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APPLICATION OF CENTERPOINT	§	PUBLIC UTILITY COMMISSION
ENERGY HOUSTON ELECTRIC, LLC	§	
FOR AUTHORITY TO CHANGE RATES	§	OF TEXAS

REBUTTAL TESTIMONY

OF

DANE A WATSON

ON BEHALF OF

CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC

June 2019

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1		REBUTTAL TESTIMONY OF DANE A. WATSON
2		I. INTRODUCTION
3	Q.	PLEASE STATE YOUR NAME AND BY WHOM YOU ARE EMPLOYED.
4	A.	My name is Dane A. Watson. I am a Partner of Alliance Consulting Group.
5		Alliance Consulting Group provides consulting and expert services to the utility
6		industry.
7	Q.	ARE YOU THE SAME DANE A. WATSON THAT FILED DIRECT
8		TESTIMONY IN THIS PROCEEDING?
9	A.	Yes. I provided direct testimony on behalf of CenterPoint Energy Houston Electric,
10		LLC ("CenterPoint Houston").
11		II. PURPOSE AND SUMMARY OF REBUTTAL TESTIMONY
12	Q.	WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS
13		PROCEEDING?
14	A.	The purpose of my testimony is to rebut the recommendations of Texas Coast
15		Utilities Coalition ("TCUC") witness David J. Garrett with regard to proposed lives
16		for various accounts and proposed depreciation rates.
17	Q.	WAS YOUR REBUTTAL TESTIMONY AND EXHIBITS PREPARED BY
18		YOU OR UNDER YOUR DIRECT SUPERVISION?
19	A.	Yes.
20	Q.	DO YOU HAVE ANY INITIAL THOUGHTS RELATED TO MR.
21		GARRETT'S TESTIMONY?
22	A.	Yes. Mr. Garrett proposes to alter the results of the depreciation study in this case
23		and extend the average service life for nine accounts. My first concern is that he
24		dismisses or disregards Company-specific data, claiming the data used to conduct

1   my SPR analyses is "unreliable,"[1] but he does not explain why he believes the data

2   is unreliable nor has he provided any support for his conclusions.   In fact, there is

3   nothing "unreliable" about the Company's data. The Company has used the same

4   SPR analysis based on similar data since as far back as 1985[2] to establish service

5   lives for the Company's transmission and distribution accounts. In fact, in Docket

6   No. 38339, no party alleged that the Company's data was unreliable or could not

7   be used as a basis for calculating depreciation rates. The Public Utility Commission

8   of Texas ("Commission") approved rates in that proceeding based on my SPR

9   analysis. Also, as explained below, Commission Staff acknowledged that the

10 methods applied in this case are commonly used by utilities do determine the life

11 and the survivor characteristics of property accounts, and Staff performed similar

12 analyses based on the same data to confirm my results and recommended no

13 changes.[3]

14   Second, Mr. Garrett cherry-picks life parameter comparisons from three

15 unrelated, smaller and very different utilities, two of which are located in

16 Oklahoma, to serve as the primary basis for his recommendations for eight of the

17 accounts he proposes to adjust. Mr. Garrett's heavy reliance on comparisons to

18 other utilities contradicts long-standing Commission precedent[4] and defies sound

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[1] Direct Testimony and Exhibits of David Garrett at 18, 19, 25, 28, 29 & 32.
[2] I have confirmed the Company utilized this methodology in Docket Nos. 6765, 12065, 22355, 32093, and 38339.
[3] Direct Testimony of Reginald J. Tuvilla at 6.
[4] *City of Amarillo v. Railroad Commission of Texas*, 894 S.W.2d 491, 501 (Tex. App.—Austin 1995, writ denied) (..."depreciation rates are company and account specific."); *Application of AEP Texas Central Company for Authority to Change Rates*, Docket No. 28840, Proposal for Decision on Remand at 68 (Nov. 16, 2004).

1   depreciation theory, which requires that depreciation rates be established on a

2   utility-specific basis using the utility's own historical data.

3   Finally, Mr. Garrett appears to take exception to my reliance on operational

4   information from the Company to confirm the life parameters or net salvage that

5   resulted from the SPR analysis. Mr. Garrett indicates that Company personnel are

6   biased and should not be relied on for purposes of assessing the Company's assets.

7   Over my 34 years of conducting depreciation studies, I have found that interviews

8   with subject matter experts are one of the most valuable tools to use in

9   understanding the life cycle of the assets being studied. Operational input,

10   combined with the statistical analysis and the engineering/depreciation expertise of

11   the depreciation analyst, will provide a far more accurate projection of lives than

12   simply relying on a single statistic. Further, in those 34 years, I have never detected

13   any "bias" in the operational discussions with engineers. Mr. Garrett's insistence

14   that the Commission must dismiss out of hand operational information from the

15   engineers and operations personnel who work with the assets severely undermines

16   the integrity of his recommendations.

17 Q. **DO YOU HAVE ANY OTHER CONCERNS ABOUT MR. GARRETT'S**

18   **STUDY OR RESULTS?**

19 A. Yes. Mr. Garrett offers two unusual and conflicting viewpoints to support his

20   proposed service lives. On the one hand, he says underestimating that lives of

21   assets hurts customers, benefits shareholders, and is economically inefficient, but

22   on the other hand, he claims no one is harmed by overestimating the life of an asset.[5]

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[5] Direct Testimony and Exhibits of David Garrett at 4:15-25.

1 Q. IS MR. GARRETT'S POSITION CONSISTENT WITH YOUR

2   UNDERSTANDING OF THIS COMMISSION'S RULES REGARDING

3   DEPRECIATION?

4 A. No. Mr. Garrett's suggestion ignores the matching principle that undergirds the

5   regulatory compact. The Commission's substantive rules make it clear the

6   appropriate period of time for measuring the allocation of cost is the useful life of

7   the asset:

8   Reserve for depreciation is the accumulation of recognized allocations of
9   original cost, representing recovery of initial investment, over the estimated
10   useful life of the asset. Depreciation shall be computed on a straight line
11   basis or by such other method approved under subsection (b)(1)(B) of this
12   section over the expected useful life of the item or facility.[6]

13   Mr. Garrett, however, appears to suggest that over-estimating the useful life is

14   somehow acceptable.

15 Q. DOES OVERESTIMATING THE LIFE OF AN ASSET IMPACT THE

16   UTILITY AND ITS CUSTOMERS?

17 A. Yes. For instance, Mr. Garrett's proposal would create intergenerational inequities

18   where customers who are not benefitting from the asset would be shouldering the

19   cost associated with any asset assigned a longer life than its useful life. Further,

20   overestimating the service lives results in slower recovery of depreciation expense

21   and, accordingly, a larger rate base upon which the Company earns a return over

22   the life of the assets, which can result in customers ultimately paying more for the

23   costs of these assets. Accordingly, from a practical standpoint, both the utility and

24   its customers can be harmed by overestimating the life of an asset as well as under-

25   stating the life.

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[6] 16 Tex. Admin. Code § 25.231(c)(2)(ii) (TAC) (emphasis added).

1	Q.	DID COMMISSION STAFF FILE TESTIMONY REGARDING YOUR
2		PROPOSED DEPRECIATION RATES?
3	A.	Yes. Commission Staff witness Reginald J. Tuvilla filed testimony specifically
4		addressing my depreciation study and resulting rates. He states that he performed
5		his own simulated plant record ("SPR") or actuarial analysis for each account and
6		reviewed my SPR and actuarial analysis and results.[7] He also recognizes my
7		reliance on Company-specific operations information and reviewed my removal
8		cost study.[8] Based on this thorough review and his own independent analysis, he
9		is not recommending any adjustments to the Company's proposed life parameters
10		or net salvage rates based on my study.[9] All of Mr. Tuvilla's adjustments to the
11		deprecation rates are pass-through results of Staff's proposed adjustments to the
12		Company's cost of service and not the service lives or net salvage ratios
13		recommended in my study.[10]
14	Q.	HAVE YOU IDENTIFIED ANY ERRORS IN MR. GARRETT'S
15		ANALYSIS?
16	A.	Yes. As explained further in Section V, Mr. Garrett failed to reallocate the
17		depreciation reserve in his depreciation rate calculations when he changed the
18		service life for the nine accounts. While I disagree with Mr. Garrett's
19		recommendations, to accurately calculate depreciation rates from his
20		recommendations requires that he also re-calculate the allocated depreciation
21		reserve. He did not. He used the depreciation reserve that I reallocated based on

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[7] Direct Testimony of Reginald J. Tuvilla at 10-12.
[8] *Id.* at 9.
[9] *Id.* at 3 & 12.
[10] *Id.* at 5.

1   my life recommendations. Because Mr. Garrett failed to reallocate the depreciation

2   reserve, his resulting depreciation rates are incorrect and cannot be relied on for

3   purposes of making adjustments to the Company's rates.

4   **III.   DEPRECIATION METHODOLOGY**

5   **A. Overview of Mr. Garrett's Recommendations and Methodology**

6 **Q.**   **WHAT RECOMMENDATION DOES MR. GARRETT MAKE WITH**

7   **REGARD TO MASS PROPERTY SERVICE LIVES?**

8 A.   Mr. Garrett argues that the proposed service lives for nine transmission,

9   distribution, and general property accounts should be longer than the Company's

10   proposed average service lives.[11] He did not challenge my proposed net salvage

11   ratios.

12 **Q.**   **COMPARE THE LIFE PARAMETERS FOR THE NINE ACCOUNTS**

13   **WITH CENTERPOINT HOUSTON'S EXISTING PARAMETERS, THE**

14   **PROPOSED PARAMETERS AND TCUC'S PROPOSED ADJUSTMENTS.**

15 A.   The table below compares the existing life and survivor curve parameters for the

16   nine accounts at issue with my proposals as well as Mr. Garrett's proposals:

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[11] Direct Testimony and Exhibits of David Garrett at 3 & Figure 2.

Account		Existing		CENTERPOINT Proposed		TCUC Proposed	
		Life	Curve	Life	Curve	Life	Curve
353	Station Equipment	47	R1	53	R0.5	56	R0.5
354	Towers and Fixtures	60	R4	59	R2.5	66	R2
362	Station Equipment	47	R1.5	48	R1	55	R0.5
364	Poles, Towers and Fixtures	35	R0.5	35	R0.5	45	R0.5
365	OH Conductors and Devices	40	R0.5	38	R0.5	40	R0.5
366	Underground Conduit	37	S6	62	R2.5	65	S1
367	Underground Conductor and Devices	31	R0.5	38	R0.5	42	L0
368	Line Transformers	28	R1	28	R1	32	L0
390	Structures and Improvements	40	R2	50	R4	58	R2

1 Q. **WHAT METHODOLOGY DID YOU APPLY TO DEVELOP THE**

2 **PROPOSED AVERAGE SERVICE LIVES AND SURVIVOR CURVES?**

3 A. I applied the same methodology that was used to develop the service lives in

4 CenterPoint Houston's last rate proceeding, Docket No. 38339.

5 Q. **DO YOU AGREE WITH MR. GARRETT'S PROPOSED CHANGES TO**

6 **YOUR RECOMMENDATIONS?**

7 A. No. Mr. Garrett's proposed service lives for these nine accounts are longer than

8 appropriate and based on unsound depreciation practices. Mr. Garrett's

9 recommendations should be rejected.

10 Q. **WHAT IS THE BASIS FOR MR. GARRETT'S RECOMMENDATIONS?**

11 A. For eight of the nine accounts he addresses, Mr. Garrett proposed an extension of

12 the proposed average service life based almost entirely on the service lives

13 approved for three other electric utilities, with little to no analysis to support why

14 these service lives would be appropriate for the Company. For account 390,

15 Structures and Improvements, Mr. Garrett proposed extending the service life for

16 this account because, he claims, my survivor curves do not provide a "good fit" and

1   that it would be more appropriate to determine a curve that ignores almost 50% of

2   the assets in this account and nearly 80% of the actuarial analysis results.

3 **Q.   PLEASE EXPLAIN YOUR CONCERNS WITH MR. GARRETT'S**

4   **METHODOLOGY.**

5 A.   First, for Accounts 353-354, 362, and 364 through 368, Mr. Garrett's SPR analysis

6   is flawed and his dismissiveness of Company plant records and analytical results as

7   "unreliable" is meritless and unsupported. Second, Mr. Garrett ignores the input of

8   Company personnel. As I explain in more detail below, it is critical in performing

9   a depreciation study to use Company-specific analysis and gain a solid

10   understanding of the underlying data. It is also critical to evaluate the way the

11   Company maintains and operates its assets and to understand the mix of assets

12   within each account and their various life-cycles. Third, one should only rely on

13   the service lives of other utilities in setting depreciation rates in extraordinary

14   circumstances that are not found here. Finally, Mr. Garrett's actuarial analysis is

15   inherently flawed because it ignores critical data relating to the longest lasting

16   assets in Account 390.

