



**STATE OF NEW HAMPSHIRE  
BEFORE THE  
PUBLIC UTILITIES COMMISSION**

Docket No. DE 13-063

Granite State Electric Company d/b/a Liberty Utilities  
Distribution Service Rate Case

**DIRECT TESTIMONY**

**OF**

**DANE WATSON**

March 29, 2013

## TABLE OF CONTENTS

1	I.	EXECUTIVE SUMMARY OF DANE WATSON .....	1
2	II.	POSITION AND QUALIFICATIONS .....	1
3	III.	PURPOSE AND SUMMARY OF DIRECT TESTIMONY .....	4
4	IV.	OVERVIEW OF DEPRECIATION STUDY METHODOLOGY .....	6
5	V.	GRANITE STATE DEPRECIATION STUDY .....	13
6	VI.	COMPLIANCE WITH STIPUATLION IN DOCKET DR 95-169.....	16
7	VII.	CONCLUSION.....	17

## **ATTACHMENTS**

Attachment DAW-1: Dane Watson Resume

Attachment DAW-2: Liberty Utilities Depreciation Study

Attachment DAW-3: Dane Watson – Prior Testimony Appearances

1 **I. EXECUTIVE SUMMARY OF DANE WATSON**

2 I have performed a depreciation study of Granite State Electric Company's assets based  
3 on the depreciable plant in service at December 31, 2011. The results of my depreciation  
4 study support an annualized depreciation expense for Granite State of approximately \$5.3  
5 million. This represents an increase of approximately \$350,000 over the annualized  
6 depreciation expense calculated on year-end 2011 investment using the current  
7 depreciation rates which were approved in the mid-1990s. Specifically, compared to the  
8 depreciation rates currently in effect, my proposed depreciation rates will result in a  
9 decrease in annual depreciation expense of approximately \$14,000 in Distribution assets,  
10 an increase of \$34,000 in General assets, and an increase of approximately \$316,000 to  
11 recover the difference between book and theoretical depreciation reserves.

12  
13 Detailed information regarding the service life and net salvage characteristics that support  
14 my proposed depreciation rates can be found in the depreciation study accompanying my  
15 testimony, as well as my workpapers.

16

17 **II. POSITION AND QUALIFICATIONS**

18 **Q. Please state your name and address.**

19 A. My name is Dane A. Watson. My business address is 1410 Avenue K, Suite 1105B,  
20 Plano, Texas 75074. I am a Partner in Alliance Consulting Group ("Alliance"). Alliance  
21 provides consulting and expert services to the utility industry.

1 **Q. On whose behalf are you testifying in this proceeding?**

2 A. I am testifying on behalf of Granite State Electric Company (“Granite State” or “the  
3 Company”).

4  
5 **Q. What is your educational background?**

6 A. I hold a Bachelor of Science degree in Electrical Engineering from the University of  
7 Arkansas at Fayetteville and a Master’s Degree in Business Administration from  
8 Amberton University in Garland, Texas.

9  
10 **Q. Do you hold any special certification as a depreciation expert?**

11 A. Yes. The Society of Depreciation Professionals (“the Society”) has established national  
12 standards for depreciation professionals. The Society administers an examination and has  
13 certain required qualifications to become certified in this field. I have met all  
14 requirements and am a Certified Depreciation Professional.

15  
16 **Q. Please describe your involvement with any professional societies or committees.**

17 A. I have twice been Chair of the Edison Electric Institute (“EEI”) Property Accounting and  
18 Valuation Committee and have been Chairman of EEI’s Depreciation and Economic  
19 Issues Subcommittee. I was the Industry Project Manager for the EEI/AGA effort around  
20 the electric and gas industry adoption of FAS 143 and testified before FERC in the  
21 hearings leading up to the release of FERC Order 631. I am a Registered Professional

1 Engineer (“PE”) in the State of Texas and a Certified Depreciation Professional. I am a  
2 Senior Member of the Institute of Electrical and Electronics Engineers. I am also Past  
3 President of the Society of Depreciation Professionals.  
4

