Exhibit No.: _____
Issue(s): Generation Depreciation Rates
Witness: Dane A. Watson
Type of Exhibit: Rebuttal Testimony
Sponsoring Party: The Empire District Electric Company d/b/a Liberty
Case No.: ER-2024-0261
Date Testimony Prepared: August 2025

Before the Public Service Commission
of the State of Missouri

Rebuttal Testimony

of

Dane A. Watson

on behalf of

The Empire District Electric Company d/b/a Liberty

August 18, 2025

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THE EMPIRE DISTRICT ELECTRIC COMPANY D/B/A LIBERTY
BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION
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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Dane A. Watson. My business address is 101 E. Park Blvd, Suite 220, Plano, TX, 75074.

Q. Have you previously provided testimony in this case?

A. No.

Q. By whom are you employed and in what position?

A. I am a Partner of Alliance Consulting Group. Alliance Consulting Group provides consulting and expert services to the utility industry.

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

A. I am filing testimony on behalf of The Empire District Electric Company d/b/a Liberty ("Liberty" or the "Company").

Q. Please describe your educational background.

A. I hold a Bachelor of Science degree in Electrical Engineering from the University of Arkansas at Fayetteville and a Master's Degree in Business Administration from Amberton University.

Q. Please describe your professional experience.

A. I was employed by Texas Utilities Electric Company and successor companies ("TXU") from 1985 to 2004. During my tenure with TXU, I was responsible for, among other things, conducting valuation and depreciation studies for the domestic TXU companies. During that time, I served as Engineering Technical Support

Manager and Manager of Property Accounting Services and Records Management in addition to my depreciation responsibilities.

In 2004, I founded Alliance Consulting Group and I am now responsible for conducting depreciation, valuation, and certain accounting-related studies for clients in various industries. My duties related to depreciation studies include the assembly and analysis of historical and simulated data, conducting field reviews, determining service life and net salvage estimates, calculating annual depreciation, presenting recommended depreciation rates to utility management for its consideration, and supporting such rates before regulatory bodies.

I have twice been Chair of the Edison Electric Institute ("EEI") Property Accounting and Valuation Committee and have been Chairman of EEI's Depreciation and Economic Issues Subcommittee. I am a Registered Professional Engineer in the State of Texas and a Certified Depreciation Professional. I am a Senior Member of the Institute of Electrical and Electronics Engineers ("IEEE") and served for several years as an officer of the Executive Board of the Dallas Section of IEEE as well as national and global IEEE offices. I served as President of the Society of Depreciation Professionals twice, most recently in 2015.

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

A. Yes. The Society of Depreciation Professionals ("SDP") has established national standards for depreciation professionals. The SDP administers an examination and has certain required qualifications to become certified in this field. I met all requirements and hold a Certified Depreciation Professional certification.

Q. Have you previously testified before the Missouri Public Service Commission ("Commission") or any other regulatory agency?

A. Yes. I appeared before this Commission in the following cases: Case Nos. ER-2021-0312 on behalf of The Empire District Electric Company; EO-2018-0092 on behalf of The Empire District Electric Company; GR-2018-0013 and GR-2024-0106 on behalf of Liberty Utilities (Midstates Natural Gas) Corp.; and WR-2024-0104 on behalf of Liberty Utilities (Missouri Water) LLC. I have conducted more than 370 depreciation studies and filed testimony or testified on depreciation and valuation issues before nearly forty utility commissions across North America, including FERC. A list of proceedings in which I have provided testimony is provided in **Rebuttal Schedule DAW-1**. I performed the last depreciation study approved before this Commission for The Empire District Electric Company.

Q. What is the purpose of your rebuttal testimony in this proceeding before the Missouri Public Service Commission ("Commission")?

A. I address the generation asset depreciation rate recommendations made by Office of Public Counsel ("OPC") witness John A. Robinett.

Q. Is Liberty preparing a new depreciation study?

A. Yes. I am working with the Company to develop new depreciation rates for its assets. The new depreciation study will be filed in early fall 2025 to comply with 20 CSR 4240-3.175(1)(B)2 and will be utilized in the Company's next general rate case at a yet to be determined date.

