STATE OF NEW HAMPSHIRE
BEFORE THE
PUBLIC UTILITIES COMMISSION

Docket No. DE 19-064

Liberty Utilities (Granite State Electric) Corp. d/b/a Liberty Utilities
Distribution Service Rate Case

DIRECT TESTIMONY

OF

DANE WATSON

April 30, 2019

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ATTACHMENTS

Attachment	Title
DAW-1	Dane Watson Resume
DAW-2	Liberty Utilities Depreciation Study
DAW-3	Dane Watson – Prior Testimony Appearances

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1   **I.**   **POSITION AND QUALIFICATIONS**

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

3   A.   My name is Dane A. Watson. My business address is 101 E. Park Blvd, Suite 220,

4   Plano, Texas. I am a Partner in Alliance Consulting Group ("Alliance"). Alliance

5   provides consulting and expert services to the utility industry.

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

7   A.   I am testifying on behalf of Liberty Utilities (Granite State Electric) Corp. ("Granite

8   State" or "the Company").

9   **Q.**   **What is your educational background?**

10   A.   I hold a Bachelor of Science degree in Electrical Engineering from the University of

11   Arkansas at Fayetteville and a Master's Degree in Business Administration from

12   Amberton University in Garland, Texas.

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

14   A.   Yes. The Society of Depreciation Professionals ("the Society") has established national

15   standards for depreciation professionals. The Society administers an examination and has

16   certain required qualifications to become certified in this field. I have met all

17   requirements and am a Certified Depreciation Professional.

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

19   A.   I have twice been Chair of the Edison Electric Institute ("EEI") Property Accounting and

20   Valuation Committee and have been Chairman of EEI's Depreciation and Economic

21   Issues Subcommittee. I was the Industry Project Manager for the EEI/AGA effort around

1   the electric and gas industry adoption of FAS 143 and testified before FERC in the

2   hearings leading up to the release of FERC Order 631. I am a Registered Professional

3   Engineer in the State of Texas and a Certified Depreciation Professional. I am a Senior

4   Member of the Institute of Electrical and Electronics Engineers ("IEEE") and served for

5   several years as an officer of the Executive Board of the Dallas Section of IEEE as well

6   as national and worldwide offices. I have twice served as President of the Society of

7   Depreciation Professionals.

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

9 A. Since graduation from college in 1985, I have worked in the area of depreciation and

10   valuation. I founded Alliance Consulting Group in 2004 and am responsible for

11   conducting depreciation, valuation, and certain other accounting-related studies for

12   utilities in various regulated industries. My duties related to depreciation studies include

13   the assembly and analysis of historical and simulated data, conducting field reviews,

14   determining service life and net salvage estimates, calculating annual depreciation,

15   presenting recommended depreciation rates to utility management for its consideration,

16   and supporting such rates before regulatory bodies.

17   My prior employment from 1985 to 2004 was with Texas Utilities ("TXU"). During my

18   tenure with TXU, I was responsible for, among other things, conducting valuation and

19   depreciation studies for the domestic TXU companies. During that time, I also served as

20   Manager of Property Accounting Services and Records Management in addition to my

21   depreciation responsibilities.

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

2   A.   Yes. I have conducted depreciation studies, filed written testimony, and testified in more

3   than 175 proceedings before at least 35 regulatory bodies across the United States over

4   the past 26 years for various regulated utilities. A listing of those appearances is found in

5   Attachment DAW-3.

6   **II.**   **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, 2018 ("Depreciation Study"); and

11   •   Support and justify the recommended depreciation rate changes for Granite

12   State's assets for the period between January 1, 2018, and December 31, 2018

13   ("Test Year"), based on the results of the Depreciation Study.

