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Issue(s): *Depreciation*
Witness: *Malachi Bowman*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Rebuttal Testimony*
Case No.: *GR-2025-0107*
Date Testimony Prepared: *May 30, 2025*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

ENGINEERING ANALYSIS DEPARTMENT

REBUTTAL TESTIMONY

OF

MALACHI BOWMAN

SPIRE MISSOURI INC.,
d/b/a Spire

CASE NO. GR-2025-0107

Jefferson City, Missouri
May 2025

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REBUTTAL TESTIMONY

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SPIRE MISSOURI INC.,
d/b/a Spire

CASE NO. GR-2025-0107

Q. Please state your name and business address.

A. My name is Malachi Bowman and my business address is 200 Madison St, Jefferson City, MO 65101.

Q. Are you the same Malachi Bowman that filed direct testimony in this proceeding on April 23, 2025?

A. Yes, I am.

EXECUTIVE SUMMARY

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to explain my reasoning behind the differences in depreciation rates between Staff and Spire Missouri Inc., d/b/a Spire ("Spire Missouri") Witness John J. Spanos. Additionally, I will respond to Office of the Public Counsel ("OPC") Witness John A. Robinett's direct testimony filed on April 23, 2025, regarding the use of general plant amortization and service life differences for Spire's plastic mains account.

REASONING BEHIND DIFFERENCES IN DEPRECIATION RATES

Q. What are the differences between Staff and Mr. Spanos' depreciation rates?

A. Staff calculated different depreciation rates than Mr. Spanos for several accounts. Below are the accounts for which Staff determined different values:

Account	Spanos Depreciation Rates	Staff Depreciation Rates[1]
305	1.91%	1.77%
307	2.10%	1.89%
352	1.60%	1.38%
353	1.79%	1.56%
371.7	2.63%	2.10%
374.2	1.25%	1.33%
376.1	2.43%	2.13%
376.21	19.07%	19.07%
376.22	11.28%	11.28%
376.3	2.51%	2.00%
378	4.00%	3.11%
379	3.00%	2.67%
380.1	5.28%	4.57%
380.2	4.50%	3.95%
381	3.80%	3.45%
382	1.70%	1.66%
385	3.10%	2.56%
390.2	2.38%	2.50%
391	4.81%	5.00%
391.1[2]	11.37%	12.00%
391.3	9.87%	10.00%
391.95[3]	5.71%	0.00%
392.1	11.43%	10.00%
393	2.25%	3.33%
394	3.63%	4.00%
395	3.47%	5.00%
397	5.86%	6.67%
397.1	5.02%	6.67%
398	4.65%	5.00%

[1] Spanos Supplemental Direct Testimony, Page VI-4 of depreciation study.
[2] Staff calculated a 20% depreciation rate for this account but lowered it to 12% to reduce rate shock since the currently ordered rate is 5.47% for this account.
[3] Account depreciation rate set to zero since is it included in the amortization adjustments.

Additionally, there are accounts which Spire Missouri did not include in its deprecation study, so Staff is recommending currently ordered rates. These accounts are listed below along with their associated rates:

Account	Account Description	Rate
367	Mains - Transmission	2.00%
390.7	Structures - Gen Plant - Monat	2.73%
391.31	Software-Oct 2012 Forward	9.89%
391.4	Data processing systems	9.89%
394.5	Equipment-CNG Fuel Stations	3.62%

Spire Missouri submitted updated data with its supplemental direct testimony[4] which Staff is still reviewing. Staff may have modifications to its recommended rates in surrebuttal.

Q. Why are Staff and Mr. Spanos' depreciation rates different?

A. Staff performed a depreciation study using the data provided and was able to come up with similar results for service life estimations as are currently ordered by the Missouri Public Service Commission ("Commission") and/or recommended by Mr. Spanos. But, when reviewing Mr. Spanos' net salvage analysis[5], Staff calculated different results because it appears that not all of the data provided by Spire Missouri in response to Staff Data Request ("DR") No. 0238 was included in his analysis. Without knowledge of the changes made to the data, and whether those changes are reasonable, Staff resorted to using currently ordered net salvage values to calculate depreciation rates for several accounts.

[4] Motion for Leave to Supplement Direct Testimony, filed March 7, 2025.
[5] Spanos Supplemental Direct Testimony, filed March 7, 2025, Page VII-1 of attached depreciation study.

