

*Exhibit No.:*  
*Issue(s):* Depreciation  
*Witness:* Amanda Arandia  
*Sponsoring Party:* MoPSC Staff  
*Type of Exhibit:* Rebuttal Testimony  
*Case No.:* ER-2024-0319  
*Date Testimony Prepared:* January 17, 2025

**MISSOURI PUBLIC SERVICE COMMISSION**  
**INDUSTRY ANALYSIS DIVISION**  
**ENGINEERING ANALYSIS DEPARTMENT**

**REBUTTAL TESTIMONY**  
**OF**  
**AMANDA ARANDIA**

**UNION ELECTRIC COMPANY,**  
**d/b/a Ameren Missouri**

**CASE NO. ER-2024-0319**

*Jefferson City, Missouri*  
*January 2025*

1 **REBUTTAL TESTIMONY**

2 **OF**

3 **AMANDA ARANDIA**

4 **UNION ELECTRIC COMPANY,**  
5 **d/b/a Ameren Missouri**

6 **CASE NO. ER-2024-0319**

7 Q. Please state your name and business address.

8 A. My name is Amanda Arandia. My business address is 200 Madison Street,  
9 Jefferson City, Missouri 65101.

10 Q. Did you file direct testimony in this case?

11 A. Yes. I filed direct testimony under the name of Amanda Coffey.  
12 However, due to my recent marriage, my name has now changed to Amanda Arandia.

13 **EXECUTIVE SUMMARY**

14 Q. What is the purpose of your rebuttal testimony?

15 A. The purpose of my rebuttal testimony is to update Staff's recommended  
16 depreciation rate schedule and to respond to the direct testimony of Ameren Missouri  
17 witness John Spanos.

18 Q. Did you provide input or work product to another Staff witness for development  
19 of an issue?

20 A. Yes. I provided my recommended depreciation rates to Staff's Auditing  
21 Department to use in the development of Staff's Accounting Schedules.

22 Q. Through your testimony, do you provide any recommendations that should  
23 specifically be reflected in the Commission's Report and Order in this case?

1           A.     Yes. In this testimony I recommend that the Commission order the updated  
2 depreciation rates included as Schedule AA-r1.

3     **DEPRECIATION**

4           Q.     Why is Staff changing its recommended depreciation rates in rebuttal?

5           A.     As previously stated in my direct testimony, Staff was unable to perform a  
6 depreciation study at the time due to technical difficulties with its depreciation software.  
7 Since filing direct testimony, Staff was able to perform depreciation calculations to provide  
8 updated rates for certain accounts.

9           Q.     What were Staff's recommendations for depreciation rates in its  
10 direct testimony?

11          A.     In my direct testimony I previously recommended the use of a majority of the  
12 depreciation rates recommended by Mr. Spanos, with the exception of a number of accounts  
13 for which the rate recommended by Mr. Spanos indicated a significant change from the  
14 previously ordered depreciation rate warranting further examination. These accounts are listed  
15 in my direct testimony on page 4, lines 6-26.

16          Q.     Was Staff able to examine these accounts further?

17          A.     Yes.

18          Q.     What is the difference between the new rates you recommend for these accounts  
19 and the rates that Mr. Spanos recommended for these accounts?

20          A.     The difference is the depreciation technique used. Mr. Spanos used the  
21 straight line, remaining life technique for all accounts, but Staff did not.

Rebuttal Testimony of  
Amanda Arandia

1 Q. Which technique did Staff use?

2 A. Staff used two different techniques. Staff used the straight line,  
3 remaining life technique, just as Mr. Spanos did, for the following accounts:

- 4 • Labadie Steam Production account 312.03
- 5 • Common Steam – Stormwater accounts 311, 312, 315, and 316
- 6 • Callaway Nuclear Production Plant account 324
- 7 • and High Prairie Wind Farm account 346.4

8 Staff used the straight line, whole life technique for the following accounts:

- 9 • Other Production Plant account 344.1
- 10 • Transmission Plant account 356
- 11 • Distribution Plant accounts 371 and 373
- 12 • General Plant account 390

13 Additionally, due to ongoing issues with depreciation software, Staff used the existing  
14 net salvage rates for these accounts which were ordered in Ameren Missouri's last rate case.

15 Q. What is the difference between the remaining life technique and the  
16 whole life technique?

17 A. The whole life technique calculates the depreciation rate over the entire service  
18 life of the asset or account. The remaining life technique calculates the depreciation rate of the  
19 remaining net book value over the remaining life of the asset or account.

