letourneau) Exactly.

13 Q. Is it equipment that you already own or you have to  
14 purchase for the pilot?

15 A. (Letourneau) The pilot -- we don't own the equipment.  
16 The pilot would be utilizing a contractor that has the  
17 equipment, to come in, and we'll identify various  
18 circuits and components. There's a dollar amount that  
19 we have to spend this year. Our goal would be to spend  
20 that money, and then evaluate the results. And, by  
21 "evaluation", what kind of problems are we finding?  
22 Are the problems significant enough to rise to a level  
23 of "we should implement the program"? If we were to  
24 implement the program, then we would have an analysis

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1 to do on whether it's something we want to bring  
2 in-house, buy the equipment ourselves, use our own  
3 folks, or actually just continue to outsource that  
4 continued maintenance program.

5 Q. That's helpful. Are some of the programs that you're  
6 understanding with this step adjustment funding shared,  
7 similar programs being done in the Fitchburg system?

8 A. (Sprague) From a reliability project standpoint, from a  
9 capital standpoint, they have their own reliability  
10 budget, with their own projects that are compared in  
11 very much the same manner as these. So, it's not like  
12 they're -- they're not necessarily competing for the  
13 same pool of funds.

14 From the infrared standpoint, I don't --  
15 again, they have -- they do the substation, and they  
16 have some transmission down there and some  
17 subtransmission. They have been doing it in those  
18 areas, but they have not done the infrared survey on  
19 the distribution system.

20 Q. And, in both the reliability work and vegetation  
21 management work, is there a clear allocation system to  
22 be sure that any expenses -- that all of the expenses  
23 that are in New Hampshire rates are for New Hampshire  
24 only investments and maintenance?

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[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1 A. (Sprague) Absolutely.

2 A. (Sankowich) Yes.

3 Q. For any of the projects that weren't completed this  
4 year and would be rolled into the 2012 budget and step  
5 increase proposal, is there -- well, let me ask it in  
6 reverse. Is there any chance that the step adjustment  
7 would include investments that might have been  
8 completed in 2011, but, in fact, were not yet in  
9 service?

10 A. (Sprague) Let me repeat the question back to you to  
11 make sure I understand. Is have we asked for -- have  
12 we put anything in our step adjustment for 2012 for  
13 projects that were not completed? Is that what you're  
14 asking?

15 Q. That's right.

16 A. (Sprague) No.

17 Q. That's the correct answer.

18 (Laughter.)

19 BY CHAIRMAN IGNATIUS:

20 Q. So, even if they had been budgeted to go in, if they  
21 just weren't completed, then they are not included in  
22 this recovery and would be put towards next year?

23 A. (Sprague) Correct. Only the projects that we have  
24 closed to plant, from an accounting standpoint, have

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[WITNESS PANEL: Sprague~Letourneau~Sankowich~Chong]

1           been included in this step adjustment.

2   Q.    This is little odd, but what can a squirrel do to cause  
3           an outage?

4   A.    (Sprague) You'd think --

5   A.    (Letourneau) A lot.

6   A.    (Sprague) Right.  Squirrels, for whatever reason, like  
7           service transformers.  I think it's because they're  
8           warm, they're a nice place to sit, they hum a little  
9           bit.  And, they tend to -- that's a spot that they tend  
10          to get on, and it's a spot where our equipment, live  
11          parts to grounded parts, tend to be closer together,  
12          meaning the bushing of the transformer.  We -- it's  
13          kind of a policy of ours to make sure we have animal  
14          protection on our service transformers.  But I can't  
15          tell you we have it on every one of them.  Whenever we  
16          find one that doesn't have one, we put it on.  But  
17          there are, obviously, some events where squirrels do  
18          get across transformers.  And, once they do, these  
19          service transformers are generally protected by a fuse.  
20          So, there's not that, you know, ability for an  
21          automatic reclose type of cycle.  It's usually a quick  
22          repair.  You know, the crew goes out, finds out that it  
23          was a squirrel, and goes and puts -- you know, replaces  
24          the fuse and closes it back in.  But, generally, you

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1 find a lot of squirrel activity on warm days in the  
2 spring and in the fall, is when we get most of our  
3 squirrel events.