USE OF GENERAL PLANT AMORTIZATION/VINTAGE YEAR ACCOUNTING

Q. What is General Plant Amortization or Vintage Year Accounting?

A. "General Plant Amortization" and "Vintage Year Accounting" are two different terms to describe the same method of depreciation allowed by the Federal Energy Regulatory Commission (FERC) for General Plant accounts when the following conditions are met for the account:

1. The individual classes of assets for which Vintage Year Accounting is followed are high volume, low value items;

2. There is no change in existing retirement unit designations, for purposes of determining when expenditures are capital or expense;

3. The cost of the vintage groups is amortized to depreciation expense over their useful lives and there is no change in depreciation rates resulting from the adoption of Vintage Year Accounting;

4. Interim retirements are not recognized;

5. Salvage and removal cost relative to items in the vintage categories are included in the accumulated depreciation account and assigned to the oldest vintage first; and

6. Properties are retired from the affected accounts that, at the date of the adoption of Vintage Year Accounting, meet or exceed the average service life of properties in that account.

Q. What are OPC Witness Robinett's concerns with using General Plant Amortization?

A. OPC Witness Robinett states that General Plant Amortization, without unitized record keeping, hinders the Commission from performing an effective prudence

review of plant added to accounts because it eliminates the need for the company to record per retirement unit information and it also does not yield actual historical data for the depreciation rate in the select account.[6]

Q. Does Staff agree that these concerns are valid in argument against the use of General Plant Amortization?

A. Yes, the absence of unitized record keeping will hinder the Commission from preforming an effective prudence review of plant and using General Plant Amortization will also not produce actual historical data that can be used for determining depreciation rates. Staff agrees that both of these concerns regarding the usage of General Plant Amortization are valid but it is unclear whether restricting Spire Missouri from using General Plant Amortization would really resolve these two concerns for these accounts.

Q. Why is it unclear whether restricting Spire Missouri from using General Plant Amortization would really resolve these two concerns?

A. General Plant Amortization is designed to be used for accounts containing low value, high quantity assets which are difficult to track. For accounts that are not using General Plant Amortization, the general process would include recording the date which the asset is placed in service and recording the date the asset is taken out of service or "retired". This data would then be used, in conjunction with informed judgement, to determine depreciation rates.[7] But for accounts that contain a large quantity of low value assets, tracking the actual retirement dates can be labor intensive and prone to error.

[6] John A. Robinett Direct Testimony, Page 6 - lines 14-15, and Page 7 – lines 3-4.
[7] The calculation of depreciation rates using the whole life method is explained in my Direct Testimony.

For example, consider a scenario where a large quantity of chairs are purchased and allocated to account 391, Office Furniture & Equipment. The property accounting team may easily know when the chairs were purchased but the actual dates of retirement may be more difficult to determine. Some chairs may break and be thrown away, while others may be moved around by employees that fail to report it to the property accounting team. The company may perform an audit in an attempt to ensure its books are accurate by tracking down each of these chairs and talking to employees to figure out what happened to the chairs, but the employees may not remember or there could have been some employee turnover making it difficult to track these chairs down. So, the property accounting team may be led to make certain inaccurate assumptions regarding the retirement of the chairs, which ultimately makes the value of this data less useful for determining an estimated service life for the account.

In summary of this scenario, the company may spend extra resources to track all of this data only for it to be inaccurate, making it still not useful for developing depreciation rates. Also, it may prove to be difficult for the Commission to perform prudence reviews on these accounts accurately regardless due to volume of assets contained in these accounts.

Q. What would be the potential benefits of using General Plant Amortization?

A. General Plant Amortization would allow Spire Missouri to estimate a life for the account without the use of historical data, and retire those assets on the books at the appointed time (determined by the estimated service life of the account), regardless of whether the asset is still in use. This way, Spire Missouri could recover its cost while also not needing to track down each individual asset and conduct multiple internal audits which could prove to be costly and inaccurate due to the high volume-low value quality of the assets contained in these accounts.

Q. What is Staff's position on the usage of General Plant Amortization?

A. Staff does not oppose the use of General Plant Amortization provided the FERC conditions listed above are met. However, Staff also agrees with Mr. Robinett that if the Commission authorizes the use of General Plant Amortization, it should require Spire Missouri to retire all general plant that exceeds the amortization period.