5 **Q. Please outline your experience in the field of depreciation.**

6 A. Since graduation from college in 1985, I have worked in the area of depreciation and  
7 valuation. I founded Alliance Consulting Group in 2004 and am responsible for  
8 conducting depreciation, valuation and certain other accounting-related studies for  
9 utilities in various regulated industries. My duties related to depreciation studies include  
10 the assembly and analysis of historical and simulated data, conducting field reviews,  
11 determining service life and net salvage estimates, calculating annual depreciation,  
12 presenting recommended depreciation rates to utility management for its consideration,  
13 and supporting such rates before regulatory bodies.  
14

15 My prior employment from 1985 to 2004 was with Texas Utilities (“TXU”). During my  
16 tenure with TXU, I was responsible for, among other things, conducting valuation and  
17 depreciation studies for the domestic TXU companies. During that time, I also served as  
18 Manager of Property Accounting Services and Records Management in addition to my  
19 depreciation responsibilities.  
20

1 **Q. Have you previously testified before other regulatory agencies?**

2 A. Yes. I have conducted depreciation studies, filed written testimony and testified before a  
3 variety of regulatory bodies across the United States over the past 20 years for various  
4 regulated utilities. A listing of those appearances is found in Attachment DAW-3.

5

6 **III. PURPOSE AND SUMMARY OF DIRECT TESTIMONY**

7 **Q. What is the purpose of your direct testimony in this proceeding?**

8 A. The purpose of my testimony is to:

- 9 • Discuss the recent Granite State Book Depreciation Accrual Rate Study at  
10 December 31, 2011 (“Depreciation Study”); and  
11 • Support and justify the recommended depreciation rate changes for Granite  
12 State’s assets for the period between January 1, 2012 and December 31, 2012  
13 (“Test Year”), based on the results of the Depreciation Study.

14

15 **Q. Do you sponsor any attachments?**

16 A. Yes. I sponsor Attachment DAW-1, my resume, Attachment DAW-2, the Depreciation  
17 Study and Attachment DAW-3 which is a list of my prior testimony experience.

18

19 **Q. Were the attachments you are sponsoring prepared by you or under your direct  
20 supervision?**

21 A. Yes, they were.

1 **Q. Please describe the depreciation study on which Granite State has based its**  
2 **requested depreciation rates in this case.**

3 A. The Depreciation Study and analysis performed under my supervision fully support  
4 Granite State's proposed depreciation rates. The Depreciation Study shows Granite  
5 State's proposed rates applied to year-end 2011 depreciable plant balances. The  
6 Depreciation Study follows the New Hampshire Public Utilities Commission's  
7 ("NHPUC") long-standing precedent of straight line, average life, whole life depreciation  
8 rates with an amortization period of to recover any difference between book depreciation  
9 reserve and the theoretical depreciation reserve by account. In this way, all customers are  
10 charged for their appropriate share of the capital expended for their benefit. In order to  
11 ensure intergenerational equities, the Commission should adopt the life and net salvage  
12 parameters proposed in this study. Granite State's depreciation rates should be set at the  
13 levels supported in the Depreciation Study in order to recover Granite State's total  
14 investment in property.

15  
16 **Q. What annual depreciation provision is reflected in your depreciation study for**  
17 **Liberty's assets?**

18 A. The Depreciation Study recommends an annual accrual of \$5.3 million based on plant in  
19 service at December 31, 2011. This includes an increase of \$0.3 million necessary to  
20 amortize the difference between book and theoretical reserve.