17   **B. Mr. Garrett's SPR Analysis is Flawed.**

18 **Q.   WHY DO YOU BELIEVE MR. GARRETT'S SPR ANALYSIS IS FLAWED?**

19 A.   Mr. Garrett argues that SPR results with a low Conformance Index ("CI")[12] are

20   "inherently unreliable" and should be dispensed with entirely, which is counter to

21   the guidance regarding and the purpose of the CI, as discussed more later in my

22   testimony. Also, Mr. Garrett's selections did not incorporate curves with a focus

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[12] I discuss the SPR methodology and the use of the Conformance Index and the Retirement Experience Index in my depreciation study, Exhibit DAW-1 to my direct testimony.

1   on Retirement Experience Index ("REI") measures near 100. Moreover, even when

2   the CI and REI were both excellent for certain service lives, Mr. Garrett

3   recommended ignoring the SPR analysis in favor of results from other companies.

4 Q. **IS SPR DATA THAT RESULTS IN A SERVICE LIFE WITH A LOW CI**

5   **INHERENTLY UNRELIABLE?**

6 A. No. When the SPR data shows that a service life recommendation has a low CI, it

7   merely means that the account could be experiencing changing life characteristics.

8   It does not indicate that the data should be thrown out entirely.

9 Q. **ARE LOW CONFORMANCE INDEX RESULTS INDICATIVE OF**

10   **UNRELIABLE DATA, AS MY GARRET ASSERTS?**

11 A. No. Academic research has documented the impact of low or high CI results. In

12   *Depreciation Systems*, Drs. F. K. Wolf and W. C. Fitch made the following

13   observations regarding accounts with low conformance indices:[13]

14   Uniformly low conformance indexes most often result because the
15   life characteristics of the property have changed over time. A less
16   likely cause is that the survivor curve describing the experience life
17   characteristics is not included in the set of curve simulated (e.g. the
18   Iowa curves contain no bimodal curves). When all conformance
19   indexes are low, resist the temptation to choose the curve with the
20   highest CI. One conformance will be larger than the others, but that
21   does not mean that those life characteristics provide a good fit to the
22   observed characteristics or that those characteristics are an
23   appropriate representation of the property. The analyst must rely on
24   judgment to select a curve type and average age that are consistent
25   with other knowledge about the property in the account.

26   In other words, one does not throw out the data and analysis as "unreliable" simply

27   because of low CI results. A low CI may just be indicative of the fact that

28   operational changes or other factors are causing changes in the life characteristics

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[13] F. K. Wolf and W.C. Fitch, *Depreciation Systems* at 249-250 (1994).

1   of the account. Accordingly, it is recommended such analysis be tempered with

2   the analyst's judgment *based on knowledge about the property in the account,*

3   something Mr. Garrett dismisses out of hand.

4   Q.   **HOW DOES THIS RELATE TO YOUR ANALYSIS OF CENTERPOINT**

5   **HOUSTON'S ASSETS?**

6   A.   For certain accounts, CenterPoint Houston's assets have experienced changing life

7   characteristics over time. For example, in Account 353 – Transmission Station

8   Equipment, a number of the assets added to this account in recent years would have

9   a shorter live than assets from many years ago. One example is the movement from

10   electromechanical to digital relays (with digital relays having a much shorter life

11   than electromechanical). This changing life characteristic is demonstrated in the

12   SPR analysis by observing the longest (93 year) band, which reflects a poor CI.

13   However, as the band decreases to a more recent period (30 years), the CI moves

14   into the excellent range.

15   But rather than simply select the service life in the longest band with the

16   highest CI statistic (or throw out the data, as Mr. Garrett recommends), I applied

17   judgment based on my knowledge of the assets in these accounts as learned through

18   my interviews with Company personnel. This is why, as Drs. Wolf and Fitch

19   recognize, it is imperative that the analyst factor into the decision the experience

20   and observations of both the SMEs who work with the assets on a daily basis and

21   of the experienced depreciation analyst to verify the SPR results.[14]

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[14] The SPR runs for the disputed accounts are included in my rebuttal workpapers, which are incorporated herein by reference.

1   **Q.**   **WHY IS IT IMPORTANT TO RELY MORE HEAVILY ON LIFE**

2   **SELECTIONS WITH A HIGHER REI?**

3   **A.**   As stated in *Depreciation Systems*,[15]

4   [t]he REI is the percent of the property retired from the oldest vintage in the
5   test year by the end of the test year. . . . If most of the property from the
6   oldest vintage remains in service, then no pattern of retirements will have
7   been revealed, and it is likely that for each type curve a life can be found
8   that will result in a high CI. The REI will be low (i.e. closer to 0% than to
9   100%) and will warn us that the data do not contain enough history to
10   uncover the life characteristics of the property. Under these circumstances,
11   the life indications may have little meaning in spite of the high CIs."

12   For these reasons, I look for REIs of close to 100 as criteria in narrowing down the

13   type curves that I consider for life selection. In addition, when CIs are statistically

14   similar, the life with the higher REI would indicate more information being used in

15   the analysis and should lean the analyst toward the life with that higher REI.

16   **Q.**   **DO DEPRECIATION EXPERTS REGULARLY RELY ON UNAGED**

17   **DATA TO ESTIMATE THE LIFE OF UTILITY PROPERTY?**

18   **A.**   Absolutely. I have reviewed many depreciation studies performed for and

19   approved by this Commission since its inception in 1976. Repeatedly, SPR analysis

20   has been used to support lives and depreciation rates before this Commission.

21   Many of those studies were fully litigated, and the Commission has reviewed and

22   ruled on depreciation studies using SPR methods for over 40 years, including many

23   of the cases in which I have participated.

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[15] F. K. Wolf and W.C. Fitch, *Depreciation Systems* at 249-250 (1994).

1   Q.   **IS AGED DATA MORE RELIABLE THAN UNAGED DATA, AS**

2   **MR. GARRET ASSERTS?**

3   A.   Not necessarily. Although the actuarial analysis technique is more robust than SPR,

4   both are reliable in determining lives for asset group. Commissions across the

5   country, as well as this Commission, have relied on SPR analysis for years to set

6   depreciation rates. It is also a fully-supported analytical technique in authoritative

7   depreciation texts. Someone simply preferring actuarial analysis is not sufficient

8   justification to discard Company-specific information and analysis or claim that the

9   data is "unreliable" simply because it is SPR analysis.

10 Q.   **IN YOUR EXPERIENCE, IS THE UNAGED DATA YOU RELIED UPON A**

11   **COMMON BASIS ON WHICH TO DEVELOP DEPRECIATION RATES**

12 A.   In performing more than 230 depreciation studies before 35 different utility

13   commissions and FERC, I have used unaged SPR data in many of those studies to

14   estimate life. Mr. Garrett's prejudice against the SPR method is not reason for this

15   Commission to discard more than 40 years of precedent.

16 Q.   **ARE THERE OTHER REASONS YOU BELIEVE MR. GARRETT'S SPR**

17   **ANALYSIS IS FLAWED?**

18 A.   Yes. In reviewing the SPR results, Mr. Garrett only focused on one overall

19   experience band for each account. In keeping with the way the SPR analysis

20   method is designed, I examined all bands where the width of the band was close to

21   or longer than the length of the current approved average service life. Examining

22   multiple bands in SPR analysis is helpful in understanding the characteristics of an

23   account over time, just as one uses multiple bands in an actuarial analysis.

1   Mr. Garrett performed a very limited analysis, which undermines the integrity of

2   his recommendations.

3   C. **Company-Specific Data Is More Predictive of the Service Lives of the**
4   **Company's Assets Than the Approved Lives of Other Utilities**

5 Q.   **HAS THIS COMMISSION RELIED ON UTILITY-SPECIFIC DATA AND**

6   **ASSET EXPERIENCE IN DEVELOPING UTILITY SPECIFIC**

7   **DEPRECIATION RATES IN THE PAST?**

8 A.   Yes. The Commission has long-indicated a preference for using a utility's own

9   data to establish depreciation rates over that of other utilities.[16] Moreover, Texas

10   courts have recognized that "depreciation rates are company and account

11   specific."[17] Mr. Garrett's approach is inconsistent with this precedent and the

12   Commission's common approach. Thus, the attempt to rely on the depreciation

13   studies of other companies in setting CenterPoint Houston's depreciation rates is

14   simply not appropriate.

15 Q.   **WHAT IS MR. GARRETT'S RATIONALE FOR RELYING ON THE**

16   **APPROVED SERVICE LIVES OF OTHER UTILITIES TO DETERMINE**

17   **APPROPRIATE SERVICE LIVES FOR CENTERPOINT HOUSTON.**

18 A.   Mr. Garrett argues, incorrectly, that the Company's data is unreliable for certain

19   accounts because the CI or REI results are low and, because of this, that using other

20   utilities would produce more accurate results.

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[16] *See, e g., Application of AEP Texas Central Company for Authority to Change Rates*, Docket No. 28840, Proposal for Decision on Remand at 58 (Nov. 16, 2004).
[17] *City of Amarillo v. Railroad Commission of Texas*, 894 S.W.2d 491, 501 (Tex. App.—Austin 1995, writ denied).

1	Q.	DO YOU HAVE ANY CONCERNS WITH THIS RATIONALE.
2	A.	Yes. First and foremost, the Company's data is not unreliable and low CI results
3		are not an indicator of the reliability of the Company's records. But, even when
4		the CI results show low CIs for an account, the appropriate practice is not to look
5		to other utilities but to use the analyst's "*knowledge about the property in the*
6		*account*" [18] to determine a life curve.
7	Q.	**DID MR. GARRETT EVALUATE THE COMPANY'S ACTUAL PLANT**
8		**ASSETS?**
9	A.	No. In fact, he criticizes this practice, arguing that I should not rely on information
10		provided by the Company because, he asserts, it is biased. As I discuss later in my
11		testimony, this accusation is baseless.
12	Q.	**DOES MR. GARRETT POINT TO ANY SPECIFIC COMMISSION**
13		**PRECEDENT OR AUTHORITIES FOR HIS RELIANCE ON OTHER**
14		**UTILITIES?**
15	A.	No.
16	Q.	**WHEN IS IT REASONABLE TO RELY ON THE APPROVED SERVICE**
17		**LIVES OF OTHER UTILITIES WHEN ANALYZING DEPRECIATION**
18		**RATES?**
19	A.	I believe that it is only reasonable to utilize other utilities service lives if (1) the
20		subject utility has a significant lack of plant data, which is not the case here as I
21		explain more below; and (2) the assets of the other utilities and conditions to which
22		those assets are subject over time are comparable to that of the applicant, which
23		would require a thorough analysis that Mr. Garrett did not appear to perform. I

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[18] F. K. Wolf and W.C. Fitch, *Depreciation Systems* at 249-250 (1994) (emphasis added).

1   have only relied on the approved service lives of other utilities in the very rare

2   circumstances in which both of these factors are at issue. In fact, the only time I

3   have seen this done is in developing net salvage rates for the new market entrant

4   transmission-only electric utilities, Lone Star Transmission, Wind Energy

5   Transmission Texas, and Cross Texas Transmission.[19] Those companies were new

6   market entrants without any operating history or in-serve assets upon which to set

7   depreciation rates. Authoritative depreciation texts recognize that depreciation

8   rates are specific to each utility as a result of the utility's own life and net salvage

9   experience.

10   Finally, while a depreciation analyst may consider the experience of utilities

11   with comparable assets or operating conditions in a broad sense to confirm the

12   validity of results, specific average service life adjustments should not be based on

13   a comparison with other utilities. To determine a specific average service life for a

14   specific account for a specific company requires that the depreciation analyst rely

15   on company-specific data.

16 Q. **PLEASE EXPLAIN THE DIFFERENT OPERATIONAL DEMANDS AND**

17   **ENVIRONMENT THAT ARE UNIQUE TO CENTERPOINT HOUSTON'S**

18   **SERVICE AREA.**

19 A. Service lives will vary among utilities for a number of reasons. Different

20   operational demands may impact the average service life of an account. The extent

21   of the service area or the population density may impact the average service lives

22   of particular accounts among utilities. Geographic and environmental variables

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[19] See PUC Dockets 40020, 40604, 40606, 42649. 43950, and 44746.