SERVICE LIFE DIFFERENCES FOR SPIRE PLASTIC MAIN ACCOUNT

Q. What were Mr. Robinett's concerns with Spire Missouri's plastic main account?

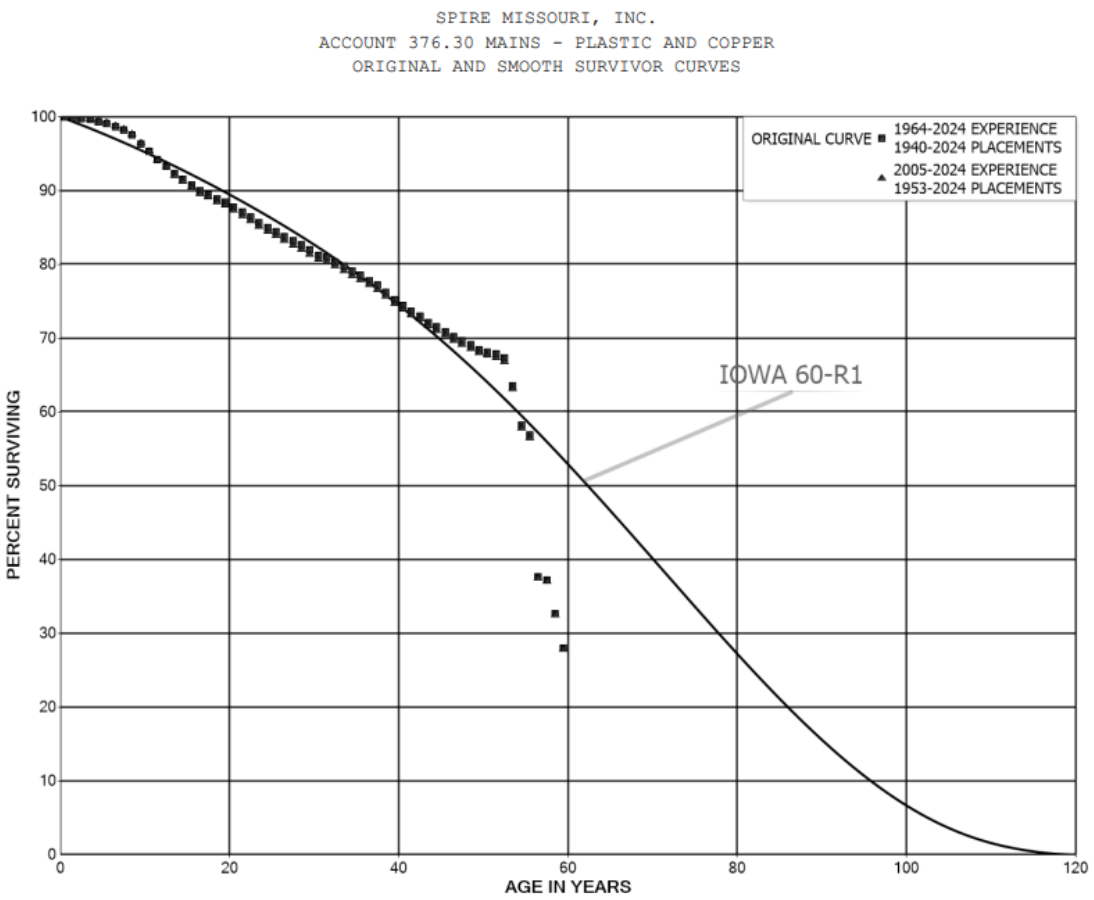
A. Mr. Robinett recommends the use of a 75-year service life for Spire account 376.3, Plastic Mains[8], where Staff and Mr. Spanos recommended a 60-year service life. Mr. Robinett explains that Spire Missouri began replacing cast-iron mains with plastic mains in 2011, which caused Spire Missouri to begin replacing and abandoning large amounts of plastic pipe before the end of the useful life of those pipes, which he believes has caused the service life data to be skewed.[9]

Upon examining the new Plant data provided by Spire Missouri on May 8, 2025, Staff does see abnormally large retirements occurring between 2013 and 2025 on assets that appear to have only been in service 0 to 10 years.

Q. What is Mr. Spanos's analysis of this account?

A. Within Mr. Spanos's depreciation study, he included the below life curve while studying two different types of "experience (observation) and placement bands", although only one appears on his provided plot which appears to support a 60-year life.

[8] John A. Robinett Direct Testimony, Page 23, Line 10.
[9] John A. Robinett Direct Testimony, Page 24, Lines 21-23.