4 CHAIRMAN IGNATIUS: Who knew? Oh, I  
5 think that does it for me.

6 (Laughter.)

7 CHAIRMAN IGNATIUS: Thank you.

8 CMSR. HARRINGTON: I had one additional  
9 question.

10 CHAIRMAN IGNATIUS: Okay.

11 BY CMSR. HARRINGTON:

12 Q. Just, you know, I looked at this report, and I think  
13 there's an awful lot of good stuff in here about how --  
14 everything that you've done, your approach, and how you  
15 got there and everything. But I'm still a little,  
16 maybe I'm just missing it or whatever, on the analysis  
17 of the results, I mean, I know this is new and it  
18 hasn't been -- I wouldn't expect to see them yet. But,  
19 maybe at this time next year, we expect to see  
20 something where you went back and looked at what you  
21 spent on, looked at what happened, as far as customer  
22 minutes and interruptions, and then analyze whether  
23 this was the best course of action, that you want it to  
24 continue, if you need to adjust it, or whatever. I

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1 mean, and no one knows for sure. You're dealing a lot  
2 with probabilities, so you never can be sure on this.  
3 But I would hope that, you know, maybe the next time we  
4 see this, we see something more on, "now we've analyzed  
5 the results, and we've had some time to look at it",  
6 and now we're going to make a slight adjustment here or  
7 there based on that." So, it's more like, I guess, a  
8 comment than a question.

9 A. (Sprague) Sure. And, one thing to just keep in mind,  
10 that these projects actually get implemented over the  
11 period of the year or over the course of the year. So,  
12 some of these projects that you see that were completed  
13 this year were actually completed in November or  
14 December of this year. So, you don't actually have  
15 that full year's worth of experience yet.

16 Q. Right. Yes, I understand you've started that.

17 A. (Sprague) So, you know, sometimes it might take a year  
18 or two years to experience --

19 Q. Yes. I mean, I suppose you have to implement the tree  
20 trimming, and then you have to wait a period of time to  
21 see how effective it worked.

22 A. (Sprague) Correct.

23 CMSR. HARRINGTON: Looking at it the  
24 next day, you can say "we've had no outages, it must have

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1 worked." Well, that's not how it's done.

2 CHAIRMAN IGNATIUS: Mr. Epler, any  
3 redirect?

4 MR. EPLER: If I could just take a  
5 moment, I just want to think if there's an area.

6 CHAIRMAN IGNATIUS: That's fine.

7 MR. EPLER: May I approach the  
8 witnesses?

9 CHAIRMAN IGNATIUS: Please.

10 (Attorney Epler conferring with the  
11 witnesses.)

12 MR. EPLER: Thank you. I do have one  
13 additional question, --

14 CHAIRMAN IGNATIUS: That's fine.

15 MR. EPLER: -- just for follow-up.

16 **REDIRECT EXAMINATION**

17 BY MR. EPLER:

18 Q. Mr. Letourneau, if you recall, there was a question  
19 from Commissioner Scott regarding possible causes for  
20 some of the trends, in terms of SAIFI and SAIDI, and  
21 impact. Do you have an additional issue you'd like to  
22 bring to the Commissioner's attention?

23 A. (Letourneau) Yes. When we hired a consultant to come  
24 in and review our vegetation control programs, one of

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1 the things that the consultant identified was the  
2 number of tree-related outages. He used several  
3 different metrics, of tree-related outages per mile,  
4 tree-related outages per 100 customers, *etcetera*. And,  
5 when you looked at our company and benchmarked it  
6 against other New England companies, our tree-related  
7 outages per mile were higher, we were outside a norm  
8 that we wanted to address. One of those  
9 recommendations also was to hire a system arborist,  
10 which is why we brought Ms. Sankowich on board to help  
11 us with that and assess.