1   will also impact the average service life of an account. Even within Texas there are

2   wide geographic differences that may impact operations. For example, the

3   experience of a utility operating in the Gulf Coast region would be different from a

4   utility operating in West Texas. Indeed, the experience of utilities in the Gulf Coast

5   region would be different from utilities operating in Oklahoma. This underscores

6   the analytical risks of conducting depreciation analysis by conducting informal

7   surveys of a few hand-picked utilities.

8 Q   **WHICH UTILITIES DID MR. GARRETT USE IN HIS ANALYSIS?**

9 A.   Southwestern Electric Power Company ("SWEPCO"), Oklahoma Gas and Electric

10   Company ("OG&E"), and Public Service Company of Oklahoma ("PSO").

11 Q. **HOW DID MR. GARRET DETERMINE THESE UTILITIES WERE**

12   **COMPARABLE TO CENTERPOINT HOUSTON AND APPROPRIATE TO**

13   **USE AS A BASIS FOR HIS RECOMMENDED SERVICE LIVES?**

14 A.   Mr. Garrett does not identify any particular method or rationale behind his reliance

15   on these specific utilities except that they are some of the utilities whose rates were

16   set in proceedings in which he was a participant. He did not produce any evidence

17   that demonstrates how these utilities' plant assets are similar to the Company's or

18   how their operating environments are comparable to the conditions CenterPoint

19   Houston's assets are subject to in the Gulf Coast region of Texas. He did not

20   analyze these utilities' retirement units or capitalization policies to determine if they

21   are comparable to CenterPoint's.[20] In fact, he presents very little actual plant data

22   from those utilities, from which this Commission could determine how they are

23   comparable to the Company's assets.

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[20] Exhibit R-DAW-1 (TCUC Response to CEHE 2-7).

1   Q.   **DID MR. GARRETT PROVIDE ANY OTHER EVIDENCE THE**

2   **REGULATORY AUTHORITIES MAY HAVE RELIED ON TO**

3   **DETERMINE THE SERVICE LIVES THAT WERE APPROVED FOR**

4   **THESE UTILITIES?**

5   A.   No. He did not produce any depreciation study or other evidence from these

6   proceedings to understand why the regulatory authorities approved the service lives

7   they did. He simply asks this Commission to adopt those prior determinations.

8   Q.   **DO YOU HAVE CONCERNS ABOUT DETERMINING THE COMPANY'S**

9   **SERVICE LIVES BASED ON WHAT WAS APPROVED FOR A**

10   **DIFFERENT UTILITY?**

11   A.   Yes. Any number of factors can affect a Commission's decision to approve a

12   specific service life for a utility's assets. Because we do not have the underlying

13   data or specific depreciation studies for those utilities that were used by the OCC

14   or the PUCT, we do not really know the basis for the life determinations and

15   Mr. Garrett did not appear to have performed this analysis himself. Rather than re-

16   litigate another agency's or this agency's prior decisions involving another utility,

17   the Commission should utilize the specific data that is available to support the

18   Company's service lives here. I would consider it a dangerous precedent to

19   regularly base service lives on those approved for other utilities, outside of the rare

20   circumstances I identified above.

21   Q.   **DO YOU BELIEVE THE THREE UTILITIES ON WHICH HE RELIES**

22   **ARE COMPARABLE TO CENTERPOINT HOUSTON?**

23   A.   No. While I don't have the information to compare relevant information such as

24   the types of assets, asset mix, capitalization policy, and operational philosophy,

25   simply looking at the size and geographical location and environment would

1		suggest that these are not utilities that should be used in life comparisons. Simply
2		considering the harsh coastal environment that exists for many of CenterPoint's
3		assets would suggest that CenterPoint's lives should be shorter than those of the
4		utilities Mr. Garrett relies on. Moreover, Mr. Garrett's data sample is very limited
5		because it only includes one Texas utility. To the extent I thought it was necessary
6		to rely on other utilities, I would use a much larger data sample from which to make
7		a recommendation. In this case though, relying on other utilities' approved service
8		lives was not necessary.
9	Q.	**GIVEN HIS SMALL "PEER GROUP", DOES MR. GARRETT**
10		**RECOGNIZE THERE ARE DIFFERENCES AMONG UTILITIES WITH**
11		**REGARDS TO THE FORCES OF RETIREMENT?**
12	A.	Yes. In response to discovery, he recognizes that forces of retirement may affect
13		the average life of assets to varying degrees and that such forces of retirement might
14		include wear and decay, accidents, action of the elements, obsolescence, disasters,
15		regulatory requirements, and managerial discretions, among other things.[21] But, as
16		I stated before, he did not even review any of these factors to determine if his
17		comparisons are appropriate.
18	Q.	**ARE MR. GARRET'S RECOMMENDATIONS HERE CONSISTENT**
19		**WITH HIS RECOMMENDATIONS IN OTHER RECENT RATE CASES?**
20	A.	No. Mr. Garrett ignores data from other Texas case he participated in that
21		contradict his recommendation, as illustrated by the following examples:
22		• He recommended extending the proposed average service life for Account 353,
23		Station Equipment, from the proposed average service life of 53 years to an
24		average service life of 56 years based on his review of the average service life
25		approved for SWEPCO and OG&E. He ignored, however, his own

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[21] Exhibit R-DAW-2 (TCUC Response to CEHE 2-13).

1 recommendation in Docket No. 48401, where he recommended that the
2 Commission adopt a 45-year life for this account for Texas-New Mexico
3 Power, Co., ("TNMP").[22]

4 • He recommended extending the proposed average service life for Account 354,
5 Towers and Fixtures from a proposed average service life of 59 years to an
6 average service life of 66 years based upon his analysis of the average service
7 life for this account approved for PSO. He ignored, however, his own
8 recommendation for TNMP in Docket No. 48401, where he proposed an
9 average service life for this account of 54 years.[23]

10 • He recommended extending the proposed average service life for Account 362,
11 Station Equipment, from a proposed average service life of 48 years to an
12 average service life of 55 years based on his analysis of the average service life
13 of this account for three other utilities. He ignored, however, his own average
14 service life recommendation for this account in a case involving TNMP where
15 he recommended a 49-year life.[24]

16 • He recommended extending the proposed average service life for Account 366,
17 Underground Conduit, from a proposed average service life of 62 years to an
18 average service life of 65 years based on his analysis of the average service life
19 of this account for three other utilities. He ignored, however, his own average
20 service life recommendation for this account in a case involving Entergy Texas
21 where he recommended a 60-year life.[25] He also ignored his own average
22 service life recommendation for this account in a case involving TNMP where
23 he recommended a 52-year life.[26]

24 **Q. WHY IS THIS IMPORTANT?**

25 A. Mr. Garrett argue that some of the Company's proposed service lives for certain

26 accounts fall well outside a "range of reasonableness" for the types of assets in

27 these accounts.[27] While I do not subscribe to Mr. Garrett's methodology of relying

28 on other electric utilities, it is at least worth noting that while he attacks my

29 recommendations for certain service lives as being unreasonably short, he

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[22] Docket No. 48401, Direct Testimony and Exhibits of David Garrett at Exhibit DJG–4.
[23] *Id.*
[24] *Id.*
[25] Docket No. 48371 Direct Testimony and Exhibits of David Garrett at Exhibit DJG–4.
[26] Docket No. 48401, Direct Testimony and Exhibits of David Garrett at Exhibit DJG–4.
[27] *Id.* at 27.

1   recommended even shorter lives for the same types of assets owned by another

2   utility just last year. Accordingly, I would disregard Mr. Garrett's analyses of other

3   utilities' approved service lives entirely and focus on the data specific to

4   CenterPoint Houston that is contained in my depreciation study and workpapers.

5 D. **Mr. Garrett Improperly Rejected the Insight and Experience of Subject**
6   **Matter Experts Regarding the Operational Experience of the Company's**
7   **Assets.**

8 Q. **WHAT IS YOUR RESPONSE TO MR. GARRETT'S CRITICISM OF**

9   **YOUR RELIANCE ON INTERVIEWS WITH SUBJECT MATTER**

10   **EXPERTS AS PART OF YOUR STUDY?**

11 A. Incorporating operations input into an analyst's decision is critical to making a valid

12   life recommendation and the Company subject matter experts are the people with

13   the most experience and familiarity with the Company's assets. Mr. Garrett gives

14   no indication in his testimony, exhibits, or workpapers that he reviewed or

15   incorporated any information from Company experts in his life recommendations.

16   Rather, he dismisses this information out of hand because he claims, without

17   evidence, the Company subject matter experts would be too "biased" to provide

18   reliable information.[28] I disagree with this accusation wholeheartedly.

19 Q. **PLEASE EXPLAIN.**

20 A. Information provided by subject matter experts on the specific plant and equipment

21   being studied is of critical importance in the depreciation study process. In its 1996

22   edition of the publication *Public Utility Depreciation Practices*, NARUC advises

23   against strict reliance on historical data and fitting, stating:[29]

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[28] Direct Testimony and Exhibits of David Garrett at 18-19.
[29] NARUC, *Public Utility Depreciation Practices* at 126 (1996) (emphasis added).

1   Depreciation analysts should avoid becoming ensnared in the
2   historical life study and relying solely on mathematical solutions.
3   The reason for making an historic life analysis is to develop a
4   sufficient understanding of history in order to evaluate whether it is
5   a reasonable predictor of the future. The importance of being aware
6   of circumstances having direct bearing on the reason for making an
7   historical life analysis cannot be understated.... The analyst should
8   become familiar with the physical plant under study and its
9   operating environment, including **talking with the field people**
10   **who use the equipment being studied.**

11   In other words, discussing with operational personnel and engineers the failure

12   modes, changes in usage, replacement programs, issues with specific assets and

13   expectations for when they will need to replace specific assets are not, in my

14   opinion from conducting those interview for over 30 years, subject to bias as

15   Mr. Garrett claims. And the information gleaned from these discussions will allow

16   the analyst to understand more than just the accounting data but also the assets

17   themselves.   This allows better informed judgment in making life selections.

18   Accordingly, it is not only standard practice to rely on subject matter experts, it is

19   a necessary practice recommended by the experts in the field. Comments from the

20   interviews I conducted were incorporated in my study and included in the

21   workpapers to my study.

22 Q. **WHY IS THE INFORMATION YOU GATHER FROM A SUBJECT**

23   **MATTER EXPERT IMPORTANT?**

24 A. The importance may be illustrated with the following example. If the majority of

25   the dollars in a particular account are associated with assets that have projected

26   lives that lie between 20 and 40 years, an overall life indication for the account of

27   60 years would not be reasonable. This is true even if a particular statistical curve

28   match mechanically produces a 60-year overall life. Here the statistical results may

1   incorrectly suggest a longer theoretical life than experienced in reality. A reason

2   that the statistics may yield misleading theoretical results is related to the pace of

3   retirements. In this example, the assets may not yet be retiring in large quantities.

4   That is because we are observing the experience early in the life of the assets.

5   Stated simply, the full life-cycle of assets is not yet visible in the mathematical

6   calculations. While the calculations themselves may be accurate, in this case they

7   are not accurately reflecting the real life expectation of the account because of the

8   young age of the actual assets in the account. The key point here is that

9   recommending the output of a statistical model without validating that output

10   against operational realities or even reasonable norms is not an appropriate way to

11   set asset lives.

12   Q.   **PLEASE EXPLAIN HOW YOU INCORPORATED INFORMATION**

13   **FROM THE SUBJECT MATTER EXPERTS IN YOUR DEPRECIATION**

14   **STUDY.**

15   A.   As I explained in my direct testimony and study, I met with Company personnel to

16   discuss various operating and maintenance practices and expectations; past,

17   present, and future projects; and other account specific information that was

18   relevant to life and net salvage expectations in the future. The information from

19   the subject matter experts generally validated the analytical results, and in some

20   cases, explained why lives were possibly changing and gave operational support

21   for my recommendations.

1   Q.   **DID MR. GARRETT UTILIZE OR RELY ON ANY OF THIS**

2   **INFORMATION IN MAKING HIS RECOMMENDATIONS?**

3   A.   No. Mr. Garrett clarified in response to discovery that he did not conduct any field

4   visits or interviews with Company personnel or rely on the field interviews and

5   interview I conducted.[30]

6   Q.   **HOW DO YOU ENSURE THAT THE INFORMATION YOU RECEIVE**

7   **FROM COMPANY SUBJECT MATTER EXPERTS IS OBJECTIVE?**

8   A.   I rely on my actuarial and SPR analysis and my engineering knowledge and

9   experience when evaluating asset lives and use information from subject matter

10   experts to provide additional data with which to make my recommendations. If a

11   life for a specific asset suggested by a subject matter expert is shorter or longer than

12   my analysis suggests, I would conduct more detailed discussion with the subject

13   matter experts to reconcile the life expectations and assess an appropriate service

14   life that satisfies my analysis and the expectations of those who work with the assets

15   regularly. As discussed in following sections, the life selections made by

16   CenterPoint Houston are supported both by my analysis and by subject matter

17   expert input.