Q. What are "experience (observation) and placement bands"?

A. Experience bands, also referred to as observation bands, show the composite retirement history for all vintages during a select set of activity years and they allow the analyst to isolate the effects of the operating environment over time.[10]

Placement bands allow the analyst to isolate the effects of changes in technology and materials that occur in successive generations of plant.[11]

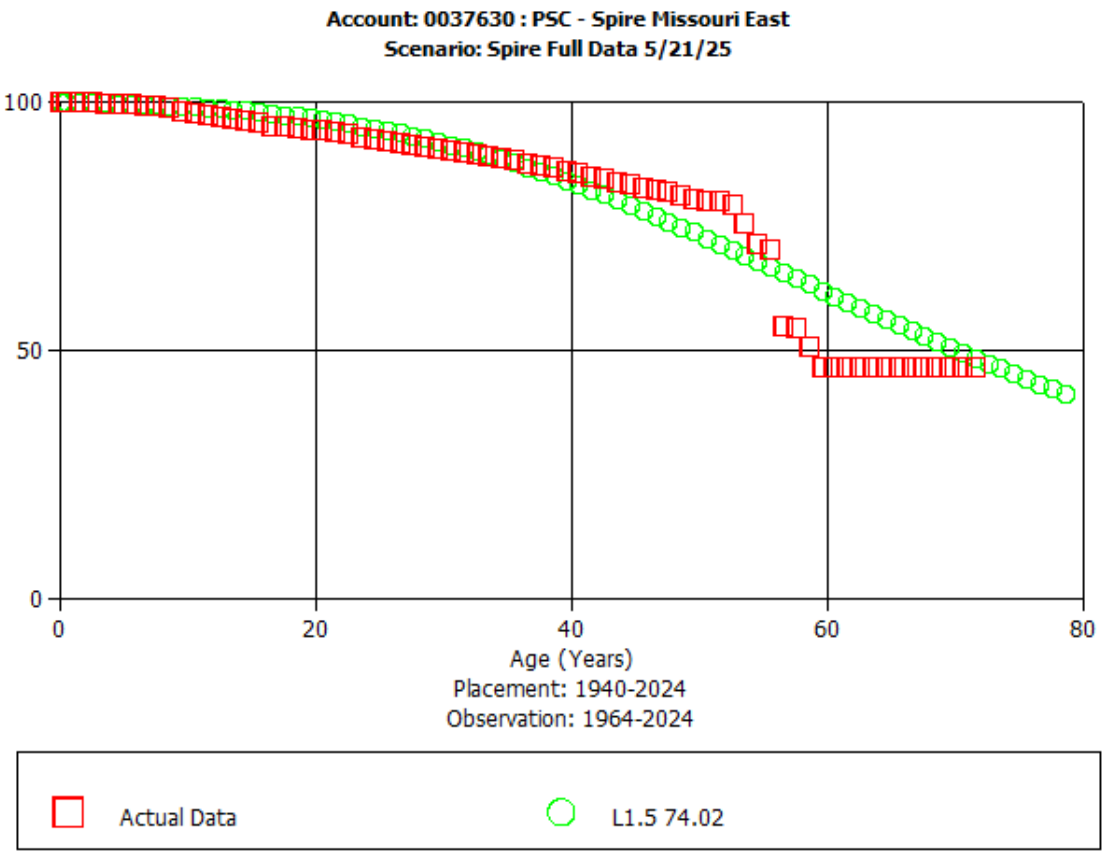
[10] *Public Utility Depreciation Practices,* National Association of Regulated Utility Commission ("NARUC"), Page 114.
[11] *Public Utility Depreciation Practices,* NARUC, Page 114.

In other words, the analyst can use these bands to look at portions of the retirement history based on when assets were installed and/or retired, and avoid certain timeframes where technology or operation conditions were different, that would otherwise suggest lives that are not accurate to the "true life" of the account.