12 But one of the trends that we've seen,  
13 particularly in the last ten years, we've been  
14 budgeting a certain amount of money every year to  
15 complete our Vegetation Control Program that we had in  
16 place. But what has -- what we've seen a significant  
17 increase in was the cost of traffic control costs for  
18 the Company has outpaced just about any measurement  
19 that we have in terms of cost. It used to be fairly  
20 simple to go into a town, certain roads we require  
21 traffic control, certain roads we did not. Now, most  
22 of our towns have passed ordinances that we are  
23 required to have traffic control in all our areas.  
24 Some of the years that we looked at, that our

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1 consultant looked at, in terms of our costs, we were  
2 seeing a lot less money going towards actually trimming  
3 trees, and a lot more going towards traffic control  
4 costs.

5 So, I guess, over this time frame, one  
6 of the contributors to those tree-related outages  
7 increasing at a level that we thought we needed to get  
8 our arms around has been that we're trimming less trees  
9 with the money that we have, and we're spending almost  
10 40 percent of our entire budget on traffic control  
11 costs.

12 CMSR. SCOTT: Wow.

13 **CONTINUED BY THE WITNESS:**

14 A. (Letourneau) In addition, you know, the municipals used  
15 to do a lot of their own trimming. They used to hire  
16 private contractors to come in and do a lot of their  
17 own trimming. A lot of those budgets have been cut.  
18 So, we're not seeing as many municipal trees being  
19 removed as we used to. So, the combination of those  
20 two have contributed a lot to, I think, the increasing  
21 trend that we've seen over the ten year period.

22 CMSR. SCOTT: Thank you.

23 MR. EPLER: Thank you. That's all I  
24 had.

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1                   CHAIRMAN IGNATIUS: Is there any  
2 objection to striking the identification and making the  
3 two exhibits full exhibits?

4                   MR. EPLER: No objection.

5                   CHAIRMAN IGNATIUS: Seeing none. I  
6 think the only thing left, unless there's something I'm  
7 not aware of, would be closing statements. Ms. Amidon.

8                   MS. AMIDON: Thank you. Staff has  
9 reviewed the filing. And, with the exception of the  
10 proposed Pilot, which is a new program, the components are  
11 calculated consistent with the terms of the Settlement  
12 Agreement approved by the Commission in the utility's most  
13 recent distribution rate case. And, similarly, the  
14 allocation to the customers' classes of the costs are also  
15 properly calculated. And, in that respect, we would  
16 recommend that the Commission approve the filing.

17                   Regarding the proposed Pilot Program for  
18 vegetation management, the Staff supports the Pilot,  
19 because we believe it's important for the Company to  
20 recognize that they can be proactive, rather than  
21 reactive, to events which cause outages for customers.  
22 However, we will be very closely reviewing the assessment  
23 of the performance of the program at the end, because we  
24 do believe the effectiveness of the program will be a key

1 component of evaluating whether we would support the  
2 program going forward as part of its standard vegetation  
3 management activity. Thank you.

4 CHAIRMAN IGNATIUS: Thank you.

5 Mr. Epler.

6 MR. EPLER: Yes. Obviously, the Company  
7 seeks approval of its filing as it's been filed. And, we  
8 appreciate the Staff's support, particularly with respect  
9 to the Pilot Program. That's something that does go  
10 beyond what was called for in the Settlement Agreement.  
11 So, it wasn't something that we had discussed previously,  
12 but we had a very productive technical session with the  
13 Staff in reviewing that, and we appreciate the Staff's  
14 support of that effort, and hope that the Commission would  
15 approve it. I think there's some valuable information  
16 that will come out of that to enable us to make some  
17 choices down the road. Thank you.

18 CHAIRMAN IGNATIUS: Thank you. I  
19 appreciate you bringing witnesses to help us understand  
20 more of the background, even though there was no prefiled  
21 testimony, that was helpful.

22 And, unless there is anything further,  
23 we will take the matter under advisement. We understand  
24 that this is proposed for a May 1 effective date, correct?

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MR. EPLER: Yes.

CHAIRMAN IGNATIUS: We will address it  
as promptly as we can. Thank you.

MR. EPLER: Thank you.

**(Whereupon the hearing ended at 11:58  
a.m.)**