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[30] Exhibit R-DAW-3 (TCUC Response to CEHE 2-1); Exhibit R-DAW-4 (TCUC Response to CEHE 2-2).

1   IV.   SPECIFIC ACCOUNT ANALYSIS

2   A. Account 353 Station Equipment

3   Q.   PLEASE COMPARE YOUR RECOMMENDATION FOR ACCOUNT 353,

4   TRANSMISSION STATION EQUIPMENT, WITH MR. GARRETT'S

5   RECOMMENDATION.

6   A.   Mr. Garrett agrees that the service life for this account is longer than the current

7   service life. I recommend increasing the existing service life for Account 353,

8   which is currently 47 R1, to a 53 R0.5. This represents an increase of 6 years.

9   Mr. Garrett proposes 56 R0.5, which is an increase of 9 years over the existing and

10   3 years beyond my recommendation.

11   Q.   DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 56

12   R0.5 CURVE?

13   A.   No. First, as I have already noted, Mr. Garrett makes his life selection (improperly)

14   to match the approved life of OG&E. As explained previously, I disagree with this

15   approach and will not reiterate my concerns about the inherent flaws of that

16   approach here. Second, Mr. Garrett's disregard of the Company-specific SPR

17   analysis is based on a flawed understanding of the use of SPR. He throws out the

18   SPR analysis because the CI is poor but, in doing so, he only looks at the 93-year

19   band. As discussed earlier, the 30-year band exhibits an excellent CI and is

20   valuable in determining the life for this asset group. Mr. Garrett does not appear to

21   have even considered it. Third, Mr. Garrett does not appear to take into

22   consideration the life expectations for the specific assets in the account.

1   Q.   **WHAT DO THE SPR RESULTS FOR ACCOUNT 353 SHOW?**

2   A.   The table below provides a summary result for all bands that are approaching the

3   width or wider than the currently approved 47-year service life. The SPR method

4   works by finding the closest average service life for any given curve that matches

5   the data. In the case of the R0.5 curve, the best match in multiple bands is 52.6

6   years, not the 56-year life Mr. Garrett recommends. Mr. Garrett's choice of a

7   56-year life is not even the closest match for an R 0.5.

8   SPR Results Account 353

	Company Proposed 53 R0.5				TCUC Proposed 56 R0.5		
Band Width	Average Service Life	CI	REI		Average Service Life	CI	REI
Overall band	52.60	25.78	92.24		56.00	23.13	88.48
90 Year	52.60	26.21	92.24		56.00	23.51	88.48
80 Year	52.60	27.79	92.24		56.00	24.93	88.48
70 Year	52.60	29.74	92.24		56.00	26.66	88.48
60 Year	52.60	33.35	92.24		56.00	29.65	88.48
50 Year	52.60	42.95	92.25		56.00	36.85	88.48
40 Year	52.60	67.12	92.25		56.00	52.30	88.48
30 Year	53.20	125.08	91.53		56.00	78.28	88.48

9   Mr. Garrett's proposed curve produces a lower CI and REI. Thus, there is no

10   evidence to support adopting his recommendation.

11   Q.   **IS MR. GARRETT'S CRITIQUE OF THE SPR RESULTS FOR THIS**

12   **ACCOUNT VALID?**

13   A.   No. As discussed earlier, the low CI in the bands is an indication of changing life

14   characteristics for the assets in this account. It is no reason to reject the Company's

15   specific data as being unreliable, as Mr. Garrett argues. In fact, the CI and REI for

1   the 40-year band produce a good CI and excellent REI that is much higher than

2   Mr. Garrett's proposed curve for the same period. Also, based on discussions with

3   Company subject matter experts, the assets in this account are incorporating more

4   electronics and newer style breakers, which have a shorter expected life, as

5   explained in my direct testimony and depreciation study. 345kV breakers, for

6   instance, are being replaced in the 30-35 year range.[31] Therefore, reviewing

7   multiple bands is imperative in analyzing an account like this. Moreover, while I

8   am recommending a service life of 53 years for this account, my interview with

9   Company personnel suggested an even shorter service life.

10 Q. **DO YOU HAVE ANY OTHER OBSERVATIONS REGARDING**

11   **MR. GARRETT'S RECOMMENDATION?**

12   Yes. Mr. Garrett did not provide any explanation or support for why the additional

13   increase in life (above the indications from the SPR analysis) would be

14   operationally justified, and his adjustment appears to be focused on his conclusion

15   that the Commission should adjust the average service life in this account based

16   upon the average service life approved for SWEPCO and OG&E. The average

17   service life for this account should be based on the results of the depreciation study

18   conducted for CenterPoint Houston, the insight of Company subject matter experts,

19   the evidence and data presented in this case.

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[31] Exhibit DAW-1 at 27.

1	Q.	IS YOUR RECOMMENDED SERVICE LIFE "REMARKABLY SHORT"
2		COMPARED TO WHAT AN ANALYST WOULD EXPECT FOR THIS
3		ACCOUNT?

4   A.   No. Moreover, Mr. Garrett recommended a 45-year life with a R2.5 dispersion for

5   this account for TNMP.[32]

6   Q.   IS YOUR SERVICE LIFE AND DISPERSION CURVE FOR THIS

7   ACCOUNT REASONABLE?

8   A.   Yes.

9   B. **Account 354 Towers and Fixtures**

10   Q.   PLEASE COMPARE YOUR RECOMMENDATION FOR ACCOUNT 354,

11   TRANSMISSION TOWERS AND FIXTURES WITH MR. GARRETT'S

12   RECOMMENDATION.

13   A.   I recommend decreasing the existing service life for Account 354, which is

14   currently 60 R4, to a 59 R2.5. This represents a decrease of 1 year. Mr. Garrett

15   proposes 66 R2, which is an increase of 6 years over the existing and 7 years beyond

16   my recommendation.

17   Q.   DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 66

18   R2 CURVE?

19   A.   No. For Account 354, Mr. Garrett relies on a single Oklahoma utility as guidance

20   for increasing the average service life parameter for this account.[33] I will not repeat

21   the flaws of his reliance on other utilities here, but will note that with the harsh,

22   coastal conditions for CenterPoint, one should expect the life for assets made of

23   steel to be shorter than those found in the middle of Oklahoma. I also observe that

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[32] Docket 48401, Direct Testimony and Exhibits of David Garrett at Exhibit DJG-4.
[33] Direct Testimony and Exhibits of David Garrett at 24.

1		he appears to ignore the fact that my service life recommendation is only one year
2		different from that adopted by one other utility he relies on, SWEPCO. Second,
3		Mr. Garrett's SPR selections do not follow the best practice guidance from
4		authoritative literature with respect to the importance of the REI in making life
5		selections and looking at multiple bands. Third, Mr. Garrett does not appear to
6		factor in the life expectations for specific assets in the account.
7	Q.	**WHAT DO THE SPR RESULTS FOR ACCOUNT 354 SHOW?**
8	A.	The table below shows summary results for all relevant bands. The currently
9		approved life is a 60-year service life.

10   Account 354 Comparison of SPR Results

Band Width	Company Proposed 59 R2.5				TCUC Proposed 66 R2		
	Average Service Life	CI	REI		Average Service Life	CI	REI
Overall band	58.70	73.17	97.88		66.30	75.00	85.95
90 Year	58.70	74.37	97.88		66.30	76.23	85.95
80 Year	58.70	78.85	97.88		66.30	80.82	85.95
70 Year	58.70	84.24	97.88		66.30	86.34	85.95
60 Year	58.70	90.74	97.88		66.30	93.00	85.95
50 Year	58.70	98.18	97.88		66.30	100.61	85.95
40 Year	58.70	106.38	97.88		66.30	108.94	85.96
30 Year	59.30	111.62	97.51		66.30	112.62	85.97

11		My proposed life produces a higher REI for all bands shown. While the difference
12		in CI between the two proposals is not material, the difference in REI is much more
13		pronounced. Given the superior REI exhibited by my proposal, there is no
14		justification to adopt Mr. Garrett's proposed life and curve.

1   Q.   **WHAT INFORMATION WAS PROVIDED BY THE COMPANY SUBJECT**

2   **MATTER EXPERT?**

3   A.   The subject matter expert suggested several elements that would shorten the service

4   life of this asset: electrical capacity upgrades, the impact on foundations of higher

5   loading, and the impact on foundations of chemical reactions. The subject matter

6   experts also provided insight regarding the replacement of towers, noting that

7   CenterPoint Houston will replace all or a portion of the structure when having to

8   replace the foundations. All of these factors tend to shorten the service lives.[34]

9   These are explained in more detail in my depreciation study and supporting

10   workpapers. Mr. Garrett simply ignores this insight without any explanation as to

11   why his recommended increase in life would be operationally justified.

12   Q.   **IS YOUR SERVICE LIFE AND DISPERSION CURVE FOR THIS**

13   **ACCOUNT REASONABLE?**

14   A.   Yes.

15   **C. Account 362 Station Equipment**

16   Q.   **PLEASE COMPARE YOUR RECOMMENDATION FOR ACCOUNT 362,**

17   **DISTRIBUTION STATION EQUIPMENT WITH MR. GARRETT'S**

18   **RECOMMENDATION.**

19   A.   Mr. Garrett agrees that the service life for this account should be longer than the

20   current service life. I recommend increasing the existing service life, which is

21   currently 47 R1.5, to a 48 R1. This represents an increase of 1 year. Mr. Garrett

22   proposes 55 R0.5, which is an increase of 8 years over the existing service life and

23   7 years beyond my recommendation.

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[34] Watson Exhibit DAW-1 at 29.

	Q.	DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 55
1		R0.5 CURVE?
2		

1 Q. DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 55

2   R0.5 CURVE?

3 A. No. First, as I have already noted, Mr. Garrett improperly uses the life for another

4   utility to set the average service life for this account, which should be disregarded

5   for the reasons I explained before. Second, Mr. Garrett's SPR selection provides

6   no Company-specific rationale for ignoring the highest ranked life and curve to

7   increase the life by 6 years from my recommendation. Third, Mr. Garrett does not

8   appear to factor in the life expectations for specific assets in the account as

9   communicated by Company subject matter experts.

10 Q. WHAT DO THE SPR RESULTS FOR ACCOUNT 362 SHOW?

11 A. The table below shows summary results for all relevant bands. The currently

12   approved life is a 47 year service life.

13   Account 362 Comparison of SPR Results

	Company Proposed 48 R1				TCUC Proposed 55 R0.5		
Band Width	Average Service Life	CI	REI		Average Service Life	CI	REI
Overall band	48.10	59.58	99.63		54.50	55.34	89.69
90 Year	48.10	60.56	99.63		54.50	56.25	89.69
80 Year	48.10	64.13	99.63		54.50	59.56	89.69
70 Year	48.10	68.33	99.63		54.50	63.47	89.69
60 Year	48.10	73.44	99.63		54.50	68.27	89.69
50 Year	48.10	80.80	99.63		54.50	75.21	89.69
40 Year	48.10	88.82	99.63		54.50	82.14	89.69
30 Year	48.10	94.05	99.63		54.50	85.93	89.69

14   My proposed curve and life produce CI's that are in the good or excellent range

15   with an REI close to 100. Additionally, in every band, my recommendation has a

16   higher CI and REI than that of Mr. Garrett. There is no Company-specific

1   justification (and none provided by Mr. Garrett) to adopt Mr. Garrett's proposed

2   life and curve.

3 Q.   **WHAT OPERATIONAL INFORMATION SHOULD BE UNDERSTOOD**

4   **FOR THIS ACCOUNT?**

5 A.   Company interviews indicate plans to replace switchboard panels, as well as

6   moving to a higher level of electronics in substations. These factors may serve to

7   limit asset life and tend to create downward pressures on life in the future.[35] Many

8   of the same factors as discussed earlier for transmission substations would be

9   exhibited for distribution substations as well. It should also be understood by an

10   engineer or analyst who studies the life-cycle of substation assets that while the

11   assets in distribution substations are relatively similar to those in transmission

12   substations, the life of assets in a distribution substation would be shorter than those

13   in transmission substations. For example, distribution-level assets see more fault

14   current than transmission and will, consequently, have a shorter life. My

15   recommended life provides a clear difference between transmission and

16   distribution (53 to 48 years, respectively) while Mr. Garrett's does not (56 to 55

17   years, respectively).