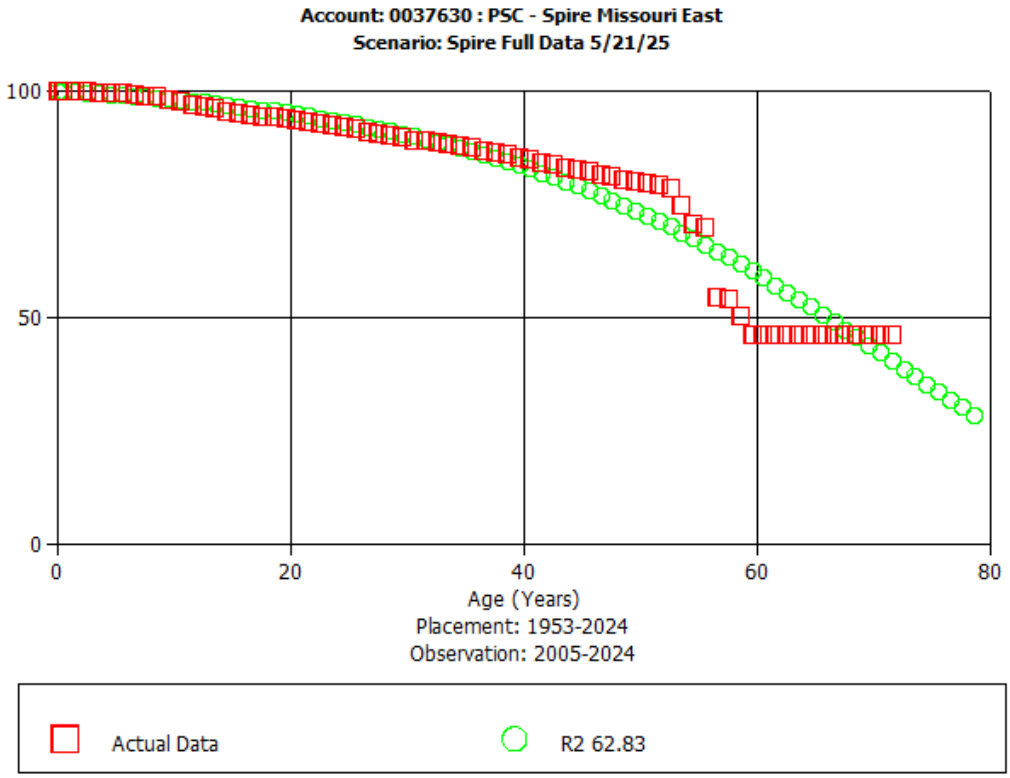
Q. What is Staff's analysis for this account?

A. Using the May 9, 2025 updated data from Spire Missouri, and the same placement and observation bands as Spanos, below are the two curves that Staff generates:

Using placement bands of 1940-2024 and observation bands of 1964-2024, Staff produces this result:

