

Exhibit No.:
Issue(s): Expense - Depreciation
Witness: Cedric E. Cunigan, PE
Sponsoring Party: MoPSC Staff
Type of Exhibit: Surrebuttal/True-Up Direct
Testimony
Case No.: ER-2022-0337
Date Testimony Prepared: March 13, 2023

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

ENGINEERING ANALYSIS DEPARTMENT

SURREBUTTAL/TRUE-UP DIRECT TESTIMONY

OF

CEDRIC E. CUNIGAN, PE

**UNION ELECTRIC COMPANY,
d/b/a AMEREN MISSOURI**

CASE NO. ER-2022-0337

*Jefferson City, Missouri
March 2023*

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SURREBUTTAL/TRUE-UP DIRECT TESTIMONY
OF
CEDRIC E. CUNIGAN, PE
UNION ELECTRIC COMPANY,
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CASE NO. ER-2022-0337**

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1 A. He states:

2 Staff's estimates appear to reflect too much emphasis on only a few age
3 intervals of the entire life cycle for an account, which is not
4 representative of the entire account. Staff does not appear to be fitting its
5 survivor curve estimates both mathematically and visually as described
6 for these accounts and more importantly seems to disregard the most
7 significant portion of the curve. In most cases, the earlier portions of the
8 curve are more representative of service life expectations than other
9 portions of the original curve.¹

10 Q. Is his statement accurate?

11 A. No. Staff begins with a mathematical fitting as a starting point, but adjusts curve
12 choices as necessary to provide the best visual fit. That being said, a visual fit is subjective to
13 each person.

14 Mr. Spanos also stated that Staff seemed to disregard the most significant portion of the
15 curve. The significant portion of the curve will vary somewhat based upon the curve type
16 chosen, though it is generally accepted to not focus the fitting of survival curves on the first 15%
17 and the last 15%. That would mean the surviving rates between 85% and 15% would be the
18 most important when fitting the data. Staff took this into account when choosing its survival
19 curves and setting its depreciation rates.

20 Q. What does Mr. Spanos state about Account 370 Meters on page 11 of his
21 rebuttal testimony?

22 A. Mr. Spanos states that the rate in Staff's schedule neglected the truncation date
23 of December 2024. Staff agrees that a formatting error removed this information from the

¹ Rebuttal Testimony of John J. Spanos page 3, lines 13-19.

1 software and has corrected the error. The newly calculated rate for Account 370 Meters is
2 consistent with that chosen by Mr. Spanos of 23.80%.

3 Q. What is Staff's recommendation on depreciation rates?

4 A. Staff recommends that the Commission order Staff's rates as amended in
5 Schedule CEC-s1.

6 **RESPONSE TO MITCHELL LANSFORD**

7 Q. What does Mr. Lansford state in his rebuttal testimony in response to Staff's
8 concern's with the Company's CPR?

9 A. He states the following:

10 Mr. Cunigan's complaint can be summarized as, upon retirement of an
11 asset accounted for as a category of mass property, the Company must
12 remove from its CPR the exact record that relates to that specific asset,
13 i.e., witness Cunigan is criticizing the Company's CPR because it doesn't
14 treat mass property like location property when, in fact, it isn't required
15 to do so. As I outlined above, there is no parameter to determine the
16 location of a mass property asset so this is clearly not possible or
17 required, and if it were, there would be no reason for the USoA to provide
18 different rules for mass property and location property.

19 Mr. Cunigan may further argue that upon retirement, a record from
20 the CPR must be removed that has the exact same vintage as the asset
21 removed from the system. This is similarly illogical and undermines
22 the obvious purpose of the rules for mass property assets. Practically
23 speaking, if an accountant were to agree with Mr. Cunigan,
24 a recordkeeping system would be necessary where each of the

Company's approximately 900,000 poles (for example) would have to be identified by location, vintage year, and perhaps other parameters².

Q. Is he correct in stating Staff's concerns with the CPR record keeping?

A. No. Staff has not requested that the Company track location data related to its mass property accounts. Staff has requested that the company track vintage years, because vintage year is one of the four pieces of information that need to be recorded in the continuing property record for a category of mass property³. Also, vintage year has a direct correlation to the average cost that is associated with what is retired from the Company's books. For example, see an excerpt from the CPR below filtered for the Crossarm, 30' and over retirement unit and the Miller-Zion and Explorer Tap asset location.