18 Q.   **IS YOUR SERVICE LIFE AND DISPERSION CURVE FOR THIS**

19   **ACCOUNT REASONABLE?**

20 A.   Yes.

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[35] Exhibit DAW-1 at 41.

1   D. Account 364 Poles Towers and Fixtures

2 Q. PLEASE COMPARE YOUR RECOMMENDATIONS FOR ACCOUNT 364,

3   POLES, TOWERS, AND FIXTURES TO MR. GARRETT'S

4   RECOMMENDATION.

5 A. I recommend retaining the existing service life for Account 364, which is currently

6   35 R0.5. Mr. Garrett proposed 45 R0.5 which is an increase of 10 years over the

7   existing life..

8 Q. DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 45

9   R0.5 CURVE?

10 A. No. First, as I have already noted, Mr. Garrett's reliance on his analysis of other

11   utilities is inappropriate and should be disregarded. Second, while the CIs are low,

12   there is no operational reason that the life should increase by 10 years (nearly 30

13   percent). All operational indications suggest that the changing life characteristics

14   that are exhibited by the low CIs are reducing the life, not increasing the life

15   dramatically as Mr. Garrett recommended. Third, Mr. Garrett does not appear to

16   factor in the Company-specific life expectations for these assets in the account as

17   communicated by Company subject matter experts.

18 Q. WHAT DO THE SPR RESULTS FOR ACCOUNT 364 SHOW?

19 A. The table below shows a comparison of my proposed curve to Mr. Garrett's. The

20   SPR method works by finding the closest average service life for any given curve

21   that matches the data. In the case of Mr. Garrett's recommended R0.5 curve, the

22   best-fitting life in multiple bands is in line with my recommendation (35.4 years),

23   not the 45 years Mr. Garrett recommends.

24   SPR Results Account 364

Band Width	Company Proposed 35 R0.5			TCUC Proposed 45 R0.5		
	Average Service Life	CI	REI	Average Service Life	CI	REI
Overall band	35.40	16.43	100.00	45.00	7.31	100.00
100 Year	35.40	16.84	100.00	45.00	7.49	100.00
90 Year	35.40	17.74	100.00	45.00	7.89	100.00
80 Year	35.40	18.78	100.00	45.00	8.36	100.00
70 Year	35.40	20.01	100.00	45.00	8.90	100.00
60 Year	35.40	21.84	100.00	45.00	9.54	100.00
50 Year	35.40	23.36	100.00	45.00	10.31	100.00
40 Year	35.40	25.90	100.00	45.00	11.27	100.00
30 Year	35.80	32.39	100.00	45.00	12.54	100.00

1   Since Mr. Garrett's proposed curve produces a lower CI (none of which rise above

2   12), there is no reason to adopt his recommendation.

3   **Q.**   **WHY IS YOUR RECOMMENDATION MORE APPROPRIATE?**

4   A.   Mr. Garrett states, "The 35 R0.5 curve Mr. Watson selected has a CI score of only

5   16, which under the applicable SPR method criteria would be a "poor" fit.[36] While

6   this is true for the 105-year band, it increases as the bands shorten. As I explained

7   earlier in my testimony, the authoritative treatise *Depreciation Systems*

8   acknowledges this reality when it explains that "low conformance indexes most

9   often result because the life characteristics of the property have changed over

10   time."[37] Based on my analysis of this account, it appears that the low CI in the

11   bands is an indication of changing life characteristics, as explained in more detail

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[36] Direct Testimony and Exhibits of David Garrett at 26:7-8.
[37] F.K. Wolf and W. C. Fitch, *Depreciation Systems* at 249 (1994).

1   in my depreciation study and workpapers. While Mr. Garrett does not provide

2   information on whether his "peer group" uses significant levels of steel or concrete

3   poles (which would significantly increase his "peer group" lives), CenterPoint

4   Houston uses predominantly wood. Also, the wood poles are being impacted by

5   high water tables, high acidity levels in the soil, other coastal conditions and high

6   humidity. The use of new materials for newer poles (both new-growth trees and

7   CCA treatments) can also shorten lives. Additional pole contacts and inspecting

8   poles on a 10-year cycle (starting 15 years ago and seeing a 7% to 10% reject rate)

9   are activities that will tend to decrease the life. With these operational realities, it

10   is not rational to increase the life by 10 years as Mr. Garrett recommends. Further,

11   even though nearly every life in the SPR results are beginning to indicate a shorter

12   life than currently approved, my recommendation conservatively recommended

13   retaining the existing life due to the lower CIs. Finally, since Mr. Garrett's

14   proposed curve produces a lower CI and REI, there is no reason to adopt his

15   recommendation and many reasons reject his recommendation.

16   Q.   **IS YOUR SERVICE LIFE AND DISPERSION CURVE FOR THIS**

17   **ACCOUNT REASONABLE?**

18   A.   Yes.

1   **E. Account 365 Overhead Conductor and Devices**

2   **Q.**   **PLEASE DESCRIBE YOUR RECOMMENDATION FOR ACCOUNT 365,**

3   **OVERHEAD CONDUCTORS AND DEVICES TO MR. GARRETT'S**

4   **RECOMMENDATION.**

5   **A.**   I recommend decreasing the existing service life for Account 365, which is

6   currently 40 R0.5, to a 38 R0.5. This represents a decrease of 2 years. Mr. Garrett

7   proposes 40 R0.5, which retains the current life and is 2 years beyond my

8   recommendation.

9   **Q.**   **DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 40**

10   **R0.5 CURVE?**

11   No. First, as I have already noted, Mr. Garrett makes improper use of the analysis

12   of other utilities in making his life selection, which should be disregarded for the

13   reasons I explained before. Second, Mr. Garrett retains the existing life in spite of

14   the Company-specific indications that the life is decreasing due to the increasing

15   proportion of electronics in the account and the shorter life exhibited from all SPR

16   indications. He also does not appear to consider the harsher environment on the

17   coast where CenterPoint assets would operate.

18   **Q.**   **WHAT DO THE SPR RESULTS FOR ACCOUNT 365 SHOW?**

19   **A.**   The table below shows a comparison of my proposed curve to Mr. Garrett's. The

20   SPR method works by finding the closest average service life for any given curve

21   that matches the data. In the case of the R0.5 curve, the best match in multiple

22   bands is 37.7 years, not the 40 years Mr. Garrett recommends.

23   SPR Results Account 365

	Company Proposed 38 R0.5				TCUC Proposed 40 R0.5		
Band Width	Average Service Life	CI	REI		Average Service Life	CI	REI
Overall band	37.70	20.93	100.00		40.00	17.73	100.00
100 Year	37.70	21.45	100.00		40.00	18.16	100.00
90 Year	37.70	22.60	100.00		40.00	19.14	100.00
80 Year	37.70	23.93	100.00		40.00	20.27	100.00
70 Year	37.70	25.53	100.00		40.00	21.62	100.00
60 Year	37.70	27.43	100.00		40.00	23.23	100.00
50 Year	37.70	29.83	100.00		40.00	25.24	100.00
40 Year	37.70	34.08	100.00		40.00	28.58	100.00
30 Year	38.00	44.22	100.00		40.00	35.72	100.00

1   As shown above, since Mr. Garrett's proposed curve produces a lower CI (most of

2   which are in the poor range), there is no Company-specific evidence to support

3   adopting his recommendation. As SPR analysis would require, reviewing bands

4   less than the full band demonstrates that the CIs in my recommendation move into

5   the fair range and even approach the good range. This movement refutes

6   Mr. Garrett's insistence on throwing out Company-specific data and indications.

7   Finally, my proposed life is the highest ranked curve in each band—above what is

8   recommended by Mr. Garrett in every band.

9   **Q.**   **IS MR. GARRETT'S CRITIQUE OF THE SPR RESULTS FOR THIS**

10   **ACCOUNT VALID?**

11   A.   No. Mr. Garrett states, "[t]he fact that a particular curve is the 'top ranked' in terms

12   of either the CI or REI scale is immaterial if the result is not reliable. In this case,

13   the Iowa curve selected by Mr. Watson results in a 'poor CI score of only 21, which

1   means that the SPR analysis for this account is unsatisfactory and unreliable."[38] As

2   explained before, the authoritative treatise *Depreciation Systems* acknowledges

3   uniformly low conformance indexes most often indicate changing life

4   characteristics of the property in the account, not that the data is inherently

5   unreliable; moreover, it states that "[t]he analyst must rely on judgment to select a

6   curve type and average age that are consistent with other knowledge about the

7   property in the account."[39] As explained below, the lower CI in the bands is an

8   indication of changing life characteristics, and there is no reason to reject the

9   Company's specific data as Mr. Garrett recommends.

10   Q.   **WHAT COMPANY-SPECIFIC INFORMATION SUPPORTS CHANGING**

11   **LIFE CHARACTERISTICS?**

12   A.   Discussions with Company engineers indicated that insulated wire lasts only as

13   long as the insulation. While earlier-generation insulated wire was prone to failure,

14   Company engineers estimate that the insulated wire now being used could allow

15   current conductors to last 40 years. Other factors, such as lightning strikes, wind,

16   automobile strikes to poles and environmental conditions will have a dampening

17   effect on the life regardless of the insulated wire being used. The increasing level

18   of electronic equipment (such as sensors, motors and sectionalizing equipment with

19   a much shorter life) in the account is providing downward pressure on the life of

20   the account.[40] Additionally, nearly every curve in the SPR analysis reflects a life

21   shorter than the existing approved life.

---

[38] Direct Testimony and Exhibits of David Garret at 28, 21-24.
[39] F.K. Wolf and W. C. Fitch, Depreciation Systems at 29 (1994).
[40] Exhibit DAW-1 at 44.

1   Q.   DOES YOUR RECOMMENDED SERVICE LIFE REFLECT THE

2   INFORMATION PROVIDED BY THE COMPANY AND YOUR SPR

3   ANALYSIS?

4   A.   Yes. And for these reasons, my recommendation is reasonable and should be

5   adopted.

6   F.   **Account 366 Underground Conduit**

7   Q.   PLEASE COMPARE YOUR RECOMMENDATIONS FOR ACCOUNT 366,

8   UNDERGROUND   CONDUIT   TO   MR.   GARRETT'S

9   RECOMMENDATION.

10 A.   Mr. Garrett agrees that the service life for this account is longer than the current

11   service life. I recommend increasing the existing service life, which is currently 37

12   S6, to a 62 R2.5. This represents a significant increase of 25 years. Mr. Garrett

13   proposes a 65 S1, which is an increase of 28 years over the existing and 3 years

14   beyond my recommendation.

15 Q.   DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 65

16   S1 CURVE?

17 A.   No. First, as I have already noted, Mr. Garrett inappropriately recommends a life

18   based upon the analysis of other utilities, which should be disregarded for the

19   reasons I explained before. Second, there is absolutely no basis for Mr. Garrett to

20   ignore the Company-specific SPR analysis. The CI and REI statistics are both in

21   the excellent range. As shown below, my recommendation is a far better selection

22   based on actual Company history. Third, Mr. Garrett does not appear to factor in

23   the life expectations specific to CenterPoint Houston and the Gulf Coast operating

24   environment. Instead, he believes the operating characteristics of other dissimilar

1   utilities are more appropriate for CenterPoint Houston than its own data and

2   characteristics.

3 Q. **WHAT DO THE SPR RESULTS FOR ACCOUNT 366 SHOW?**

4 A.   The table below shows summary results for all relevant bands in the SPR analysis.

5   The currently approved life is a 37-year service life.

6   Account 366 Comparison of SPR Results

Band Width	Company Proposed 62 R2.5				TCUC Proposed 65 S1		
	Average Service Life	CI	REI		Average Service Life	CI	REI
Overall band	61.90	188.72	99.48		64.90	129.15	94.06
100 Year	61.90	193.37	99.48		64.90	132.33	94.06
90 Year	61.90	203.78	99.48		64.90	139.45	94.06
80 Year	61.90	215.98	99.48		64.90	147.80	94.06
70 Year	61.90	230.66	99.48		64.90	157.84	94.06
60 Year	61.90	248.55	99.48		64.90	170.03	94.06
50 Year	61.90	271.89	99.48		64.90	185.62	94.06
40 Year	61.90	302.27	99.48		64.90	205.31	94.06
30 Year	61.90	342.16	99.48		64.90	230.58	94.06

7   My proposed life produces a much higher CI and REI than Mr. Garrett's proposal.

8   There is no justification to adopt Mr. Garrett's proposed life and curve which are

9   far inferior to my recommendation.