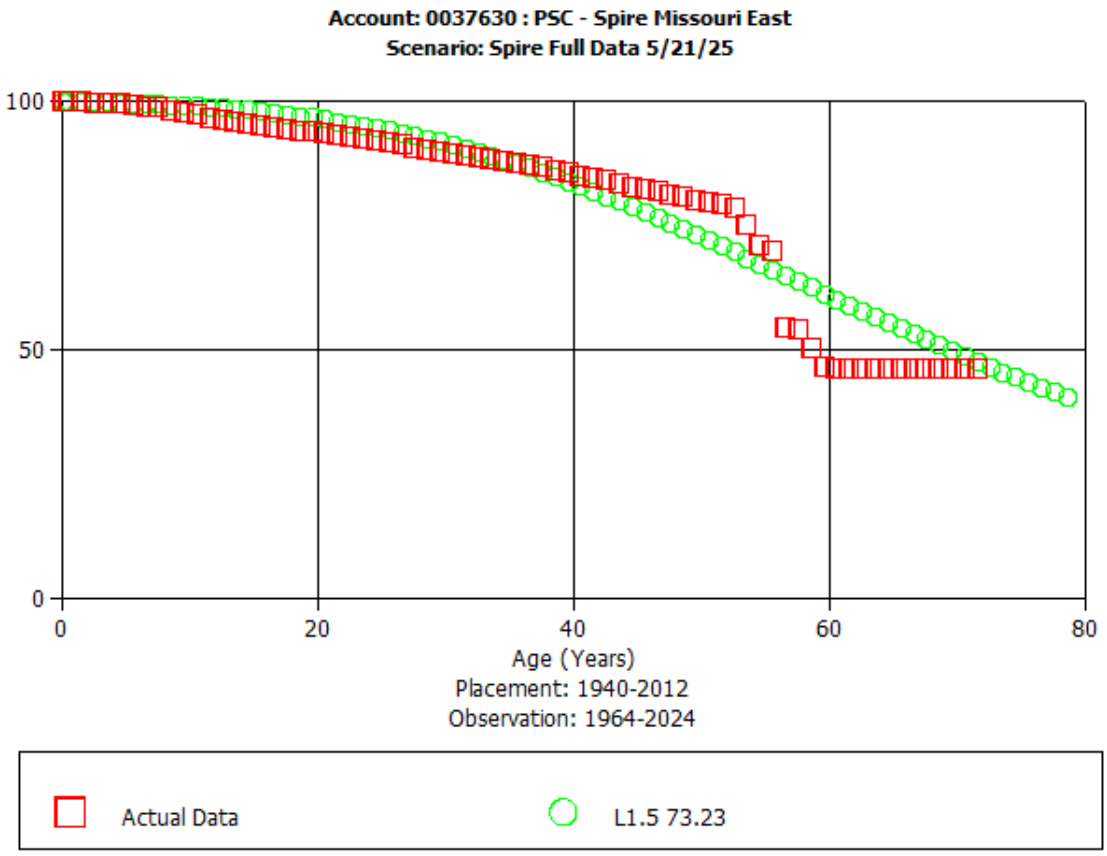


Including all the data of the account supports a 75-year life estimation. If we consider the other bands which Mr. Spanos analyzed, we see the life drop significantly to roughly 60 years.



It appears that Mr. Spanos based his analysis solely on the 2005-2024 Experience Bands and 1953-2024 Observation Bands. However, Mr. Spanos did not provide justification in his testimony of why he chose these specific bands in his analysis.

If we study this account based on the knowledge of the early retirements occurring because of the ISRS program, and exclude assets that were installed between 2013-2025 by adjusting "placement bands" to 1940-2012 and retired between 1964-2024 by keeping the "observation bands" at 1964-2024, we can see that the statistically calculated life of the account is roughly 75 years as shown below.



If we consider another "observation band", as Mr. Spanos did, of 2005-2024 but keep the "placement bands" the same as before, we continue to get a similar result within a few years' difference.

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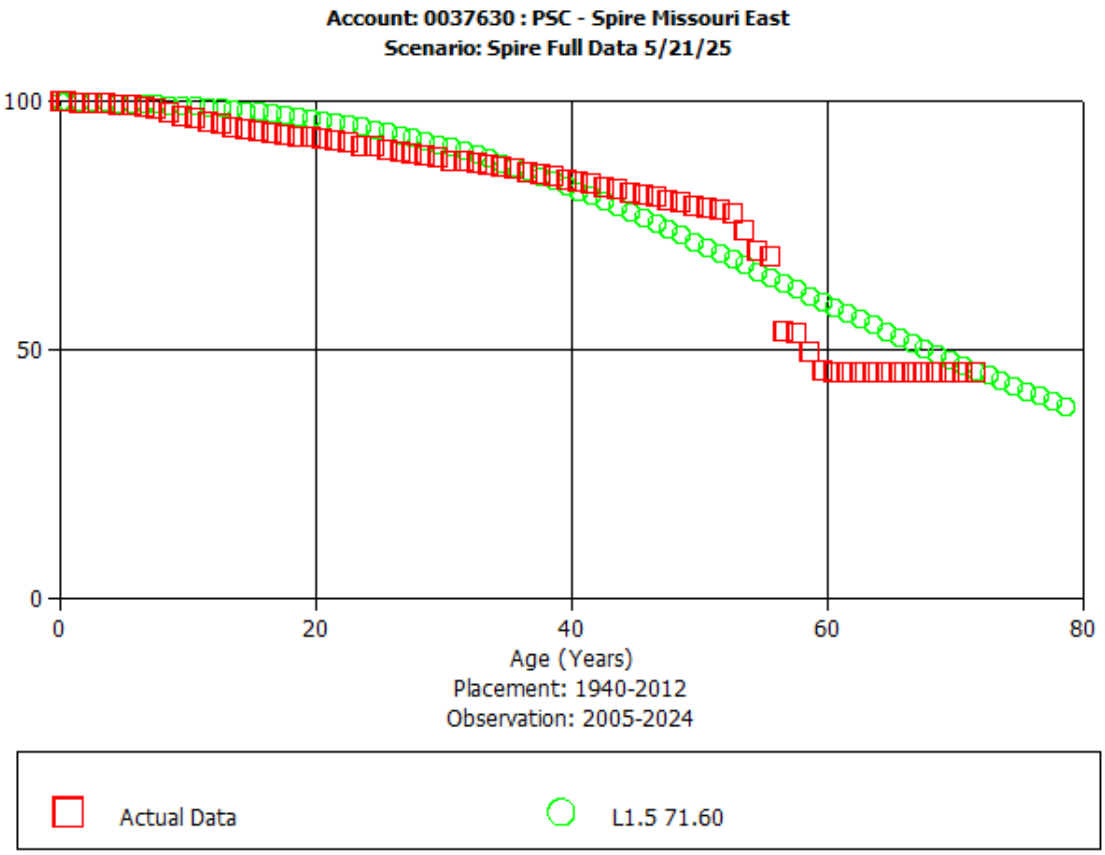

We can observe that if we include only assets that are placed in service between 1940-2012 and retired between 2005-2024, by adjusting these bands, we see that a service life of 75 years is still a reasonable life estimation for this account.