20 Q. How is the life of an asset or account determined?

21 A. Typically the life is considered to be the average service life of the account.  
22 The average service life is estimated based on the service life data which contains a record of  
23 each addition and retirement, along with the activity year (the year of installation or retirement)

1 and the vintage (the year the that the asset was placed) into service. However, some facilities  
2 have an expected retirement date when the whole facility will be retired. For accounts  
3 associated with these facilities the life of an account is considered to be that of the facility.  
4 For instance, the Labadie facility has an expected retirement date of December 2042 and all  
5 accounts specific to that facility have that same expected retirement date.

6 Q. Why has Staff used two different techniques for calculating the  
7 depreciation rates?

8 A. Staff utilized different techniques because some of these accounts have an  
9 expected retirement date. The remaining life technique was used for accounts with a known  
10 expected retirement date. These accounts are associated with facilities that have a known  
11 expected retirement date. As explained above, if a facility has an expected retirement date,  
12 the accounts associated with that facility will also have that expected retirement date.

13 The whole life technique was used for accounts without a known expected retirement  
14 date. These accounts can reasonably be assumed to remain in use over the economic life of the  
15 utility, with a continual cycle of retirement of plant from accounts, and acquisition of plant into  
16 the accounts. For example, account 373 is street lighting and signaling systems.  
17 It can reasonably be assumed that there will be a continuous cycle of additions and  
18 retirements in this account over the entire life of the utility. It can also be reasonably assumed  
19 that over the years the technology will change, leading to changes in the average service life  
20 of the account. By using the remaining life technique for these accounts, new investments  
21 could accrue depreciation at a faster or slower rate than if the whole life method were used.  
22 This can lead to the accounts being over or under accrued and lead to more fluctuations in the  
23 calculated depreciation rates in the future. For this reason, Staff has consistently used the

1 whole life method in its depreciation studies; most recently Staff used this method in  
2 Liberty rate case GR-2024-0106.

3 Q. Did you make any other changes to your recommended depreciation rates?

4 A. Yes. The Schedule of Depreciation Rates attached to my direct testimony still  
5 had the old rates for some of the Sioux Steam Production Plant accounts for which Staff  
6 intended to adopt Ameren Missouri's recommended rates. In my updated Schedule of  
7 Depreciation Rates I have included Ameren Missouri's recommended rates for those accounts.

8 **RECOMMENDATIONS**

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

10 A. Staff is recommending the use of the depreciation rates prepared by Staff and  
11 attached in Schedule AA-r1.

12 Q. Does this conclude your rebuttal testimony?

13 A. Yes it does.

**BEFORE THE PUBLIC SERVICE COMMISSION**

**OF THE STATE OF MISSOURI**

In the Matter of Union Electric Company            )  
d/b/a Ameren Missouri's Tariffs to Adjust        )  
Its Revenues for Electric Service                )            Case No. ER-2024-0319

**AFFIDAVIT OF AMANDA ARANDIA**

STATE OF MISSOURI        )  
  )  
COUNTY OF COLE         )            ss.

**COMES NOW AMANDA ARANDIA** and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Rebuttal Testimony of Amanda Arandia*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

  
AMANDA ARANDIA

**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 15<sup>th</sup> day of January 2025.

D. SUZIE MANKIN  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for Cole County  
My Commission Expires: April 04, 2025  
Commission Number: 12412070

  
Notary Public

Ameren Missouri  
Schedule of Depreciation Rates  
ER-2024-0319

<b><u>DEPRECIABLE PLANT</u></b>		<b><u>Net Salvage</u></b>	<b><u>Depreciation Rate</u></b>
<b>STEAM PRODUCTION PLANT</b>			
<b>53</b>	<b><i>SIOUX STEAM PRODUCTION PLANT</i></b>		
311	STRUCTURES AND IMPROVEMENTS	-1	6.84
312	BOILER PLANT EQUIPMENT	-2	5.74
314	TURBOGENERATOR UNITS	-1	5.12
315	ACCESSORY ELECTRIC EQUIPMENT	0	5.52
316	MISCELLANEOUS POWER PLANT EQUIPMENT	-5	7.66
316.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
316.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
316.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
<b>58</b>	<b><i>LABADIE STEAM PRODUCTION PLANT</i></b>		
311	STRUCTURES AND IMPROVEMENTS	-2	3.86
312	BOILER PLANT EQUIPMENT	-5	3.95
312.03	BOILER PLANT EQUIPMENT - ALUMINUM COAL CARS	25	2.45
314	TURBOGENERATOR UNITS	-3	3.2
315	ACCESSORY ELECTRIC EQUIPMENT	-1	3.17
316	MISCELLANEOUS POWER PLANT EQUIPMENT	-2	4.55
316.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
316.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
316.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
<b>63</b>	<b><i>RUSH ISLAND STEAM PRODUCTION PLANT</i></b>		
311	STRUCTURES AND IMPROVEMENTS	-1	3.95
312	BOILER PLANT EQUIPMENT	-5	4.14
314	TURBOGENERATOR UNITS	-2	3.49
315	ACCESSORY ELECTRIC EQUIPMENT	-1	3.72
316	MISCELLANEOUS POWER PLANT EQUIPMENT	-1	5.35