10 Q. **IS MR. GARRETT'S RECOMMENDED DISPERSION REASONABLE?**

11 A.   No. The graph below compares our two recommended curves for the full life cycle.

12   As shown in the graph, the last retirement in my 62-R2.5 is approximately 110

13   years, whereas Mr. Garrett's 65-S1 will have assets surviving to nearly age 130.

1   While 110 years is a long time for conduit to exist, it is much more difficult to

2   support any asset in this account lasting nearly 130 years.

CenterPoint Account 366

Legend: ● 62 R2.5 ○ 65 S1

Y-axis: % Surviving (0 to 100)
X-axis: Age (0 to 130)
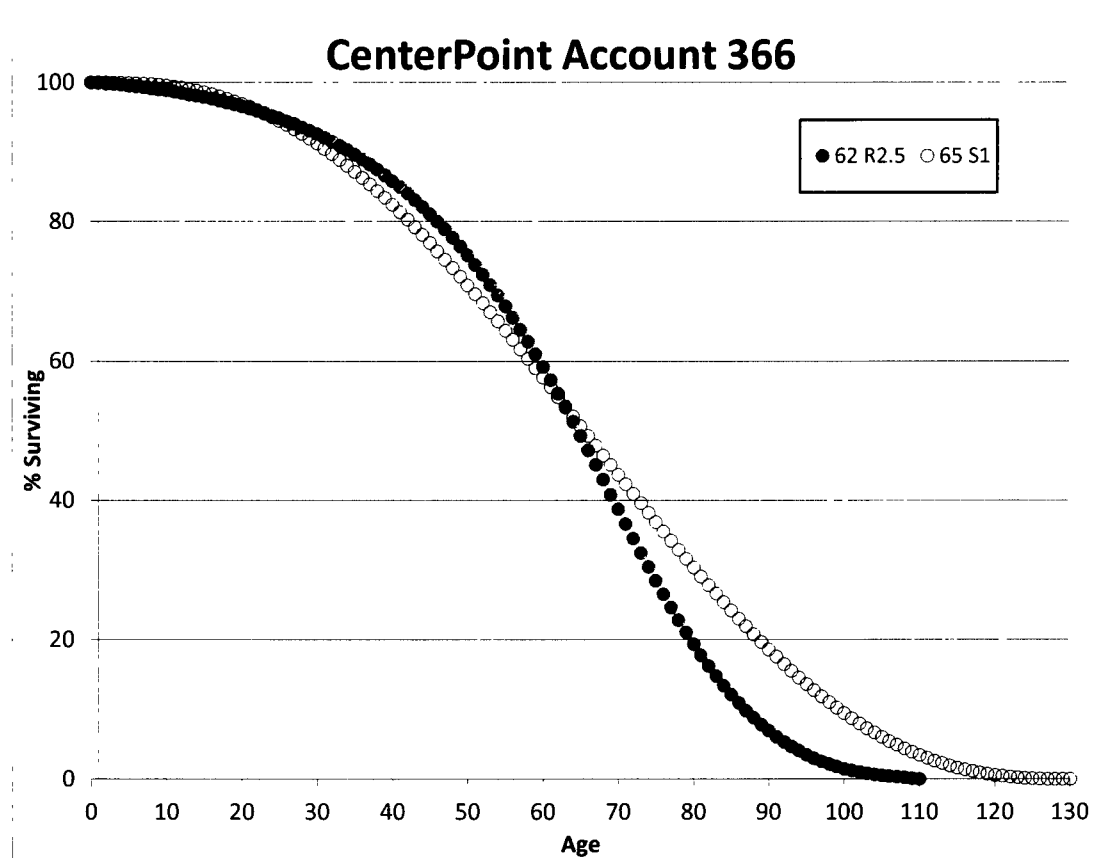
3 **Q.   DOES COMPANY-SPECIFIC INFORMATION SUPPORT EXTENDING**

4 **THE LIFE OF CONDUIT?**

5 A.   It does. In a number of cases, conductor could be removed and re-pulled in the

6   conduit, which would extend the life of the conduit as compared to the cable.[41] The

7   Company-specific analysis and the operational information all support the

8   extension in life and the SPR results clearly support my selection over that of

9   Mr. Garrett. There is no factual basis for adopting Mr. Garrett's recommendation.

10   My 62 R2.5 recommendation should be adopted.

_____

[41] Exhibit DAW-1 at 46.

1   **G. Account 367 Underground Conductor and Devices**

2 Q. **PLEASE COMPARE YOUR RECOMMENDATIONS FOR ACCOUNT 367,**

3   **UNDERGROUND CONDUCTOR AND DEVICES TO MR. GARRETT'S**

4   **RECOMMENDATION.**

5 A. Mr. Garrett agrees that the service life for this account is longer than the current

6   service life. I recommend increasing the existing service life, which is currently 31

7   R0.5, to 38 R0.5. This represents an increase of 7 years. Mr. Garrett proposes 42

8   L0, which is an increase of 11 years over the existing and 4 years beyond my

9   recommendation.

10 Q. **DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 42**

11   **L0 CURVE?**

12   No. First, as I have already noted, Mr. Garrett inappropriately relies on the analysis

13   of other companies in making his life selection which should be disregarded for the

14   reasons I explained before. Second, Mr. Garrett's SPR selection is a more poorly

15   ranked life based on Company-specific data. Third, Mr. Garrett does not appear to

16   factor in the Company-specific operating characteristics for this account such as

17   much of the underground conductor is direct buried—which would tend to shorten

18   the life as compared to cable that is in conduit.

19 Q. **WHAT DO THE SPR RESULTS FOR ACCOUNT 367 SHOW?**

20 A. The table below shows summary results for all relevant bands.

1

Account 367 Comparison of SPR Results

Band Width	Company Proposed 38 R0.5			TCUC Proposed 42 L0		
	Average Service Life	CI	REI	Average Service Life	CI	REI
Overall band	37.70	22.62	100.00	41.70	20.96	98.20
100 Year	37.70	23.18	100.00	41.70	21.48	98.20
90 Year	37.70	24.43	100.00	41.70	22.64	98.20
80 Year	37.70	25.90	100.00	41.70	24.00	98.20
70 Year	37.70	27.66	100.00	41.70	25.64	98.20
60 Year	37.70	29.83	100.00	41.70	27.64	98.20
50 Year	37.70	32.55	100.00	41.70	30.16	98.20
40 Year	37.70	35.87	100.00	41.70	33.24	98.20
30 Year	37.70	38.67	100.00	41.70	35.94	98.20

2   In every band, my proposed life produces a higher REI and CI than Mr. Garrett's

3   proposal. From an SPR analysis perspective, there is no justification to adopt

4   Mr. Garrett's proposed life and curve.

5 Q.   IS MR. GARRETT'S CRITIQUE OF THE SPR RESULTS FOR THIS

6   ACCOUNT CONSISTENT WITH HIS EARLIER POSITIONS?

7 A.   No. Mr. Garrett recommends a L0 dispersion and he states, "[t]he L0 curve is based

8   on the Company's SPR analysis."[42] The L0 curve produces CI results in the poor

9   range for bands of 80 years and longer. The CI in bands from 40 to 70 years is

10   barely above the poor range. Moreover, Mr. Garrett argues earlier in his testimony

11   that the Company's proposal should be rejected because the results produce a poor

12   CI,[43] but in this account he adopts the results from a poor CI. This inconsistent

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[42] Direct Testimony and Exhibits of David Garret at 33:1-2
[43] Id. at 21:21 (Account 353), 26:7-9 (Account 364), 28:21-24 (Account 365), 32:11-15 (Account 367).

1   position renders Mr. Garrett's recommendations suspect and undermines the

2   methodology behind his recommendations for this and the other SPR-related

3   accounts

4   Q.   IS MR. GARRETT'S DISPERSION ALSO A PROBLEM?

5   A.   Yes.   The graph below compares each curve for the full life cycle.   For my

6   recommended 38-R0.5, the last retirement will occur at approximately 80 years.

7   Mr. Garrett's 42-L0 exhibits its last retirement at nearly age 160. It is unreasonable

8   from an operational or engineering perspective to assume any asset in this account

9   will last 160 years. Accordingly, his dispersion curve is unreasonable.

CenterPoint Account 367

● 28 R1   ○ 32 L0

% Surviving vs Age
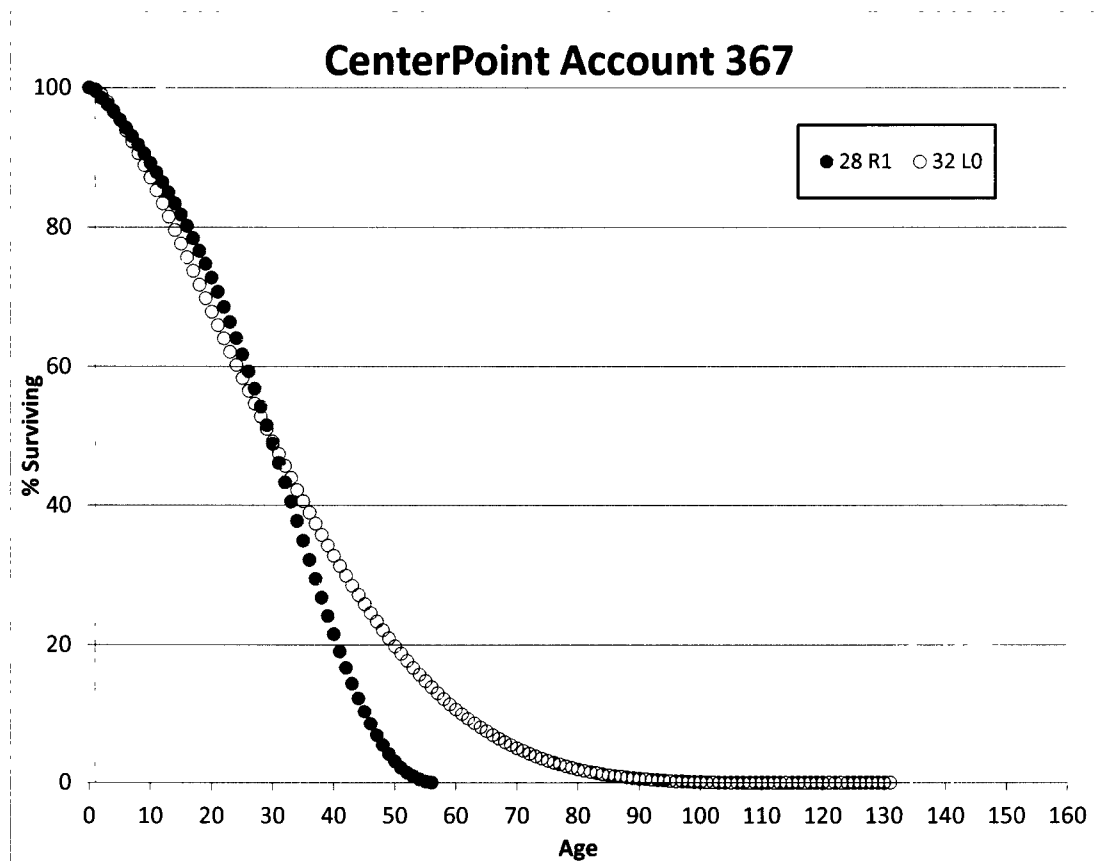
1   Q.   **DOES COMPANY-SPECIFIC INFORMATION SUPPORT YOUR LIFE**

2   **RECOMMENDATION?**

3   A.   Yes. Underground conductor life is increasing due to newer technology in cable

4   (Cross Linked Polyethylene or XLPE) better protects the cable and is more

5   technologically advanced than older cable. Moderating the increasing life with the

6   new technology is the Company's practices of direct burying cable (which can have

7   a shortening effect on life). Of note is that Mr. Garrett does not provide any

8   information related to whether his "peer group" utilities place cable in conduit or

9   direct bury. This information would be critical to understand before assuming the

10   life of the other utilities are even remotely representative of CenterPoint. Based on

11   both operational information and the results of my SPR analysis, my proposal is

12   reasonable and should be adopted.