Based on this new analysis, Staff is revising the service life for account 376.3 to the currently ordered service life of 75 years and has provided an updated depreciation schedule in attached Schedule MB-r1. Staff also agrees with Mr. Robinett that the Commission should order Spire Missouri to record the early retirements of plastic pipe being replaced under

Spire Missouri ISRS as transaction code 7 "outlier retirements"[12] for the purposes of the depreciation study data base.

Q. Did Staff also conduct a new net salvage analysis for this account using the updated data?

A. Yes. But Staff is still noticing certain differences between the data provided to Staff and the data used by Mr. Spanos. Using the updated data provided to Staff by Spire Missouri, Staff calculated a similar Net Salvage average percentage of -52%. Based on this analysis, -50% is a reasonable Net Salvage for this account.

CONCLUSION

Q. In conclusion, what are Staff's recommendations?

A. Staff is recommending the use of the depreciation rates prepared by Staff and attached in Schedule MB-r1. Additionally, Staff is recommending the Commission should order Spire Missouri to record the early retirements of plastic pipe being replaced under Spire Missouri ISRS as transaction code 7 "outlier retirements" for the purposes of the depreciation study data base.

Q. Does this conclude your rebuttal testimony?

A. Yes it does.

[12] Mr. Robinett's recommendation uses the Gannet Fleming transaction code terminology. PowerPlan refers to outlier retirements as abnormal retirement.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc. d/b/a Spire's Request for Authority to Implement a General Rate Increase for Natural Gas Service Provided in the Company's Missouri Service Areas	))))	Case No. GR-2025-0107

AFFIDAVIT OF MALACHI BOWMAN

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW MALACHI BOWMAN and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Rebuttal Testimony of Malachi Bowman*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

MALACHI BOWMAN

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 28th day of May 2025.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2029
Commission Number: 12412070

Notary Public

Spire Missouri (Gas)

Schedule of Depreciation Rates

GR-2025-0107

	Depreciable Plant	Selected Curves	Average Service Life	Net Salvage	Depreciation Rate
	Production Plant				
305	Structures and Improvements	R2-65	65.00	-15.00%	1.77%
307	Other Power Equipment	R4-55	55.00	-4.00%	1.89%
**311	Propane Equipment	R1-30	30.00	-5.00%	2.62%
**311.1	Propane Stg Cavern	R4-75	75.00	-5.00%	1.40%
	Underground Gas Storage				
350.2	Rights of Way	R4-80	80.00	0.00%	1.25%
351.2	Compressor Station Structure	R1-50	50.00	-10.00%	2.20%
351.4	Other Structures	R1-50	50.00	-10.00%	2.20%
352	Wells	R2-80	80.00	-10.00%	1.38%
352.1	Storage Leaseholds	R3-90	90.00	0.00%	1.11%
352.2	Reservoirs	S2.5-90	90.00	0.00%	1.11%
352.3	Non-Recoverable Gas	R4-60	90.00	0.00%	1.11%
352.4	Wells - Oil & Vent Gas	R2-55	55.00	-20.00%	2.18%
353	Lines	R3-80	80.00	-25.00%	1.56%
354	Compressor Station Equipment	R3-55	55.00	-10.00%	2.00%
355	Meas. & Reg. Equipment	R2.5-55	55.00	-10.00%	2.00%
356	Purification Equipment	S0.5-50	50.00	-15.00%	2.30%
357	Other Equipment	L2-30	30.00	-5.00%	3.50%
	Transmission Plant				
*367	Mains - Transmission	Not Analyzed	80.00	15.00%	2.00%
371.7	Other Equipment	S2-50	50.00	-5.00%	2.10%

Spire Missouri (Gas)