II. FLAWS IN MR. ROBINETT'S DEPRECIATION RATE RECOMMENDATIONS

Q. Do you agree with Mr. Robinett's proposed accrual rate computations?

A. No. Mr. Robinett's analysis contains several critical flaws that undermine the validity of his proposed accrual rates:

- **Non-compliance with regulatory requirements:** The proposed rate changes do not adhere to standards outlined in 20 CSR 4240-3.175, which governs submission requirements for electric utility depreciation studies. All electric utilities are required to follow this rule when proposing new deprecation rates.
- **Outdated data**: Mr. Robinett's calculations rely on data from the Company's last depreciation study, which was based on year-end 2019 information. Given the passage of more than five years, asset conditions, service lives, and capital expectations are likely to have materially changed.
- **Omission of interim retirement curves**: His analysis does not incorporate interim retirement curves, which are a standard component of depreciation modeling for generation assets. By assuming that all assets at a generating unit will remain in service without any retirements or replacements, the analysis fails to reflect realistic asset lifecycle behavior.
- **Incorrect remaining life computations:** Mr. Robinett's remaining life calculations for several key assets, including Iatan Common, Energy Center Units 3 and 4 (FT8), State Line Combined Cycle, and Riverton Unit 12 are incorrect.
- **Incorrect balances for Riverton Units 10 & 11:** In his testimony, Mr. Robinett raises concerns about the calculated depreciation rates for Riverton Units 10 & 11, suggesting that these units should be nearly fully accrued. However, his analysis is based on plant balances that include more than just the components scheduled

for retirement in 2026. By using inflated balances that encompass assets not subject to near-term retirement, Mr. Robinett's proposed rates appear unreasonably high and do not accurately reflect depreciation needs of the units. A proper depreciation analysis must isolate the assets tied to the retirement timeline to ensure the rates are both fair and representative of actual capital recovery requirements.

In summary, Mr. Robinett's proposed rates are not grounded in current data, do not reflect standard depreciation practices, and fail to comply with regulatory requirements. As such, they should not be adopted.

A. <u>Ignores Commission requirements for depreciation study and rate changes</u>

Q. What requirements does the Commission specify for depreciation studies?

A. The Commission outlines specific requirements for electric utility depreciation studies in 20 CSR 4240-3.175. These requirements ensure consistency, transparency, and accuracy in the development of depreciation rates. At a minimum, a compliant depreciation study must include:

1. A comprehensive database and property unit catalog - detailing the utility's assets by function and classification.
2. A database of additions and dollar retirements - organized by vintage year and year of retirement to track asset investment and recovery over time.
3. Surviving plant data – showing the remaining assets in service by account and vintage.
4. Estimated date of final retirement – for each asset or group of assets, to support the calculation of remaining life and depreciation rates.

These elements are essential for developing depreciation rates that accurately reflect the utility's capital recovery needs and the expected service lives of its assets.

Q. Do Mr. Robinett's proposed rates shown in Exhibit JAR-D-3 meet the Commission criteria?

A. No. While Mr. Robinett has a long history of presenting recommendations before this Commission, the approach he uses in this proceeding falls short of the standards required for depreciation rate developments. His proposal relies on a simplified, back-of-the-envelope calculation to support a reduction in the Company's depreciation accrual rates for generation assets.

B. <u>Does not update net salvage parameters in developing accrual rates</u>

Q. What source is Mr. Robinett using for his net salvage estimates?

A. Mr. Robinett relies on the net salvage parameters approved in Case No. ER-2021-0312, which was the Company's last general rate case. However, this approach is problematic because it does not reflect the Company's most recent experience or updated asset conditions. Net salvage values can evolve over time due to changes in market conditions, asset retirement practices, and regulatory developments. By failing to update these parameters, Mr. Robinett's proposed accrual rates are based on outdated assumptions and do not meet the standards required for a current and accurate depreciation analysis.