Asset Id	Utility Account	Vintage	Retirement Unit	Asset Location	Activity Quantity	Activity Cost	Average Cost
39060388	1364001-Poles-Towers-TAPS	2020	CROSSARM,30' AND OVER	001-MILLER-ZION AND EXPLORER TAP	5	\$291,080.76	\$58,216.15
39798622	1364001-Poles-Towers-TAPS	2020	CROSSARM,30' AND OVER	001-MILLER-ZION AND EXPLORER TAP	0	\$0.00	\$0.00
39743791	1364001-Poles-Towers-TAPS	2019	CROSSARM,30' AND OVER	001-MILLER-ZION AND EXPLORER TAP	27	\$237,587.45	\$8,799.54
2119302	1364001-Poles-Towers-TAPS	2005	CROSSARM,30' AND OVER	001-MILLER-ZION AND EXPLORER TAP	1	\$2,854.47	\$2,854.47
985107	1364001-Poles-Towers-TAPS	1999	CROSSARM,30' AND OVER	001-MILLER-ZION AND EXPLORER TAP	2	\$5,476.84	\$2,738.42
958262	1364001-Poles-Towers-TAPS	1976	CROSSARM,30' AND OVER	001-MILLER-ZION AND EXPLORER TAP	105	\$9,675.06	\$92.14
958261	1364001-Poles-Towers-TAPS	1971	CROSSARM,30' AND OVER	001-MILLER-ZION AND EXPLORER TAP	80	\$13,549.83	\$169.37

² Rebuttal Testimony of Mitchell Lansford page 9 line, 12 through page 10, line 3.

³ For each category of mass property the following information is required by the USoA:

- (1) A general description of the property and quantity;
- (2) The quantity placed in service by vintage year;
- (3) The average cost as set forth in Plant Instructions 2 and 3 of this part; and,
- (4) The plant control account to which the costs are charged.

1 For this retirement unit, the vintage years range from 1971 to 2020 and the average cost
2 ranges from about \$92 to \$58,216. Even narrowed down to vintage years 2020 and 2019, there
3 is still a roughly \$49,000 gap in the average cost between those two years. Letting the
4 depreciation software pick the property to retire from the survivor curve, rather than
5 tracking the vintage year for the actual asset is introducing a large potential for error in the
6 Company's books. While not all accounts and vintage years will have this drastic of a
7 difference, this is an example of how quickly the numbers for what is actually in service can
8 differ from what is on the books under the Company's current practice. The books are used to
9 determine rate base and depreciation expense that is charged to customers. If there is a large
10 mismatch between the books and what is actually in service, there is potential for a large over
11 or under payment for services. This could be to the benefit or the detriment of customers, but
12 it is impossible to know without knowledge of what is in the field.

13 Q. Has Ameren Missouri represented that it does possess information of the vintage
14 year and location of each of the Company's approximately 900,000 poles?

15 A. Yes. In Mr. Hickman's response to Staff DR 565 he stated that Ameren Missouri
16 possesses such records. He further stated that Ameren Missouri possesses this information in
17 separate systems. He indicated that "Our accounting records are the record keeping system that
18 contains vintage year information. Specific location of property is not contained in our
19 accounting records, but there is a separate operational record keeping system that contains the
20 location associated with each pole."

21 Q. What is Staff's recommendation?

22 A. As stated previously, Staff recommends that the Commission order Ameren to
23 stop its practice of allowing its depreciation software to determine which units to retire and

1 record the vintage year of assets being retired. This is directly in line with the requirement that
2 the CPR record the quantity placed in service by vintage year.

3 **RESPONSE TO JOHN ROBINETT**

4 Q. What does Mr. Robinett state in his rebuttal regarding depreciation rates?

5 A. Mr. Robinett references OPC data requests that provide justification for newly
6 proposed depreciation rates in Mr. Spanos's testimony for surge protection devices (6.80%)⁴
7 and battery storage devices (10.00%)⁵. He recommends approval of each of these rates.

8 Q. What is Staff's position on these rates?

9 A. Staff is not opposed to use of these rates. However, Staff notes the Company has
10 no plant currently in service for these asset accounts and that these rates may need to be adjusted
11 in the future based on what equipment is actually placed in service.

12 **RESERVE ACCOUNT ADJUSTMENTS**

13 Q. What accounts need to be adjusted and why?

14 A. Certain amortized plant accounts need to be adjusted to correct imbalances that
15 were created when the accounts were first formed. In order to keep reserve balances accurate,
16 any adjustment in an account will be offset by an adjustment to a separate account within the
17 same group. The adjustments are listed in the table below.

18
19
20 *continued on next page*

⁴ Rebuttal Testimony of John A. Robinett page 1, line 17 through page 2, line 10.