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

15   A.   Yes. I sponsor Attachment DAW-1, my resume, Attachment DAW-2, the Depreciation

16   Study, and Attachment DAW-3, which is a list of my prior testimony experience.

17   **Q.**   **Were the attachments you are sponsoring prepared by you or under your direct**

18   **supervision?**

19   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 2018 depreciable plant balances. The

6 Depreciation Study follows the New Hampshire Public Utilities Commission's

7 ("Commission") long-standing precedent of straight line, average life, whole life

8 depreciation rates with an amortization period of to recover any difference between book

9 depreciation reserve and the theoretical depreciation reserve by account. In this way, all

10 customers are charged for their appropriate share of the capital expended for their benefit.

11 In order to ensure intergenerational equities, the Commission should adopt the life and

12 net salvage parameters proposed in this study. Granite State's depreciation rates should

13 be set at the levels supported in the Depreciation Study in order to recover Granite State's

14 total investment in property.

15 **Q.** **Please summarize the results of your analysis.**

16 A. I have performed a depreciation study of Granite State's assets based on the depreciable

17 plant in service at December 31, 2018. The results of my depreciation study support an

18 annualized depreciation expense for Granite State of approximately $9.9 million. This

19 represents an increase of approximately $160,000 over the annualized depreciation

20 expense calculated on year-end 2018 plant investment using the current depreciation rates

21 which were approved approximately five years ago. Specifically, compared to the

22 depreciation rates currently in effect, my proposed depreciation rates will result in a

1   decrease in annual depreciation expense of approximately $492,000 in Intangible assets,

2   an increase in annual depreciation expense of approximately $279,000 in Distribution

3   assets, an increase of $140,000 in General assets, and an increase of approximately

4    $233,000 to recover the difference between book and theoretical depreciation reserves.

5   Detailed information regarding the service life and net salvage characteristics that support

6   my proposed depreciation rates can be found in the depreciation study accompanying my

7   testimony, as well as my workpapers.

8 **Q. What annual depreciation provision is reflected in your depreciation study for**

9 **Liberty's assets?**

10 A. The Depreciation Study recommends an annual accrual of $9.89 million based on plant in

11   service at December 31, 2018. This includes $233,000 necessary to amortize the

12   difference between the book and theoretical reserves.

13 **Q. Are the results of your depreciation study reflected in the test year ending**

14 **December 31, 2018, Cost of Service Calculation?**

15 A. Yes.

16 **Q. What depreciation rates are being used to calculate depreciation expense in this**

17 **case?**

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

1   **III.   OVERVIEW OF DEPRECIATION STUDY METHODOLOGY**

2   **Q.   What definition of depreciation have you used for the purposes of conducting the**

3   **depreciation study and preparing your testimony?**

4   A.   In this testimony, I use the term "depreciation" in the accounting sense; that is, a system

5   of accounting that distributes the cost of assets, less net salvage (if any), over the

6   estimated useful life of the assets in a systematic and rational manner. Depreciation is a

7   process of allocation, not valuation. Depreciation expense is systematically allocated to

8   accounting periods over the life of the properties. The amount allocated to any one

9   accounting period does not necessarily represent the loss or decrease in value that will

10   occur during that particular period. Thus, depreciation is considered an expense or cost,

11   rather than a loss or decrease in value. Granite State accrues depreciation based on the

12   original cost of all property included in each depreciable plant account. Upon retirement

13   of any particular piece of property, the full cost of depreciable property, less the net

14   salvage amount, if any, is charged to the depreciation reserve.

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

16   A.   I conduct a depreciation study in four phases as shown in Attachment DAW-2. The four

17   phases are: Data Collection, Analysis, Evaluation, and Calculation. During the initial

18   phase of the study, I collect historical data to be used in the analysis. After the data is

19   assembled, I perform analyses to determine the life and net salvage percentage for the

20   different property groups being studied. The information obtained from field personnel,

21   engineers, and/or managerial personnel, combined with the study results, are then

22   evaluated to determine how the results of the historical asset activity analysis, in

1   conjunction with the Company's expected future plans, should be applied. Using all of

2   these resources, I then calculate the depreciation rate for plant account.