1 **Q. Are the results of your depreciation study reflected in the test year ending**  
2 **December 31, 2012 Cost of Service Calculation?**

3 A. Yes.

4

5 **Q. What depreciation rates are being used to calculate depreciation expense in this**  
6 **case?**

7 A. The proposed depreciation rates shown in Appendix A of Attachment DAW-2.

8

9 **IV. OVERVIEW OF DEPRECIATION STUDY METHODOLOGY**

10 **Q. What definition of depreciation have you used for the purposes of conducting the**  
11 **depreciation study and preparing your testimony?**

12 A. The term “depreciation,” as used herein, is considered in the accounting sense; that is, a  
13 system of accounting that distributes the cost of assets, less net salvage (if any), over the  
14 estimated useful life of the assets in a systematic and rational manner. Depreciation is a  
15 process of allocation, not valuation. Depreciation expense is systematically allocated to  
16 accounting periods over the life of the properties. The amount allocated to any one  
17 accounting period does not necessarily represent the loss or decrease in value that will  
18 occur during that particular period. Thus, depreciation is considered an expense or cost,  
19 rather than a loss or decrease in value. Granite State accrues depreciation based on the  
20 original cost of all property included in each depreciable plant account. On retirement of  
21 any particular piece of property, the full cost of depreciable property, less the net salvage

1 amount, if any, is charged to the depreciation reserve.

2

3 **Q. Please describe your depreciation study approach.**

4 A. I conduct a depreciation study in four phases as shown in Attachment DAW-2. The four  
5 phases are: Data Collection, Analysis, Evaluation, and Calculation. During the initial  
6 phase of the study, I collect historical data to be used in the analysis. After the data is  
7 assembled, I perform analyses to determine the life and net salvage percentage for the  
8 different property groups being studied. The information obtained from field personnel,  
9 engineers, and/or managerial personnel, combined with the study results, are then  
10 evaluated to determine how the results of the historical asset activity analysis, in  
11 conjunction with the Company's expected future plans, should be applied. Using all of  
12 these resources, I then calculate the depreciation rate for plant account.

13

14 **Q. What process have you undertaken to give effect to both historical data and the  
15 company-specific expectations in developing your service life recommendations?**

16 A. In order to achieve a reasonable balance between these critical components of the life  
17 analysis, I evaluated the statistical historical data and then applied informed judgment to  
18 make the most appropriate service life selections. The objective in any depreciation study  
19 is to project the remaining cost (installation, material and removal cost) to be recovered  
20 and the remaining periods in which to recover the costs. This necessarily requires that the  
21 service life selections reflect both the Company's historic experience and its current

1 expectations of asset lives. In order to understand the Company's expectations regarding  
2 asset lives, I interviewed Company engineers working in both operations and  
3 maintenance to confirm the historical activity and indications, current and future plans,  
4 expectations and the applicability to the future surviving assets. The interview process  
5 provides important information regarding changes in materials, operation and  
6 maintenance, as well as the Company's current expectation regarding the service life of  
7 the assets currently in use. This information is then considered along with the historical  
8 statistical data to develop the most reasonable and representative expected service lives  
9 for the Company's assets. The result of all of this analysis is reflected in the service life  
10 recommendations set forth in the depreciation study.

11  
12 **Q. Can you provide an example of the important information you gleaned from the**  
13 **company personnel?**

14 A. Account 364, Distribution poles has experienced many changes as the Company moved  
15 from old growth to new growth trees and pole treatment changed from creosote to Penta.  
16 Items causing retirements include relocations (DOT, growth, etc.), 3<sup>rd</sup> party contracts, and  
17 more people/more pole hits. Two other factors will impact life. The Company has been  
18 using FIFO (first in first out) pricing. This is a normal methodology used in the industry  
19 but can reflect a longer life, all else being equal. The Company has instituted an  
20 Inspection and Maintenance (IM) program that may result in the retirement of some items  
21 at an early age and will shorten life. While historic analysis shows a life in the low 40

1 year range, Company personnel estimate a shorter life for this account of 35 years as a  
2 reasonable estimate going forward. This shorter life incorporates the effect of the IM  
3 program and FIFO pricing.

4

5 **Q. What depreciation system did you use?**

6 A. The straight-line method, average life group (“ALG”) procedure, whole-life technique  
7 comprise the depreciation system that was employed to calculate the annual accrual for  
8 depreciation expense in the study.