13   H. **Account 368 Line Transformers**

14   Q.   **PLEASE COMPARE YOUR RECOMMENDATIONS FOR ACCOUNT 368,**

15   **LINE TRANSFORMERS AND MR. GARRETT'S RECOMMENDATION.**

16   A.   I recommend retaining the existing service life for Account 368, which is a 28 R1.

17   Mr. Garrett proposes 32 L0, which is an increase of 4 years over the existing life.

18   Q.   **DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 32**

19   **L0 CURVE?**

20   A.   No. First, as I have already noted, Mr. Garrett ignores Company-specific analysis

21   and inappropriately bases the average service life for this account upon the analysis

22   of other utilities. I will not repeat the flaws of that approach here. Second, Mr.

23   Garrett's choses an SPR selection that is dramatically worse than my

24   recommendation. Third, Mr. Garrett does not appear to factor in the life

1   expectations for specific assets in the account as communicated by Company

2   subject matter experts.

3 **Q.**   **WHAT DO THE SPR RESULTS FOR ACCOUNT 368 SHOW?**

4 **A.**   The table below shows summary results for all relevant bands. The currently

5   approved life is 28-years.

6   Account 368 Comparison of SPR Results

	Company Proposed 28 R1				TCUC Proposed 32 L0		
Band Width	Average Service Life	CI	REI		Average Service Life	CI	REI
Overall band	27.70	50.62	100.00		31.70	40.15	99.96
100 Year	27.70	51.87	100.00		31.70	41.14	99.96
90 Year	27.70	54.66	100.00		31.70	43.36	99.96
80 Year	27.70	57.94	100.00		31.70	45.96	99.96
70 Year	27.70	61.86	100.00		31.70	49.06	99.96
60 Year	27.70	66.42	100.00		31.70	52.65	99.96
50 Year	27.70	71.31	100.00		31.70	56.60	99.96
40 Year	27.70	77.13	100.00		31.70	60.78	99.96
30 Year	27.70	81.25	100.00		31.70	62.00	99.96
20 Year	27.90	92.68	100.00		31.70	62.03	99.96

7   While the REIs are close, there is a marked difference in the CI and where Mr.

8   Garrett's recommended L0 curve ranks compared to my proposal. Moreover, my

9   proposed curve ranks above his in each index for all bands. In addition, in the

10   shorter bands, my recommendation produces an excellent CI. There is simply no

11   justification to adopt Mr. Garrett's proposed life and curve, which is not validated
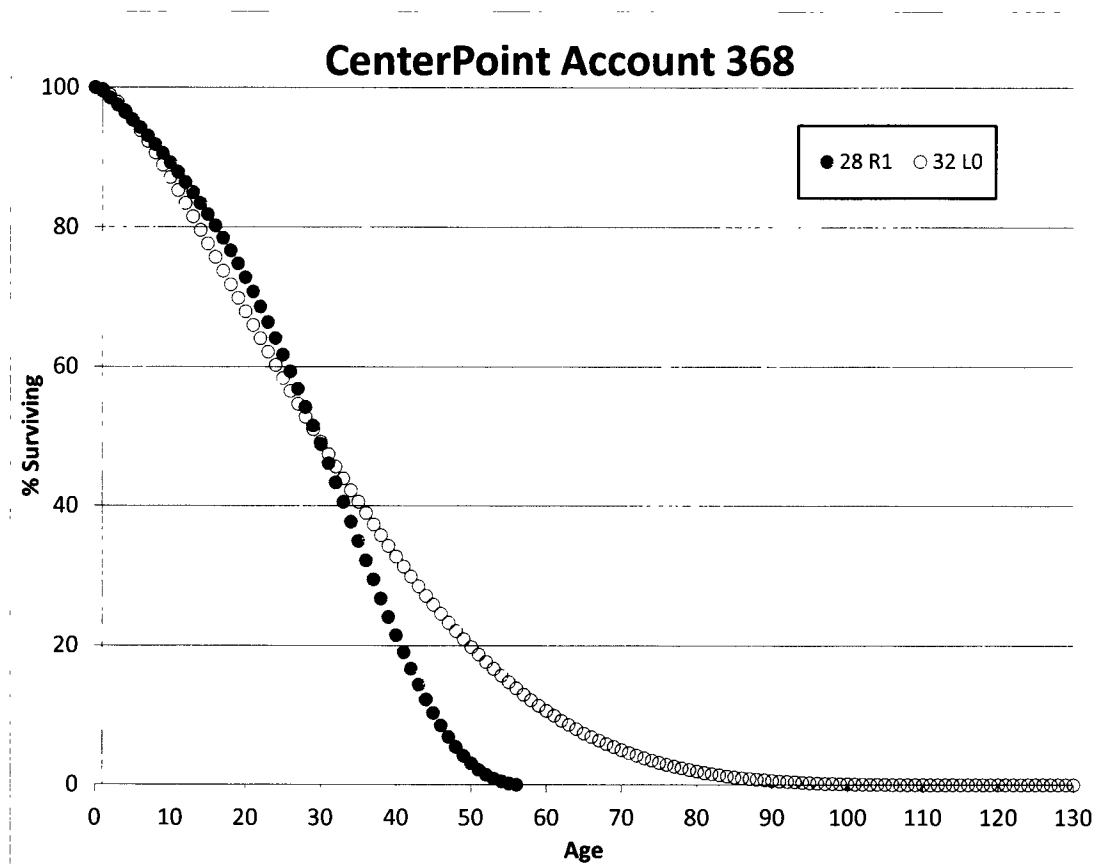
12   by Company specific analysis.

1   Q.   **IS MR. GARRETT'S CRITIQUE OF THE SPR RESULTS FOR THIS**

2   **ACCOUNT CONSISTENT WITH HIS EARLIER POSITIONS?**

3   A.   No. Mr. Garrett recommends a L0 dispersion which produces CI results in the poor

4   range for bands of 80 years and longer. The CI in bands from 40 to 70 years is

5   barely above the poor range. Earlier in his testimony,[44] Mr. Garrett rejects the

6   Company's proposal because the results produce a poor CI, but in this account he

7   adopts the results from a fair CI. The inconsistency of his approach renders Mr.

8   Garrett's recommendations suspect and undermines his SPR analysis for all other

9   accounts.

10 Q.   **ARE   THERE   ISSUES   WITH   MR.   GARRETT'S   DISPERSION**

11   **RECOMMENDATION?**

12 A.   Yes.   The graph below compares each curve for the full life cycle.   My

13   recommended life and dispersion, a 28-R1, would exhibit the last retirement at

14   approximately 60 years. Mr. Garrett's 32-L0 would have retirements occurring to

15   nearly age 130. It is difficult from an operational or engineering perspective to

16   support any asset in this account lasting nearly 130 years. This demonstrates the

17   unreasonableness of Mr. Garrett's recommendation.

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[44] Direct Testimony and Exhibits of David Garrett at 21 (Account 353), 26 (Account 364), 28 (Account 365) & 32 (Account 367).

CenterPoint Account 368

| 1 | Q. | **WHY IS COMPANY-SPECIFIC INFORMATION A BETTER INDICATION OF THE LIFE OF CENTERPOINT HOUSTON'S ASSETS IN THIS ACCOUNT?** |

1 Q. **WHY IS COMPANY-SPECIFIC INFORMATION A BETTER**

2 **INDICATION OF THE LIFE OF CENTERPOINT HOUSTON'S ASSETS**

3 **IN THIS ACCOUNT?**

4 A. Line transformers, whether pole-mounted or pad mount, are exposed to the

5 elements. The environment in the Gulf Coast region is harsh on steel and is likely

6 very different from Mr. Garrett's "peer group," which are all located in northern

7 Texas and Oklahoma. In addition, the CI and REI for this account are both in the

8 excellent range, suggesting a very high confidence in the analysis. Based on

9 specific Company information and analysis, I recommend adoption of my proposal.

1   **I.**   **Account 390 Structures and Improvements**

2   **Q.**   **PLEASE COMPARE YOUR RECOMMENDATIONS FOR ACCOUNT 390,**

3   **GENERAL STRUCTURES AND IMPROVEMENTS TO MR. GARRETT'S**

4   **RECOMMENDATION.**

5   A.   Mr. Garrett agrees that the service life for this account is longer than the current

6   service life. Based on my actuarial analysis, I recommend increasing the existing

7   service life, which is currently 40 R2, to 50 R4. This represents an increase of 10

8   years. Mr. Garrett proposes 58 R2, which is an increase of 18 years over the

9   existing and 8 years beyond my recommendation.

10   **Q.**   **DO YOU AGREE WITH MR. GARRETT'S BASIS FOR PROPOSING A 58**

11   **R2 CURVE?**

12   A.   No. First, Mr. Garrett does not appear to factor in the life expectations for specific

13   assets in this account as communicated by Company subject matter experts. My

14   depreciation study clearly states the factors that influence the life of this account:

15   Discussions with Company personnel indicated the average age of
16   the buildings, absent replacement activity, is over 40 years old. They
17   have "reskinned" a couple service centers. Roofs may last 20-25
18   years. Over the last several years, they have replaced all
19   underground tanks in this account (this happens every 20-25 years).
20   All vehicle lifts were replaced in the last several years also. Some
21   code changes have required replacement of fire sprinkler systems.
22   They have been replacing some of the building generators in the last
23   several years (in the 30-35 year old range). Most of the buildings are
24   aging so moving to 50 years is reasonable.[45]

25   Mr. Garrett fails to provide an explanation as to why the excessive increase in life

26   would be operationally justified, given these factors. Second, Mr. Garrett

27   inappropriately relies on mathematical fitting to form his recommendation. Third,

---

[45] Exhibit DAW-1 at 60.

1   to justify his recommendation, Mr. Garrett excludes a significant portion of the

2   curve and attempts to match 75% to 100% surviving, which is inconsistent with the

3   approach recommended by authoritative guidance. Finally, Mr. Garrett relies on a

4   single band to form his recommendation.

5 Q.   **DID YOU AND MR. GARRETT USE THE SAME APPROACH WHEN**

6   **DETERMINING AN AVERAGE SERVICE LIFE FOR ACCOUNT 390**

7   **GENERAL STRUCTURES AND IMPROVEMENTS?**

8 A.   Yes. Mr. Garrett and I both used actuarial analysis when developing an average

9   service life for Account 390. However, I incorporated Company-specific

10   information from operations, management, and subject matter experts and relied on

11   visual fitting between actual historical retirement data and a selected Iowa curve,

12   whereas Mr. Garrett relied on mathematical fitting[46] in his analysis, ignored

13   relevant portions of the curve[47] and disregarded all Company-specific information.

14 Q.   **IS RELYING SOLELY ON A MATHEMATICAL FITTING**

15   **APPROPRIATE WHEN PERFORMING ACTUARIAL ANALYSIS?**

16 A.   When a reasonable amount of historical data is available and actuarial analysis is

17   used to determine an average service life, it is best to incorporate Company-specific

18   information and perform both mathematical and visual fitting. As stated in

19   *Depreciation Systems*, "[t]he results of mathematical curve fitting serve as a guide

20   for the analyst and speed the visual fitting process. But the results of the

21   mathematical fitting should be checked visually, and the final determination of the

22   best fit be made by the analyst."[48] *Depreciation Systems* also states:

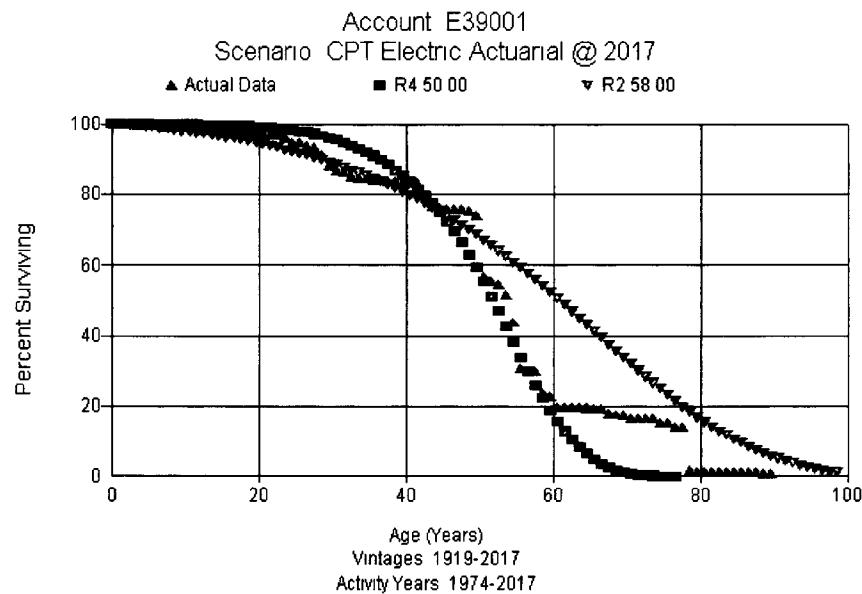[46] Direct Testimony and Exhibits of David Garrett at 16:7-12.
[47] *Id* at 14:8-12.
[48] Frank K. Wolf & W. Chester Fitch, *Depreciation Systems* at 46-47 (1994).