316.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
316.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
316.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
<b>50</b>	<b>COMMON STEAM</b>		
311	STRUCTURES AND IMPROVEMENTS	0	5.06
312	BOILER PLANT EQUIPMENT	-2	5.34
315	ACCESSORY ELECTRIC EQUIPMENT	-1	14.91
316	MISCELLANEOUS POWER PLANT EQUIPMENT	0	5.31
316.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
316.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
316.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
	<b>NUCLEAR PRODUCTION PLANT</b>		
<b>65</b>	<b>CALLAWAY NUCLEAR PRODUCTION PLANT</b>		
321	STRUCTURES AND IMPROVEMENTS	-1	1.71
322	REACTOR PLANT EQUIPMENT	-3	2.95
323	TURBOGENERATOR UNITS	-4	3.03
324	ACCESSORY ELECTRIC EQUIPMENT	-1	2.46
325	MISCELLANEOUS POWER PLANT EQUIPMENT	-2	3.93
325.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
325.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
325.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
	<b>HYDRAULIC PRODUCTION PLANT</b>		
<b>52</b>	<b>OSAGE HYDRAULIC PRODUCTION PLANT</b>		
331	STRUCTURES AND IMPROVEMENTS	-2	3.79
332	RESERVOIRS, DAMS, AND WATERWAYS	-1	3.14
333	WATER WHEELS, TURBINES, AND GENERATORS	-7	2.88
334	ACCESSORY ELECTRIC EQUIPMENT	-5	3.11

335	MISCELLANEOUS POWER PLANT EQUIPMENT	0	3.65
335.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
335.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
335.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
336	ROADS, RAILROADS, AND BRIDGES	0	1.83

**54 TAUM SAUK HYDRAULIC PRODUCTION PLANT**

331	STRUCTURES AND IMPROVEMENTS	-6	1.43
332	RESERVOIRS, DAMS, AND WATERWAYS	-3	2.39
333	WATER WHEELS, TURBINES, AND GENERATORS	-27	2.05
334	ACCESSORY ELECTRIC EQUIPMENT	-24	2.13
335	MISCELLANEOUS POWER PLANT EQUIPMENT	0	2.13
335.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
335.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
335.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
336	ROADS, RAILROADS, AND BRIDGES	0	1.61

**59 KEOKUK HYDRAULIC PRODUCTION PLANT**

331	STRUCTURES AND IMPROVEMENTS	-2	3.03
332	RESERVOIRS, DAMS, AND WATERWAYS	-1	2.5
333	WATER WHEELS, TURBINES, AND GENERATORS	-9	2.86
334	ACCESSORY ELECTRIC EQUIPMENT	-8	2.76
335	MISCELLANEOUS POWER PLANT EQUIPMENT	0	3.1
335.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
335.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
335.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
336	ROADS, RAILROADS, AND BRIDGES	0	1.19

**HP HIGH PRAIRIE WIND FARM**

341.4	STRUCTURES AND IMPROVEMENTS	0	3.48
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344.4	GENERATORS	-1	3.64
345.4	ACCESSORY ELECTRIC EQUIPMENT	-1	3.64
346.4	MISCELLANEOUS POWER PLANT EQUIPMENT	0	3.59
346.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
346.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
346.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
<b>AT</b>	<b>ATCHISON WIND FARM</b>		
341.4	STRUCTURES AND IMPROVEMENTS	0	3.39
344.4	GENERATORS	-1	3.56
345.4	ACCESSORY ELECTRIC EQUIPMENT	-1	3.52
346.4	MISCELLANEOUS POWER PLANT EQUIPMENT	0	2.36
346.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
346.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
346.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20
	<b>OTHER PRODUCTION PLANT</b>		
341	STRUCTURES AND IMPROVEMENTS	-5	2.56
341.2	STRUCTURES AND IMPROVEMENTS - SOLAR	0	3.98
342	FUEL HOLDERS, PRODUCERS, AND ACCESSORIES	-5	2.08
344	GENERATORS	-5	1.73
344.1	GENERATORS - MARYLAND HEIGHTS LANDFILL CTG	40	4.29
344.2	GENERATORS - SOLAR	0	3.75
345	ACCESSORY ELECTRIC EQUIPMENT	-5	2.15
345.2	ACCESSORY ELECTRIC EQUIPMENT - SOLAR	0	0.86
346	MISCELLANEOUS POWER PLANT EQUIPMENT	0	1.71
346.2	MISCELLANEOUS POWER PLANT EQUIPMENT - SOLAR	0	1.91
346.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE	0	5
346.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT	0	6.67
346.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS	0	20