⁵ Rebuttal Testimony of John A. Robinett page 2, lines 12-24.

Surrebuttal/True-Up Direct testimony of
Cedric E. Cunigan, PE

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	Account	Description	Adjustment	Reason
Callaway				
	321	Structures and Improvements	\$ (4,385,910.38)	Offset adjustment of 325.21, 325.22, and 325.23
	325.21	Miscellaneous Power Plant Equipment - Office Furniture	\$ 694,559.44	Correct Amortization
	325.22	Miscellaneous Power Plant Equipment - Office Equipment	\$ 384,124.80	Correct Amortization
	325.23	Miscellaneous Power Plant Equipment - Computers	\$ 3,307,226.14	Correct Amortization
Rush Island				
	311	Structures and Improvements	\$ (167,696.64)	Offset adjustment of 316.21, 316.22, 1nd 316.23
	316.21	Miscellaneous Power Plant Equipment - Office Furniture	\$ 32,076.87	Correct Amortization
	316.22	Miscellaneous Power Plant Equipment - Office Equipment	\$ (65,156.20)	Correct Amortization
	316.23	Miscellaneous Power Plant Equipment - Computers	\$ 200,775.96	Correct Amortization
Keokuk				
	331	Structures and Improvements	\$ (377,730.80)	Offset Adjustment for 335.21, 335.22, and 335.23
	335.21	Miscellaneous Power Plant Equipment - Office Furniture	\$ 4,379.34	Correct Amortization
	335.22	Miscellaneous Power Plant Equipment - Office Equipment	\$ 8,113.20	Correct Amortization
	335.23	Miscellaneous Power Plant Equipment - Computers	\$ 365,238.26	Correct Amortization
Labadie				
	311	Structures and Improvements	\$ 698,106.74	Offset adjustment of 316.21, 316.22, 1nd 316.23
	316.21	Miscellaneous Power Plant Equipment - Office Furniture	\$ 36,656.63	Correct Amortization

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	316.22	Miscellaneous Power Plant Equipment - Office Equipment	\$ (323,022.91)	Correct Amortization
	316.23	Miscellaneous Power Plant Equipment - Computers	\$ (411,740.45)	Correct Amortization
Taum Sauk				
	331	Structures and Improvements	\$ 273,764.39	Offset Adjustment for 335.21, 335.22, and 335.23
	335.21	Miscellaneous Power Plant Equipment - Office Furniture	\$ 5,058.83	Correct Amortization
	335.22	Miscellaneous Power Plant Equipment - Office Equipment	\$ (44,267.20)	Correct Amortization
	335.23	Miscellaneous Power Plant Equipment - Computers	\$ (234,556.01)	Correct Amortization
Sioux				
	311	Structures and Improvements	\$ 34,714.16	Offset adjustment of 316.21, 316.22, 1nd 316.23
	316.21	Miscellaneous Power Plant Equipment - Office Furniture	\$ 92,347.58	Correct Amortization
	316.22	Miscellaneous Power Plant Equipment - Office Equipment	\$ (105,945.27)	Correct Amortization
	316.23	Miscellaneous Power Plant Equipment - Computers	\$ (21,116.46)	Correct Amortization
Osage				
	331	Structures and Improvements	\$ (118.54)	Offset Adjustment for 335.21, 335.22, and 335.23
	335.21	Miscellaneous Power Plant Equipment - Office Furniture	\$ 5,700.92	Correct Amortization
	335.22	Miscellaneous Power Plant Equipment - Office Equipment	\$ 4,850.99	Correct Amortization
	335.23	Miscellaneous Power Plant Equipment - Computers	\$ (10,433.36)	Correct Amortization

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Q. Does this conclude your Surrebuttal and True-Up Direct Testimony?

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-2022-0337

AFFIDAVIT OF CEDRIC E. CUNIGAN, PE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW CEDRIC E. CUNIGAN, PE and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Surrebuttal/True-Up Direct Testimony of Cedric E. Cunigan, PE*; and that the same is true and correct according to his best knowledge and belief.

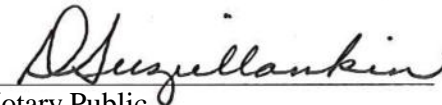
Further the Affiant sayeth not.


CEDRIC E. CUNIGAN, PE

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 8th day of March 2023.