9

10 **Q. Has this commission repeatedly approved the use of alg- whole life derived**  
11 **depreciation rates?**

12 A. Yes.

13

14 **Q. How are depreciation rates developed under theALG, whole life system?**

15 A. In the ALG Whole Life system, the annual depreciation rate for each group is computed  
16 by dividing (1 – Net Salvage Percentage) by the Average Service Life of the group. The  
17 resulting annual accrual amounts of all depreciable property were computed by  
18 multiplying the original cost of all account level depreciable property by each account-  
19 level depreciation rate. The computations of the annual depreciation rates are shown in  
20 my Attachments DAW-2 Appendix A.

1 **Q. What other adjustment is necessary for the ALG whole life depreciation system?**

2 A. It is necessary to compare the book depreciation reserve to the theoretical depreciation  
3 reserve and determine if assets are over-accrued or under-accrued. To bring the reserve  
4 position into parity with the theoretical model, an amortization period for the reserve  
5 difference is necessary to normalize the asset's cost and spread it ratably over future  
6 periods. Some jurisdictions use the remaining life depreciation system to deal with this  
7 situation. The NHPUC precedent is to use a fixed period to handle such differences. I  
8 recommend an amortization period of 10 years to bring the reserve positions into  
9 alignment. The comparison of the annual depreciation rates along with the amortization  
10 adjustment is shown in Attachments DAW-2 Appendix B. The comparison of plant, book  
11 reserve, and theoretical reserve is shown in Attachment DAW-2, Appendix E.

12

13 **Q. How did you determine the average service lives for each account?**

14 A. The establishment of appropriate average service lives for each account within a  
15 functional group was determined by using actuarial analysis methods. The remaining  
16 lives, by account, are calculated in Attachment DAW-2, Appendix B. Graphs and tables  
17 supporting the semi-actuarial analysis and the chosen Iowa Curves used to determine the  
18 average service lives for analyzed accounts are found in the life analysis section and in  
19 Appendix C of Attachment DAW-2.

20

1 **Q. What is net salvage?**

2 A. While discussed more fully in the study itself, net salvage is the difference between the  
3 gross salvage (what is received in scrap value for the asset when retired) and the removal  
4 cost (cost to remove and dispose of the asset). Salvage and removal cost percentages are  
5 calculated by dividing the current cost of salvage or removal by the original installed cost  
6 of the asset.

7  
8 **Q. How did you determine the net salvage percentages for each asset group?**

9 A. I examined the experience realized by the Company by observing the actual net salvage  
10 for various bands (or combinations) of years. Using averages (such as the three-year and  
11 five-year bands) allows the smoothing of the timing differences between when  
12 retirements, removal cost and salvage are booked. By looking at successive average  
13 bands (“rolling bands”), an analyst can see trends in the data that would indicate the  
14 future net salvage in the account. This examination, in combination with the feedback of  
15 Company engineers related to any changes in operations or maintenance that would affect  
16 the future net salvage of the asset, allowed the selection of the best estimate of future net  
17 salvage for each account. The net salvage as a percent of retirements for various bands  
18 (i.e., groupings of years such as the five-year average) for each account are shown in  
19 Attachment DAW-2, Appendix D. As with any analysis of this type, expert judgment was  
20 applied in order to select a net salvage percentage reflective of the future expectations for  
21 each account.