346.4	Miscellaneous powerplant equipment - wind - other	0	2.6
<b>TRANSMISSION PLANT</b>			
352	STRUCTURES AND IMPROVEMENTS	-5	1.66
353	STATION EQUIPMENT	-10	2.03
354	TOWERS AND FIXTURES	-55	3
355	POLES AND FIXTURES	-105	3.65
356	OVERHEAD CONDUCTORS AND DEVICES	-40	2.15
359	ROADS AND TRAILS	0	1.33
<b>DISTRIBUTION PLANT</b>			
361	STRUCTURES AND IMPROVEMENTS	-5	1.73
362	STATION EQUIPMENT	-10	1.85
364	POLES AND FIXTURES	-155	4.33
365	OVERHEAD CONDUCTORS AND DEVICES	-50	2.33
366	UNDERGROUND CONDUIT	-60	2.29
367	UNDERGROUND CONDUCTORS AND DEVICES	-45	2.62
368	LINE TRANSFORMERS	0	1.96
369.1	OVERHEAD SERVICES	-175	3.63
369.2	UNDERGROUND SERVICES	-100	2.71
370	METERS	-1	25.78
370.1	METERS - AMI	-1	5.58
371	INSTALLATIONS ON CUSTOMERS' PREMISES	0	3.33
373	STREET LIGHTING AND SIGNAL SYSTEMS	-30	3.61
<b>GENERAL PLANT</b>			
390	STRUCTURES AND IMPROVEMENTS MISCELLANEOUS	-10	2.44
	STRUCTURES - OLD		
	LARGE STRUCTURES	-10	2.88
390.05	STRUCTURES AND IMPROVEMENTS - TRAINING ASSETS	0	-
391	OFFICE FURNITURE AND EQUIPMENT - FURNITURE	0	5.42
391.2	OFFICE FURNITURE AND EQUIPMENT - PERSONAL COMPUTERS	0	20.19
391.3	OFFICE FURNITURE AND EQUIPMENT - EQUIPMENT	0	8.06
392	TRANSPORTATION EQUIPMENT	15	5.06
392.05	TRANSPORTATION EQUIPMENT - TRAINING ASSETS	0	-
393	STORES EQUIPMENT	0	5.08
394	TOOLS, SHOP, AND GARAGE EQUIPMENT	0	5.18

394.05	TOOLS, SHOP, AND GARAGE EQUIPMENT - TRAINING ASSETS	0	-
395	LABORATORY EQUIPMENT	0	4.99
396	POWER OPERATED EQUIPMENT	15	6.87
397	COMMUNICATION EQUIPMENT	0	6.79
397.05	COMMUNICATION EQUIPMENT - TRAINING ASSETS	0	-
398	MISCELLANEOUS EQUIPMENT	0	5.02
<b>New Additions for Large Wind Farms</b>			
341.4	Structures and Improvements	0.00	3.47
344.4	Generators	0.00	3.67
345.4	Accessory Electric Equipment	0.00	3.67
346.4	Miscellaneous Power Plant Equipment	0.00	3.63
<b>New Additions for Small Wind Farms</b>			
341.4	Structures and Improvements	0.00	4.15
344.4	Generators	0.00	4.34
345.4	Accessory Electric Equipment	0.00	4.32
346.4	Miscellaneous Power Plant Equipment	0.00	4.22
<b>New Additions for Large Solar</b>			
341.2	Structures and Improvements	0.00	3.47
344.2	Generators	0.00	3.89
345.2	Accessory Electric Equipment	0.00	3.83
346.2	Miscellaneous Power Plant Equipment	0.00	3.82
<b>New Additions for Energy Storage Equipment and Surge Protectors</b>			
348	Energy Storage Equipmnet	0.00	10
351	Energy Storage Equipment	0.00	10
363	Storage Battery Equipment	0.00	10
370.2	Meters - Surge Protection Devices	0.00	6.85