3 **Q.   What process have you undertaken to give effect to both historical data and to the**

4   **company-specific expectations in developing your service life recommendations?**

5 A.   In order to achieve a reasonable balance between these critical components of the life

6   analysis, I evaluated the statistical historical data and then applied informed judgment to

7   make the most appropriate service life selections. The objective in any depreciation

8   study is to project the remaining cost (installation, material, and removal cost) to be

9   recovered and the remaining periods in which to recover the costs. This necessarily

10   requires that the service life selections reflect both the Company's historic experience and

11   its current expectations of asset lives. In order to understand the Company's expectations

12   regarding asset lives, I interviewed Company engineers working in both operations and

13   maintenance to confirm the historical activity and indications, current and future plans,

14   expectations, and the applicability to the future surviving assets. The interview process

15   provides important information regarding changes in materials, operation and

16   maintenance, as well as the Company's current expectation regarding the service life of

17   the assets currently in use. This information is then considered along with the historical

18   statistical data to develop the most reasonable and representative expected service lives

19   for the Company's assets. The result of all of this analysis is reflected in the service life

20   recommendations set forth in the depreciation study.

1 **Q. Can you provide an example of the important information you gleaned from the**

2 **Company personnel?**

3 A. Yes. Account 364, distribution poles, has experienced many changes as the Company

4 moved from old growth to new growth trees and pole treatment changed from creosote to

5 Penta. Items causing retirements include relocations (DOT, growth, etc.), third party

6 contracts, and higher population density. Additionally, the Company uses FIFO (first in

7 first out) pricing for retirements. This is a standard methodology used in the industry but

8 can reflect a longer life for the capitalized investment, all else being equal. Company

9 personnel report that replacement poles will be a heavier class than the poles being

10 replaced. Moderating the account average life is the shorter life of cross arms that is

11 around 20 years for southern pine and a little longer for other wood types. The Company

12 is moving to composite cross arms which personnel expect will have a longer life than

13 wood cross arms (but still shorter than the life of the poles). Company personnel expect a

14 slightly longer life than the current 40 years, but caution that the changes that would

15 move lives longer are mainly not yet affecting the majority of assets in this account at this

16 point. SPR analysis shows uniformly poor conformance indices and none of the band

17 results meet the criteria advocated by authoritative texts to be relied upon strongly in

18 making life selections. Company operational input indicated the expectation was for the

19 life of the pole account would begin to increase over time based on many of the above

20 factors. I selected a 44-year life (an increase of four years or 10 percent for the existing

21 life) for this account based on input from Company personnel and a limited use of the

22 SPR results.

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

2   A.   The straight-line method, average life group ("ALG ") procedure, whole-life technique

3   comprises the depreciation system that was employed to calculate the annual accrual for

4   depreciation expense in the study.

5   **Q.**   **Has this Commission repeatedly approved the use of ALG- whole life derived**

6   **depreciation rates?**

7   A.   Yes.

8   **Q.**   **How are depreciation rates developed under the ALG, whole life system?**

9   A.   In the ALG Whole Life system, the annual depreciation rate for each group is computed

10   by dividing (1 – Net Salvage Percentage) by the Average Service Life of the group. The

11   resulting annual accrual amounts of all depreciable property were computed by

12   multiplying the original cost of all account level depreciable property by each account-

13   level depreciation rate. The computations of the annual depreciation rates are shown in

14   my Attachments DAW-2 Appendix A.