C. <u>Does not incorporate interim retirement curves in developing accrual rates</u>

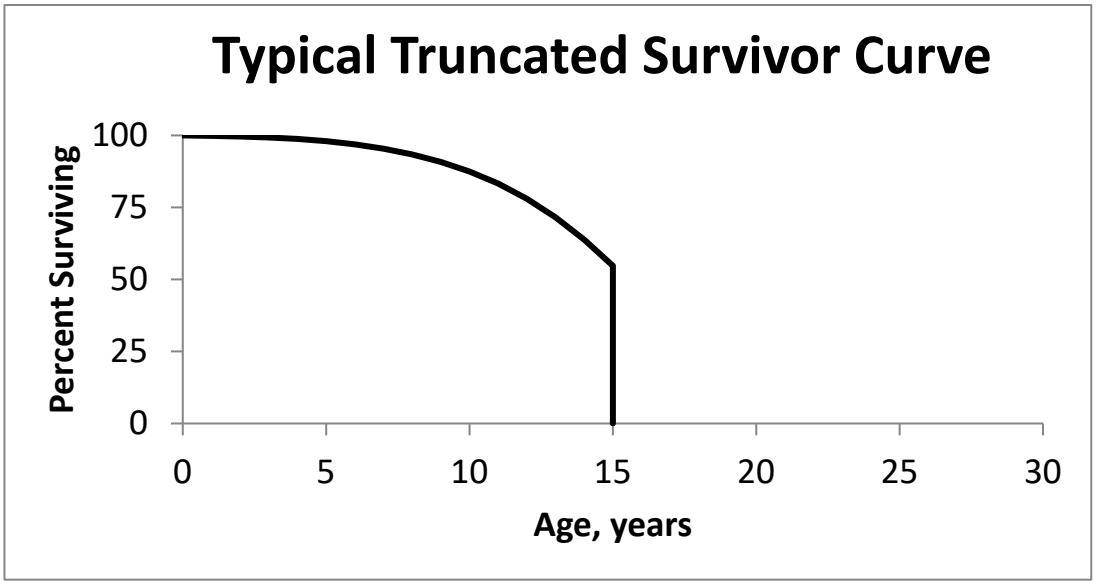
Q. What is an interim retirement curve?

A. An interim retirement curve is a modeling tool used in depreciation studies to reflect the retirement of individual assets within a generating unit before the facility's final retirement date. Unlike the life span procedure – which assumes all assets are depreciated evenly over a fixed period and retired simultaneously – interim retirement curves recognize that many components of a power plant will be replaced or retired at

different times throughout the facility's life. These curves are developed using historical asset retirement data and engineering judgement to estimate how many assets will retire each year. By applying interim retirement curves, depreciation rates more accurately reflect the actual capital recovery pattern, ensuring that assets with shorter useful lives are depreciated more quickly than those expected to remain in service until terminal retirement. In short, interim retirement curves provide a more realistic and granular view of asset life cycles, which is essential for setting appropriate depreciation rates and ensuring regulatory compliance.

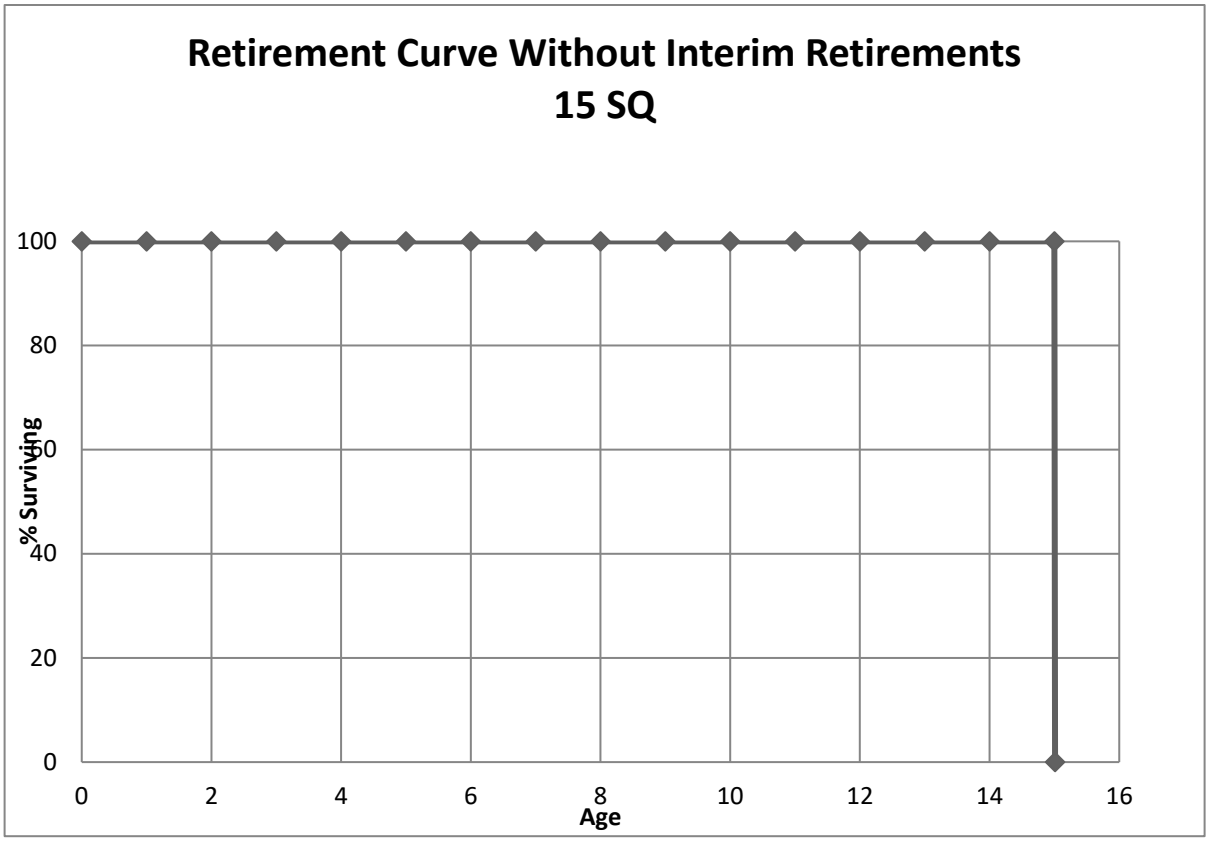
Q. What does an interim retirement curve look like?