1 **Q. Is this a reasonable method for determining net salvage rates?**

2 A. Yes. The method used to establish appropriate net salvage percentages for each account  
3 was determined by using the same methodology that was approved in the recent cases  
4 before the Commission.<sup>1</sup> It is also the methodology commonly employed throughout the  
5 industry and is the method recommended in authoritative texts.<sup>2</sup>

6  
7 **Q. What factors can cause plant assets to experience significant levels of negative net  
8 salvage?**

9 A. Some plant assets can experience significant negative removal cost percentages due to the  
10 timing of the addition versus the retirement. For example, a Distribution asset in FERC  
11 Account 365 with a current installed cost of \$500 (2012) would have had an installed cost  
12 of \$62 in 1972. A removal cost of \$50 for the asset calculated (incorrectly) on current  
13 installed cost would only have a negative 10 percent removal cost ( $\$50/\$500$ ). However,  
14 a correct removal cost calculation would show a negative 80.1 percent removal cost for  
15 that asset ( $\$50/\$62$ ).<sup>3</sup> Inflation from the time of installation of the asset until the time of  
16 its removal must be taken into account in the calculation of the removal cost percentage  
17 because the depreciation rate, which includes the removal cost percentage, will be applied  
18 to the original installed cost of assets. Other factors such as the synchronization of net  
19 salvage data can also affect the level of net salvage.

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<sup>1</sup> NHPUC cases DG 08-009 (EnergyNorth Natural Gas, Inc.), DG 09-035 (Public Service Company of New Hampshire), DG 10-055 (Unitil Energy System, Inc.), and DG 11-069 (Northern Utilities).

<sup>2</sup> Public Utility Depreciation Practice, published by the National Association of Regulatory Commissioners, 1996, pages 157-161. Depreciation Systems, by Drs. F.K. Fitch and W.C. Fitch, 1994, Iowa State Press, p. 51-55.

<sup>3</sup> Handy Whitman, Bulletin 176, E-1, Line 45.

1 V. GRANITE STATE DEPRECIATION STUDY

2 Overview

3 Q. When were Granite State's depreciation rates last changed?

4 A. The last change in the Company's depreciation rates occurred in 1996 as part of Granite  
5 State's last distribution rate case.

6

7 Q. What type of property is included in the depreciation study?

8 A. The study includes electric distribution and general property used by Granite State to  
9 serve its customers.

10

11 Q. Do you have any general observations regarding the life parameters you are  
12 recommending in the study?

13 A. The life parameters recommended in this study incorporate the understanding of the  
14 operation of the system with the available accounting information analyzed using the  
15 simulated plant record ("SPR") Balances method. Using those resources as well as my  
16 professional judgment, the depreciation study recommends service lives based on a  
17 combination of statistical analyses and also on how well future retirement patterns will  
18 match past retirements for Granite State. Out of 19 accounts, nine accounts have a longer  
19 life, one account is unchanged, eight accounts have a shorter life, and one account was  
20 not included in the last depreciation study. The largest increase in life is Account 369  
21 Services, which increased from 25 to 45 years. The life set in the last study based on data

1 in the mid-90s is much shorter than utility companies across the United States exhibit for  
2 this account. The largest decrease in life is Account 366, Underground Conduit which  
3 decreased from 60 years to 50 years. Currently customers own pad to pole conduit. The  
4 items owned by Granite State exhibit a shorter life than the currently approved 60 years.  
5 Since it has been more than 17 years since the last depreciation study, the life  
6 characteristic to this account has changed.

7  
8 **Q. Do you have any general observations regarding the net salvage parameters you are**  
9 **recommending in the study?**

10 A. The biggest change proposed in this study is to move from functional level net salvage  
11 parameters, i.e., distribution and general, to plant account based net salvage parameters. I  
12 do not know of any other utility in New Hampshire that is still using functional net  
13 salvage parameters. Changing to account based net salvage rates will put Granite State on  
14 the same basis as other New Hampshire electric utilities.

15  
16 **Service Lives and Net Salvage Depreciation Study Results**

17 **Q. What are the primary forces affecting the depreciation expense recommended in the**  
18 **study?**

19 A. Generally, depreciation expense is affected by three separate factors – changes in average  
20 service life, changes in net salvage, and the effect of reserve position.