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

16   A.   Under a whole life approach, since unlike the remaining life approach there is no

17   embedded "true-up" provision for the depreciation reserve in the formula, it is necessary

18   to compare the book depreciation reserve to the theoretical depreciation reserve and

19   determine if assets are over-accrued or under-accrued. To bring the reserve position into

20   parity with the theoretical model, an amortization period for the reserve difference is

21   necessary to normalize the asset's cost and spread it ratably over future periods. The

1   Commission precedent is to use a fixed period to handle such differences. The Company

2   recommended and I implemented an amortization period of six years to bring the reserve

3   positions into alignment. The comparison of the annual depreciation rates along with the

4   amortization adjustment is shown in Attachments DAW-2 Appendix B. The comparison

5   of plant, book reserve, and theoretical reserve is shown in Attachment DAW-2, Appendix

6   E.

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

8   A.   I established appropriate average service lives for each account within a functional group

9   by using a semi-actuarial analysis method. Graphs and tables supporting the semi-

10   actuarial analysis and the chosen Iowa Curves used to determine the average service lives

11   for analyzed accounts are found in the life analysis section and in Appendix C of

12   Attachment DAW-2.

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

14   A.   While discussed more fully in the study itself, net salvage is the difference between the

15   gross salvage (what is received in scrap value for the asset when retired) and the removal

16   cost (cost to remove and dispose of the asset). Salvage and removal cost percentages are

17   calculated by dividing the current cost of salvage or removal by the original installed cost

18   of the asset.

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

20   A.   I examined the experience realized by the Company by observing the actual net salvage

21   for various bands (or combinations) of years. Using averages (such as the three-year and

1   five-year bands) allows the smoothing of the timing differences between when

2   retirements, removal cost, and salvage are booked. By looking at successive average

3   bands ("rolling bands"), an analyst can see trends in the data that would indicate the

4   future net salvage in the account. This examination, in combination with the feedback of

5   Company engineers related to any changes in operations or maintenance that would affect

6   the future net salvage of the asset, allowed the selection of the best estimate of future net

7   salvage for each account. The net salvage as a percent of retirements for various bands

8   (i.e., groupings of years such as the five-year average) for each account are shown in

9   Attachment DAW-2, Appendix D. As with any analysis of this type, expert judgment

10   was applied in order to select a net salvage percentage reflective of the future

11   expectations for each account.

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

13 A.   Yes. The method used to establish appropriate net salvage percentages for each account

14   was determined by using the same methodology that was approved in the recent cases

15   before the Commission.[1] It is also the methodology commonly employed throughout the

16   industry and is the method recommended in authoritative texts.[2]

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[1]   See Docket Nos. 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).

[2]   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.

1 **Q.   What factors can cause plant assets to experience significant levels of negative net**

2 **salvage?**

3 A.   Some plant assets can experience significant negative removal cost percentages due to the

4 timing of the addition versus the retirement. For example, a distribution asset in FERC

5 Account 365 with a current installed cost of $500 (2018) would have had an installed cost

6 of $12.86 in 1968[3] (which is the proposed average life of the account). A removal cost of

7 $50 for the asset calculated (incorrectly) on current installed cost would only have a

8 negative 10 percent removal cost ($50/$500). However, a correct removal cost

9 calculation would show a negative 138 percent removal cost for that asset ($50/$36.32).

10 Inflation from the time of installation of the asset until the time of its removal must be

11 taken into account in the calculation of the removal cost percentage because the

12 depreciation rate, which includes the removal cost percentage, will be applied to the

13 original installed cost of assets. Other factors such as the synchronization of net salvage

14 data can also affect the level of net salvage.

15 **IV.   GRANITE STATE DEPRECIATION STUDY**

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

17 A.   The last change in the Company's depreciation rates occurred in 2014 as part of Granite

18 State's distribution rate case, Docket No. DE 13-063. The use of those depreciation rates

19 was continued in Granite State's most recent rate case, Docket No. DE 16-383.

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[3]   Using the Handy-Whitman Bulletin No. 188, E-1, line 45, $36.32 = $500 x 68/936.

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

2 A. The study includes electric distribution and general property used by Granite State to

3 serve its customers.

4 **Q.** **What are the primary forces affecting the depreciation expense recommended in the**

5 **study?**

6 A. Generally, depreciation expense under the whole life approach is affected by two separate

7 factors – changes in average service life and changes in net salvage.