A. An interim retirement curve visually represents how individual assets within a generating station are expected to retire over time – before the facility's final retirement date. Rather than assuming all assets remain in service until terminal retirement, the curve shows a gradual decline in asset population as components are retired and replaced throughout the life of the plant. Typically, the curve starts with the full asset base and slopes downward year by year, reflecting the expected retirement of equipment based on historical trends and engineering judgement. See the sample curve below. By the time the facility reaches its terminal retirement date, all investment is fully retired. This approach provides a more realistic view of asset turnover and supports accurate depreciation modeling.



Q. Do Mr. Robinett's proposed accrual rates incorporate an interim retirement component?

A. No. Mr. Robinett's proposed accrual rates are based on the unrealistic assumption that all investments remain in service until the facility's terminal retirement date. This approach effectively models a "rectangular life" pattern, where 100% of assets are assumed to survive until the final year of operation – an improbable scenario for generating units. See that sample curve below. His analysis does not account for interim retirements, which reflect the routine replacement of equipment due to wear and tear, evolving technology and operational needs – including cybersecurity upgrades. In reality, generating facilities experience ongoing asset turnover well before their final retirement. By excluding interim retirement curves, Mr. Robinett's proposal fails to capture the actual lifecycle of plant components and understates the appropriate level of depreciation needed for timely capital recovery.



Q. Are there situations where you might recommend a square survivor curve for generation assets?

A. Yes, but only in limited circumstances. A square survivor curve – which assumes all assets remain in service until the terminal retirement date – may be appropriate for an emerging technology where there is little or no historical data to model asset retirements. However, for the majority of Liberty's conventional generation assets, information is available to estimate the interim retirement pattern, so the use of interim retirement curves is both important and reasonable. These curves reflect the reality that individual components within a generating facility retire at different times due to wear and tear, and operational needs. Ignoring these interim retirements results in an unrealistic "rectangular life" assumption that can significantly understate near-term depreciation rates and delay capital recovery. It can create intergenerational inequity where depreciation expense will have to be paid by future customers for the remaining

cost of shorter-lived assets and for the replacement asset as well. Incorporating interim retirement curves ensures that depreciation modeling aligns with asset behavior, supports regulatory compliance, provides a more accurate financial representation of the utility's investment lifecycle, and provides a better match of capital consumption.

D. <u>Does not use correct remaining lives in deriving accrual rates</u>

Q. What remaining lives for Liberty's generation assets were approved by the Commission in Case No. ER-2021-0312?

A. The remaining lives approved by the Commission in Case No. ER-2021-0312 are summarized in Table 1 below. These values were derived from Liberty's last depreciation study, which was based on plant-in-service data as of December 31, 2019. Remaining lives were calculated by generating unit and plant account, as specified in the settlement agreement, and I applied direct weightings to consolidate the accounts at each unit level. It's important to note that this dataset does not include Liberty's wind or solar generation assets, as those facilities were not yet in service at the time of the 2019 study. As such, the approved remaining lives reflect only the conventional generation fleet and may not fully represent the current asset mix or updated operational expectations. Mr. Robinett has used updated information from the Company's current Integrated Resource Plan ("IRP") to reflect revised retirement dates for Iatan 1, Energy Center 1 and 2. For units where the Company did not provide information in the IRP, Mr. Robinett states that he used data from the last depreciation study.[1] In his computations, some units show different retirement dates than approved in Case No. ER-2021-0312. This discrepancy exists for State Line 1 (2040 compared to 2044) and State Line Common (2051 compared to 2044).