21

1 **Q. What accounts were most impacted by changes in the net salvage percentages?**

2 A. Nearly all Granite State's property accounts were impacted by an increase in negative net  
3 salvage. Out of nineteen plant accounts, sixteen accounts had a higher negative net  
4 salvage, one was unchanged, one had a lower negative net salvage, and one account was  
5 not included in the last depreciation study. In the last depreciation study, there was no  
6 investment in account 392 and no life or net salvage recommendations were made for that  
7 account.

8  
9 **Q. Please describe the results reflected in your study for distribution plant.**

10 A. As shown in Appendix B of Attachment DAW-2, there is a small decrease in  
11 depreciation expense for distribution property. Based on plant balances at December 31,  
12 2011, there is a decrease of \$14 thousand in annual depreciation expense.

13  
14 **Q. Please describe the results reflected in your study for general.**

15 A. As shown in Appendix B of Attachment DAW-2, there is a small increase in depreciation  
16 expense for general property. Based on plant balances at December 31, 2011, there will  
17 be an increase of \$48 thousand in annual depreciation expense.

18  
19 **Q. What other item is included in your depreciation recommendation?**

20 A. In keeping with the Commission's use of whole life depreciation with a period to  
21 amortize the difference between book and theoretical depreciation reserves, I recommend

1 an additional accrual of \$316 thousand per year. This accrual over 10 years will recover  
2 any variance between book and theoretical reserves.

3

4 **VI. COMPLIANCE WITH STIPUATLION IN DOCKET DR 95-169**

5 **Q. What did the company agree to do regarding depreciation in its last distribution**  
6 **rate case?**

7 A. In its last distribution rate case, DR 95-169, the Company agreed "...to survey other New  
8 Hampshire utilities' methods for recording and tracking of gross salvage and cost of  
9 removal and present its findings as part of its next depreciation study". Order 22,141.

10

11 **Q. How did you comply with this requirement?**

12 A. I reviewed recent cases before the NHPUC that were identified by Commission Staff.<sup>4</sup>  
13 As a first step, I wanted to summarize the precedents regarding net salvage set by the  
14 Commission to ensure this depreciation study was compliant. In each instance, account-  
15 based net salvage was used. The Commission has approved the use of traditional net  
16 salvage using moving average with shrinking and rolling bands.

17

18 **Q. What other steps did you take to comply with the Commission's order?**

19 A. I asked the Company to present questions to two other electric utilities in the state to  
20 discuss how net salvage was recording on their books. Based on these inquiries, I learned  
21 that PSNH and Unitil use PowerPlan software. Charges are gathered at the work order

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<sup>4</sup> Those cases were: DG 08-009 (EnergyNorth Natural Gas, Inc.), DG 09-035 (Public Service Company of New Hampshire), DG 10-055 (Unitil Energy System, Inc.), and DG 11-069 (Northern Utilities).

1 level. Those charges accumulate and post to cost of removal when the work order is  
2 closed.

3  
4 PSNH uses standards for all distribution work orders. Those standards specify what  
5 percentage of the work (labor) to be done is for cost of removal. The percentages are then  
6 applied to the actual costs incurred and charged to the work order. The allocation of cost  
7 between new installation and removal cost began with a study in the mid-1980s and is  
8 updated periodically by Company personnel. Gross salvage is accumulated directly on  
9 the work order and posts separately from cost of removal. Unutil's process is similar. The  
10 subject matter expert in charge of the work order identifies an estimate of cost of  
11 removal. Those charges are applied to labor and overheads, excluding materials and  
12 materials overheads. Cost of removal is posted when the project closes. Gross salvage is  
13 accumulated at the work order level and charged in actual dollars.

14  
15 **Q. Are these processes similar to Granite State's current practice?**

16 A. Yes. Liberty is using a similar methodology.

17  
18 **VII. CONCLUSION**

19 **Q. Mr. Watson, do you have any concluding remarks?**

20 A. Yes. I recommend the Commission set the depreciation accrual rates at the levels shown  
21 in Attachment DAW-2.

1 **Q. Does this conclude your prefiled direct testimony?**

2 **A. Yes, it does.**

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