8 **Q.** **Do you have any general observations regarding the life parameters you are**

9 **recommending in the study?**

10 A. The life parameters recommended in this study incorporate the understanding of the

11 operation of the system with the available accounting information analyzed using the

12 simulated plant record ("SPR") Balances method. Using those resources as well as my

13 professional judgment, the depreciation study recommends service lives based on a

14 combination of statistical analyses and also on how well future retirement patterns will

15 match past retirements for Granite State. Out of twenty-six accounts, seven accounts

16 have a longer life, ten accounts have lives that are unchanged, four accounts have a

17 shorter life, and for four accounts no comparison is possible as they were not included in

18 the prior study. In addition, one account is related to a water heater rental program that

19 was terminated. The largest increase in life is Account 367 Underground Conductor and

20 Devices, which increased from 41 to 46 years. The largest decrease in life is Account

21 391.1 and 391.2, Software and Desktop Computers and Laptop Computer Equipment,

1   respectively, which decreased from 25 years to five years. Previously these assets were

2   combined in Account 391 Office and Furniture and Equipment. Since these subgroups

3   have distinctly different life characteristics than office furniture this study proposes to

4   separate these sub-accounts. In addition, software that had been included in these

5   accounts was reclassified to Account 303, Intangible Assets.

6 **Q.**   **Do you have any general observations regarding the net salvage parameters you are**

7   **recommending in the study?**

8 A.   The Company experienced process difficulties after the exit from National Grid

9   ownership and its accounting system. Removal cost for 2012 and 2013 was not available

10   at a detailed account level. Data from January to May 2012 was used to allocate removal

11   cost by plant account for years 2012 and 2013. Removal cost was not recorded to the

12   accounting system from 2014–2015. The Company provided data for removal cost from

13   2016–2018 at the plant account level. Gross salvage was not allocated to plant accounts

14   in years 2016–2018. Based on information from Company personnel, the small amount

15   of gross salvage received (approximately $66 thousand over three years) was allocated

16   based on retirements over that period in account likely to produce gross salvage. The net

17   salvage parameters recommended in this study incorporate the understanding of the

18   operation of the system with the available accounting information analyzed using by

19   moving averages, as well as my professional judgment.

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 twenty-six plant accounts, five accounts had a higher negative net

4 salvage, thirteen accounts were unchanged, three had a lower negative net salvage, and

5 four accounts were not included in the last depreciation study. In the last depreciation

6 study, there was no investment in account 392 and no life or net salvage

7 recommendations were made for that account.

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

9 A. As shown in Appendix B of Attachment DAW-2, there is a decrease in depreciation

10 expense for intangible property. Based on plant balances at December 31, 2018, there is

11 a decrease of $492 thousand in annual depreciation expense. Currently the life of all

12 software is 5 years. This study is dividing the software into lives of 3, 5, and 10 years.

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

14 A. As shown in Appendix B of Attachment DAW-2, there is a small decrease in

15 depreciation expense for distribution property. Based on plant balances at December 31,

16 2018, there is an increase of $279 thousand in annual depreciation expense.

17 **Q.** **Please describe the results reflected in your study for general plant.**

18 A. As shown in Appendix B of Attachment DAW-2, there is a small increase in depreciation

19 expense for general property. Based on plant balances at December 31, 2018, there will

20 be an increase of $140 thousand in annual depreciation expense.

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

2 A. In keeping with the Commission's use of whole life depreciation with a period to

3 amortize the difference between book and theoretical depreciation reserves, the Company

4 is recommending a six-year accrual to recover the variance between the book and

5 theoretical depreciation reserves. This results in an additional accrual of $233 thousand

6 per year.

7 **V. CONCLUSION**

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

9 A. Yes. I recommend the Commission set the depreciation accrual rates at the levels shown

10 in Attachment DAW-2.

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

12 A. Yes, it does.