[1] Robinett Direct, 6:1-5.

Table 1 – Current generating unit retirement dates and remaining life

	CASE NO. ER-2021-0321	
Generating Unit	Retirement Year 12/31/2019	Remaining Life 12/31/2019
Iatan 1	Dec-40	17.84
Iatan 2	Dec-70	34.35
Iatan Common	Dec-70	35.07
Plum Point	Dec-60	30.27
Ozark Beach	Dec-53	23.92
Energy Center	Dec-26	6.74
Energy Center FT8	Dec-43	21.88
Riverton 12	Dec-57	33.68
State Line Unit 1	Dec-40	18.93
State Line Common	Dec-51	27.03
State Line CC	Dec-51	31.42

Q. What remaining lives would you expect to see for Liberty's generation assets at September 30, 2024 for these generating units?

A. Given that it has been 4.75 years since the depreciation rates were last calculated using 2019 year-end data, I would expect the remaining lives of Liberty's generation assets to decline by approximately 4.75 years – assuming no changes to terminal retirement dates or interim retirement curves.[2] Additionally, any new plant added since December 31, 2019 would have shorter remaining lives, as those assets must be depreciated over the remaining life of the generating unit to which they belong. This means fewer years are available to recover the cost of those investments, resulting in higher annual depreciation requirements. The changes in plant balances and additions since the last study are shown in Table 2 below, and they further support the need to update remaining life assumptions to reflect current asset conditions and investment timelines.

[2] See Table 3, column called "Estimated Remaining Life 9/30/24."

Table 2- Change in Depreciable Investment 12/31/2019 to 9/30/24

Unit	Plant at 12/31/2019	Plant at 9/30/2024	Change
Iatan 1	106,946,707	114,460,511	7,513,804
Iatan 2	229,210,757	232,133,661	2,922,904
Iatan Common	65,506,609	69,946,396	4,439,787
Plum Point	105,251,283	106,109,109	857,826
Ozark Beach	12,250,897	23,008,592	10,757,695
Energy Center 1 2	42,352,816	44,738,291	2,385,475
Energy Center FT8	62,299,050	75,468,862	13,169,812
Riverton 12	221,709,676	233,670,758	11,961,081
State Line 1	42,768,440	59,872,363	17,103,923
State Line CC	161,487,582	180,924,054	19,436,472
State Line Common	8,849,385	13,208,735	4,359,349
Total	1,058,633,202	1,153,541,332	94,908,130

*Plant Amounts exclude accounts 310, 330, and 340, which are non-depreciable.

Q. How did Mr. Robinett calculate the remaining lives for the various units?

A. Except for certain mistakes noted below, Mr. Robinett simply took the difference between 12/31/2024 and the proposed retirement dates.

Q. How do Mr. Robinett's proposed remaining lives compare with the currently approved ones shown in Table 1?

A. Many of the remaining lives are noticeably longer than those approved by the Commission and presented in Table 1. This discrepancy stems from several key issues in his methodology:

1. Omission of interim retirement curves: Mr. Robinett's analysis assumes all assets remain in service until the terminal retirement date, ignoring the reality that components within generating units are routinely retired and replaced throughout the facility's life. This resulted in inflated remaining life estimates and understated depreciation rates.

2. Errors in retirement dates: His analysis includes incorrect assumptions about the approved retirement dates for several generating units, such as Iatan 2, State Line 1, and State Line Common, which directly affect the accuracy of his remaining life calculations.

3. Incorrect computations: In several cases, Mr. Robinett's remaining life calculations do not align with standard depreciation practices or the approved methodology used in prior Commission proceedings. **Table - 3** below provides a side-by-side comparison of Mr. Robinett's proposed remaining lives and the Commission approved values, as well as the walkforward of the remaining life explained below. This comparison highlights the importance of using a comprehensive and updated depreciation model that incorporates interim retirements and reflects current asset conditions. To compare each facility, one must view the terminal retirement date and reflect any change in terminal date and then subtract the period of time since the rates were computed in Case No. ER-2021-0312, 4.75 years.