CenterPoint Energy Houston Electric, LLC   51

1   On the surface, the removal of judgment from the fitting process
2   may appear to be an advantage. but blind acceptance of mechanical
3   fitting processes will occasionally but consistently result in poor
4   results. A better procedure is to use the least squares method to select
5   candidates for the best fit. Comparison of the sum of squares will
6   reveal situations where the difference between the best choices is
7   small. The analyst should then visually examine the observed data
8   and compare them to the theoretical curves.[49]

9

10   Mr. Garrett computes a mathematical SSD that excludes a relevant portion of the

11   curve to supports his recommendation.

12 **Q.**   **WHAT DOES A VISUAL COMPARISON SHOW?**

13 **A.**   Below are graphs over various placement and experience bands. The dark blue

14   triangles represent the observed life table, the green rectangles represent the

15   Company's proposal, and the slanted light blue triangles show Mr. Garrett's.

16   Below is a graph of the both proposals with the full placement band (1919-2017)

17   and the full observation band (1974-2017).

Account E39001
Scenario CPT Electric Actuarial @ 2017

▲ Actual Data   ■ R4 50 00   ▼ R2 58 00

Age (Years)
Vintages 1919-2017
Activity Years 1974-2017

---

[49] *Id.*

1   As can be seen from the graph above, the Company proposed curve matches the

2   actual experience better from over 80% surviving to 20% surviving.

3   Q. **WHAT PORTION OF THE CURVE DOES MR. GARRETT ADVOCATE**

4   **MATCHING TO?**

5   A. Mr. Garrett cautions that "the tail-end of the OLT curve will have less analytical

6   value than other portions of the curve and therefore will be less reliable from a

7   statistical standpoint.[50] He justifies this approach by quoting from select portions

8   *Depreciation Systems*, but omits a valuable part of the guidance included therein.

9   The entirety of the quotations reads:

10   Points at the end of the curve are often based on fewer exposures
11   and may be given less weight than points based on large samples.
12   The weight placed on those points will depend on the size of the
13   exposures. **Often the middle section of the curve (that section**
14   **ranging from approximately 80% to 20% surviving) is given**
15   **more weight than the first and last sections.** This middle section
16   is relatively straight and is the portion of the curve that often best
17   characterizes the survivor curve.[51]

18   In short, the section of the curve from 80% to 20% should be where the analyst

19   focuses when matching actual experience with a recommended curve. Mr. Garrett

20   does just the opposite and ignores most of that area entirely.

21 Q. **WHAT PORTION OF THE DATA DOES MR. GARRETT BELIEVE IS**

22   **NOT STATICALLY RELEVANT?**

23 A. Mr. Garrett advocates eliminating data after age 50.[52] Thus, his proposal ignores

24   data after 74.09% surviving. In short, Mr. Garrett's excludes and ignores the

25   portion of the data demonstrative that many building component frequently fail at

---

[50] Direct Testimony and Exhibits of David Garrett at 12.
[51] Frank K. Wolf & W. Chester Fitch, *Depreciation Systems* at 46-47 (1994).
[52] Direct Testimony and Exhibits of David Garrett at 14:10-12.

1 50 years. That significant flaw makes his recommendation highly unreliable. My

2 proposed curve and life matches the data well through the 80% to 20% portion of

3 the graph.

4 Q. **WHAT OTHER FLAW EXISTS IN MR. GARRETT'S PROPOSAL FOR**

5 **THIS ACCOUNT?**

6 A. Mr. Garrett relies on the overall band truncated at 50 years. *Depreciation Systems*

7 cautions against the use of the overall band:

8   The ultimate combination of bands is the overall band, which
9   combines all individual placement and experience bands into a
10   single, overall band. The major attribute of the survivor curve
11   obtained from this band is that it uses every available exposure and
12   retirement. On the other hand, this grand average obscures the
13   dynamic characteristics of the life characteristics of the property. In
14   addition, it is difficult to define the meaning of the resulting survivor
15   curve. Each individual retirement ratio is based on a different group
16   of property. The first retirement ratio will include observations from
17   all vintages and the second retirement ratio from all but the most
18   recent. This pattern continues until the final point is based on
19   observations from only one vintage. It is difficult to figure out the
20   exact meaning of the overall band, and, in spite of the fact it does
21   include all the data points, it should be given limited significance.[53]

22 Q. **ARE MR. GARRETT'S RECOMMENDATIONS REASONABLE GIVEN**

23 **THE TYPES OF ASSETS IN THIS ACCOUNT?**

24 A. No. This building account does not just include large building structures. It also

25 includes HVAC, chillers, roofs, fencing, water systems, lighting systems, elevators,

26 fire protection systems, and other capitalized assets that have a shorter life and will

27 likely be replaced prior to the end of the life of the building shell. Even building

28 shells can be "reskinned" prior to the end of the life of the basic structure. While a

29 50-year or more life for the larger structures might be reasonable, when smaller

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[53] Frank K. Wolf & W. Chester Fitch, *Depreciation Systems* at 187 (1994).

1 structures and other shorter-lived assets are included in the average, an average life

2 of nearly 60 years does not seem reasonable. My recommendation of 50 R4

3 balances the life of the longer and shorter-lived assets within this account and better

4 matches the actual experience of the Company and should be adopted.

5 **V. CALCULATION OF THE DEPRECIATION RESERVE**

6 **Q. DID YOU FIND ANY ERRORS IN MR. GARRETT'S RATE**

7 **COMPUTATIONS?**

8 A. Yes. When making my depreciation rate calculations, I allocated the depreciation

9 reserve to each account within each function based on my life and net salvage

10 recommendations. The calculated theoretical reserve used in the allocation was

11 directly connected to my recommended lives and net salvage. The individual

12 account-level depreciation rates used those allocated reserves in the calculation of

13 each depreciation rate. These calculations are found in Exhibit DAW-1, Appendix

14 A and my direct testimony workpapers. When Mr. Garrett recommended different

15 lives for several accounts, the allocated depreciation reserves from my calculation

16 were no longer consistent with his proposed life changes. However, Mr. Garrett

17 did not recalculate my allocated reserve based on his revised life recommendations.

18 **Q. WHAT IS THE RESULT OF THIS ERROR?**

19 A. Because of this error, Mr. Garrett's depreciation rates are incorrectly calculated and

20 should not be used.

1		**VI. CONCLUSION**
2	Q.	**PLEASE SUMMARIZE THE CONCLUSIONS YOU HAVE REACHED AS**
3		**A RESULT OF YOUR ANALYSIS.**
4	A.	I conducted a complete depreciation study using standard depreciation processes
5		and methodologies that resulted in the recommended parameters and depreciation
6		rates. My recommended life and net salvage parameters are reasonable and specific
7		to CenterPoint's unique circumstances. The depreciation rates, as provided in
8		Exhibit DAW-1, Appendices A and B and applied to CenterPoint's plant in service
9		balances, provide fair and reasonable recovery to both CenterPoint Houston and its
10		customers and should be adopted by this Commission.
11	Q.	**DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**
12	A.	Yes.

STATE OF TEXAS   §
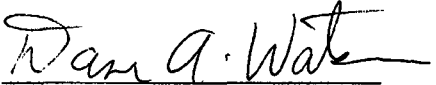   §
COUNTY OF COLLIN   §

AFFIDAVIT OF DANE A. WATSON

BEFORE ME, the undersigned authority, on this day personally appeared Dane A. Watson who having been placed under oath by me did depose as follows:
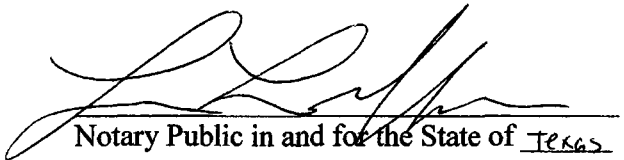
1. "My name is Dane A. Watson. I am of sound mind and capable of making this affidavit. The facts stated herein are true and correct based upon my personal knowledge.

2. I have prepared the foregoing Rebuttal Testimony and the information contained in this document is true and correct to the best of my knowledge."
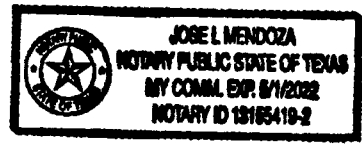
Further affiant sayeth not.

_____
Dane A. Watson

SUBSCRIBED AND SWORN TO BEFORE ME on this 7ᵗʰ day of ____June____, 2019.

_____
Notary Public in and for the State of Texas

My commission expires: 05/01/2022

SOAH DOCKET NO. 473-19-3864
PUC DOCKET NO. 49421

APPLICATION OF CENTERPOINT	§	BEFORE THE STATE OFFICE
ENERGY HOUSTON ELECTRIC, LLC	§	OF
FOR AUTHORITY TO CHANGE	§	
RATES	§	ADMINISTRATIVE HEARINGS

**TEXAS COAST UTILITIES COALITION'S RESPONSES TO
CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC's
SECOND REQUEST FOR INFORMATION TO TCUC,
QUESTION NOS. 2-1 THROUGH 2-14**

CEHE RFI 2-7:

Regarding the direct testimony of David J. Garrett and the data relied upon for three utilities identified on page 19, please identify the actual retirement unit and capitalization policy of the three companies cited.

RESPONSE:

Mr. Garrett has not conducted research to determine the "actual retirement units" and actual capitalization policies of the three companies cited.

SPONSORED BY: David J. Garrett
PREPARED BY: David J. Garrett

SOAH DOCKET NO. 473-19-3864
PUC DOCKET NO. 49421

APPLICATION OF CENTERPOINT	§	BEFORE THE STATE OFFICE
ENERGY HOUSTON ELECTRIC, LLC	§	OF
FOR AUTHORITY TO CHANGE	§	
RATES	§	ADMINISTRATIVE HEARINGS

TEXAS COAST UTILITIES COALITION'S RESPONSES TO
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SECOND REQUEST FOR INFORMATION TO TCUC,
QUESTION NOS. 2-1 THROUGH 2-14

CEHE RFI 2-13:

Regarding the direct testimony of David J. Garrett, to the extent age may vary among various utilities, please identify what factors may account for those differences.

RESPONSE:

Forces of retirement may affect the average life of grouped assets among different utilities to varying degrees. Forces of retirement might include wear and decay, accidents, action of the elements, obsolescence, disasters, regulatory requirements, and managerial discretions, among other things.

SPONSORED BY: David J. Garrett
PREPARED BY: David J. Garrett

SOAH DOCKET NO. 473-19-3864
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APPLICATION OF CENTERPOINT	§	BEFORE THE STATE OFFICE
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TEXAS COAST UTILITIES COALITION'S RESPONSES TO
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SECOND REQUEST FOR INFORMATION TO TCUC,
QUESTION NOS. 2-1 THROUGH 2-14

CEHE RFI 2-1:

Regarding the direct testimony of David J. Garrett, please identify any field visits or interviews with Company personnel performed by Mr. Garrett.

RESPONSE:

Mr. Garrett did not conduct a field visit or speak directly with Company personnel as part of this proceeding.

SPONSORED BY: David J. Garrett
PREPARED BY: David J. Garrett

SOAH DOCKET NO. 473-19-3864
PUC DOCKET NO. 49421

APPLICATION OF CENTERPOINT	§	BEFORE THE STATE OFFICE
ENERGY HOUSTON ELECTRIC, LLC	§	OF
FOR AUTHORITY TO CHANGE	§	
RATES	§	ADMINISTRATIVE HEARINGS

TEXAS COAST UTILITIES COALITION'S RESPONSES TO
CENTERPOINT ENERGY HOUSTON ELECTRIC, LLC's
SECOND REQUEST FOR INFORMATION TO TCUC,
QUESTION NOS. 2-1 THROUGH 2-14

CEHE RFI 2-2:

Regarding the direct testimony of David J. Garrett, please identify any field visits or interviews with Company personnel relied upon by Mr. Garrett.

RESPONSE:

Mr. Garrett did not conduct a field visit or speak directly with Company personnel as part of this proceeding.

SPONSORED BY: David J. Garrett
PREPARED BY: David J. Garrett