Schedule of Depreciation Rates

GR-2025-0107

	Depreciable Plant	Selected Curves	Average Service Life	Net Salvage	Depreciation Rate
	Distribution Plant				
374.2	Land Rights	R4-75	75.00	0.00%	1.33%
*375.1	Structures and Improvements - Meas & Reg	Not Analyzed	50.00	-20.00%	2.40%
*375.2	Structures and Improvements - Svc Centers	Not Analyzed	50.00	-20.00%	2.40%
*375.3	Structures and Improvements - Garages	Not Analyzed	50.00	-20.00%	2.40%
*375.41	Structures and Improvements - Leased Property	Not Analyzed	50.00	-20.00%	2.40%
*375.7	Structures and Improvements -MN	Not Analyzed	50.00	-20.00%	2.40%
375	Structures and Improvements	S0-50	50.00	-10.00%	2.20%
376.1	Steel Mains	R2-80	80.00	-70.00%	2.13%
376.21	Cast Iron Mains - East	S0.5-65	65.00	-150.00%	19.07%
376.22	Cast Iron Mains - West	S0.5-65	65.00	-150.00%	11.28%
376.3	Plastic Mains	R2.5-75	75.00	-50.00%	2.00%
378	Meas & Reg Station Equipment	L0.5-45	45.00	-40.00%	3.11%
379	City Meas & Reg Station Equipment	S0.5-45	45.00	-20.00%	2.67%
380.1	Steel Services	R0.5-46	46.00	-110.00%	4.57%
380.2	Plastic & Copper Services	R2-43	43.00	-70.00%	3.95%
***381	Meters	R1-29	29.00	0.00%	3.45%
381.1	Ultrasonic Meters	S3-20	20.00	0.00%	5.00%
382	Meter Installations - West	R2-60	60.00	0.48%	1.66%
382.1	Ultrasonic Meter Installation	S2.5-20	20.00	0.00%	5.00%

Spire Missouri (Gas)

Schedule of Depreciation Rates

GR-2025-0107

	Depreciable Plant	Selected Curves	Average Service Life	Net Salvage	Depreciation Rate
383	House Regulators	R3-50	50.00	0.00%	2.00%
385	Comm & Ind Meas & Reg Eqpt	R1.5-45	45.00	-15.00%	2.56%
386	Other Prop-Cust Premises	L3-15	15.00	0.00%	0.00%
387	Other Equipment	R1.5-50	50.00	-10.00%	2.20%
	General Plant				
390.2	Structures and Improvements	S0.5-40	40.00	0.00%	2.50%
390.7	Structures - Gen Plant - Monat	Not Analyzed	40.00	0.00%	2.50%
391	Office Furniture & Equipment	SQ-20	20.00	0.00%	5.00%
391.1	Data Processing Systems	SQ-5	5.00	0.00%	12.00%
391.2	Mechanical Office Equipment	SQ-15	15.00	0.00%	6.67%
391.3	Data Processing Software	SQ-10	10.00	0.00%	10.00%
391.31	Software-Oct 2012 Forward	Not Analyzed	5.00	0.00%	9.89%
*391.4	Data processing systems	Not Analyzed	5.00	0.00%	9.89%
****391.95	Enterprise Software	SQ-10	10.00	0.00%	0.00%
391.96	Enterprise Hardware	SQ-10	10.00	0.00%	10.00%
392.1	Transportation Eqpt - Cars	L2-8	8.00	20.00%	10.00%
392.2	Transportation Eqpt-Trucks	S2-11	11.00	20.00%	7.27%
393	Stores Equipment	SQ-30	30.00	0.00%	3.33%
394	Tools, Shop & Garage Equipment	SQ-25	25.00	0.00%	4.00%
*394.5	Equipment-CNG Fuel Stations	Not Analyzed	0.00	0.00%	3.62%
395	Laboratory Equipment	SQ-20	20.00	0.00%	5.00%
396	Power Operated Equipment	L2.5-13	13.00	20.00%	6.15%
396.1	Power Operated Equipment - Trucks	L2.5-13	13.00	20.00%	6.15%

Spire Missouri (Gas)

Schedule of Depreciation Rates

GR-2025-0107

	Depreciable Plant	Selected Curves	Average Service Life	Net Salvage	Depreciation Rate
397	Communication Equipment	SQ-15	15.00	0.00%	6.67%
397.1	Communication Equipment	SQ-15	15.00	0.00%	6.67%
397.2	Communication Equipment	SQ-7.5	7.50	0.00%	0.00%
398	Miscellaneous Equipment	SQ-20	20.00	0.00%	5.00%

(*) Denotes an account which was not studied by Ameren Missouri so Staff is recommending currently ordered rates.
(**) Currently ordered rates were recommended but Spire indicates that retirement will occur by May 31, 2025. If so, Staff will update its recommended depreciation rates to 0%.

(***) Account 381 includes both Meter purchases and Meter Installation costs for Spire Missouri East.

(****) Account 391.950 is already included in the amortization adjustments so depreciation rate is set to zero.