For example, the terminal date for Iatan 1 has been reduced by 1 year so a comparative remaining life at September 30, 2024 = Remaining life at 2019 -1-4.75 years = 12.09 years.[3] For units that retained the same terminal retirement date, the remaining life at December 31, 2019 should be reduced by 4.75 years. This computation derives the remaining life at September 30, 2024 for Iatan 2, Iatan Common, Plum Point, Ozark Beach, Riverton 12, and State Line Unit 1, and State Line Common. I cannot replicate Mr. Robinett's proposed retirement date for Iatan Common, State Line Unit 1, State Line CC, and State Line Common.

[3] The one year represents the reduction of one year in life from Case No. ER-2021-0312.

For Energy Center 1 & 2, the remaining life needs to reflect a nine-year extension. Hence the remaining life for Energy Center 1 & 2, so a comparative remaining life at September 30, 2024 = Remaining life at 2019 +9-4.75 years = 12.09 years.[4]

For Energy Center FT8, Mr. Robinett's remaining life is incorrect. To reflect an apples-to-apples comparison, Mr. Robinett's proposed remaining life needs to reflect a one-year extension. Hence the remaining life for Energy Center FT8, so a comparative remaining life at September 30, 2024 = Remaining life at 2019 +1-4.75 years = 12.09 years.[5]

Mr. Robinett's computation for Riverton 12 is not correct. Using a 2057 retirement date he proposes a remaining life of 25.25 years, which does not equal 2057-2024.75. The correct remaining life should be 32.25 years under his methodology. For State Line 1 and State Line, he proposes a remaining life of 25.25 years with a proposed retirement date of 2044. His proposed life of 25.25 years does not equal 2044-2024.75, which is 19.25 years.

For State Line CC, he proposes a remaining life of 25.25 years with a proposed retirement date of 2051. His proposed life of 25.25 years does not equal 2051-2024.75, which is 26.25 years.

The table below shows a comparison of the different remaining lives for the Company's generation assets. The remaining life computations I made are described in the narrative above.

[4] The nine years represents the increase of nine years in life from Case No. ER-2021-0312.
[5] The one year represents the increase of nine years in life from Case No. ER-2021-0312.

Table 3- Comparison of Retirement Dates and Remaining
Life by Generating Unit

	CASE NO. ER-2021-0321		Estimated	EXHIBIT JAR-D-3	
	Retirement	Remaining	Remaining	Retirement	Remaining
	Year	Life	Life	Year	Life
Generating Unit	12/31/2019	12/31/2019	9/30/24	at 9/30/24	at 9/30/24
Iatan 1	Dec-40	17.84	12.09	Dec-39	15.25
Iatan 2	Dec-70	34.35	29.60	Dec-70	46.25
Iatan Common	Dec-70	35.07	30.32	Dec-39	15.25
Plum Point	Dec-60	30.27	25.52	Dec-60	36.25
Ozark Beach	Dec-53	23.92	19.17	Jun-53	28.75
Energy Center 1 2	Dec-26	6.74	10.99	Dec-35	11.25
Energy Center FT8	Dec-43	21.88	18.13	Dec-44	25.25
Riverton 12	Dec-57	33.68	28.93	Dec-57	25.25
State Line Unit 1	Dec-40	18.93	14.18	Dec-44	25.25
State Line Common	Dec-51	27.03	22.28	Dec-44	25.25
State Line CC	Dec-51	31.42	26.67	Dec-51	25.25

Q. What is your recommendation?

A. I recommend all Mr. Robinett's depreciation proposals be rejected. His analysis relies on outdated data, omits critical components such as interim retirement curves, and contains errors in remaining life calculations and retirement dates. These deficiencies result in depreciation rates that do not reflect the actual condition or expected lifecycle of Liberty's generation assets. To ensure accuracy and regulatory compliance, I will be submitting a comprehensive depreciation study to comply with 20 CSR 4240-3.175(1)(B)(2) in the coming weeks. This study will be based on updated plant data, incorporate appropriate modeling techniques, and be subject to full review and adjudication by all parties in the Company's next rate case.

III. CONCLUSION

Q. Does this conclude your rebuttal testimony at this time?

A. Yes.

VERIFICATION

I, Dane A. Watson, under penalty of perjury, on this 18th day of August, 2025, declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/ Dane A. Watson