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


Notary Public

AMEREN MISSOURI
ELECTRIC DIVISION
SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, AND ANNUAL DEPRECIATION RATES

<u>DEPRECIABLE GROUP</u>	<u>PROB. RET.</u> <u>DATE</u>	<u>SURVIVOR</u> <u>CURVE</u>	<u>NET SALVAGE</u> <u>PERCENT</u>	<u>DEPRECIATION RATE</u>
STEAM PRODUCTION PLANT				
311	STRUCTURES AND IMPROVEMENTS			
	MERAMEC	Dec-22 95-R1.5	0	10.90
	SIOUX	Dec-30 95-R1.5	-1	5.89
	LABADIE	Dec-42 95-R1.5	-1	3.33
	COMMON - ALL STEAM PLANTS	May-25 95-R1.5	0	15.07
	RUSH ISLAND	Dec-39 95-R1.5	-1	3.56
312	BOILER PLANT EQUIPMENT			
	MERAMEC	Dec-22 60-R0.5	0	10.37
	SIOUX	Dec-30 60-R0.5	-2	7.00
	LABADIE	Dec-42 60-R0.5	-5	3.90
	COMMON - ALL STEAM PLANTS	May-25 60-R0.5	-2	13.13
	RUSH ISLAND	Dec-39 60-R0.5	-4	4.12
312.03	BOILER PLANT EQUIPMENT - ALUMINUM COAL CARS		35-R2	25
				0.14
314	BOILER PLANT EQUIPMENT			
	MERAMEC	Dec-22 60-S0.5	0	5.92
	SIOUX	Dec-30 60-S0.5	-1	6.27
	LABADIE	Dec-42 60-S0.5	-2	2.97
	RUSH ISLAND	Dec-39 60-S0.5	-2	3.46
315	ACCESSORY ELECTRIC EQUIPMENT			
	MERAMEC	Dec-22 75-S0	0	13.75
	SIOUX	Dec-30 75-S0	-1	7.09
	LABADIE	Dec-42 75-S0	-2	3.08
	COMMON - ALL STEAM PLANTS	May-25 75-S0	-1	14.91
	RUSH ISLAND	Dec-39 75-S0	-2	3.58
316	MISCELLANEOUS POWER PLANT EQUIPMENT			
	MERAMEC	Dec-22 40-L0	0	27.91
	SIOUX	Dec-30 40-L0	0	8.50
	LABADIE	Dec-42 40-L0	-1	4.12
	COMMON - ALL STEAM PLANTS	May-25 40-L0	0	16.07
	RUSH ISLAND	Dec-39 40-L0	-1	5.61
316.21	MISCELLANEOUS POWER PLANT EQUIPMENT - FURNITURE			
	MERAMEC	20-SQ	0	5.00
	SIOUX	20-SQ	0	5.00
	LABADIE	20-SQ	0	5.00
	RUSH ISLAND	20-SQ	0	5.00
316.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE			
	MERAMEC	15-SQ	0	6.67
	SIOUX	15-SQ	0	6.67
	LABADIE	15-SQ	0	6.67
	RUSH ISLAND	15-SQ	0	6.67
316.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS			
	MERAMEC	5-SQ	0	20.00
	SIOUX	5-SQ	0	20.00
	LABADIE	5-SQ	0	20.00
	RUSH ISLAND	5-SQ	0	20.00

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<u>DEPRECIABLE GROUP</u>	<u>PROB. RET.</u>	<u>SURVIVOR</u>	<u>NET SALVAGE</u>	<u>DEPRECIATION RATE</u>
<u>NUCLEAR PRODUCTION PLANT</u>	<u>DATE</u>	<u>CURVE</u>	<u>PERCENT</u>	
321 STRUCTURES AND IMPROVEMENTS	Oct-44	90-R2	-1	1.63
322 REACTOR PLANT EQUIPMENT	Oct-44	55-S0.5	-3	2.83
323 TURBOGENERATOR UNITS	Oct-44	50-S0.5	-4	2.99
324 ACCESSORY ELECTRIC EQUIPMENT	Oct-44	75-R2	-1	2.30
325 MISCELLANEOUS POWER PLANT EQUIPMENT	Oct-44	40-L0	0	3.97
325.21 MISCELLANEOUS POWER PLANT EQUIPMENT - FURNITURE		20-SQ	0	5.00
325.22 MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE		15-SQ	0	6.67
325.23 MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ	0	20.00
 <u>HYDRAULIC PRODUCTION PLANT</u>				
331 STRUCTURES AND IMPROVEMENTS				
OSAGE	Jun-47	125-R1	-2	3.49
TAUM SAUK	Jun-89	125-R1	-5	1.38
KEOKUK	Jun-55	125-R1	-2	2.71
332 RESERVOIRS, DAMS AND WATERWAYS				
OSAGE	Jun-47	150-R2.5	-1	2.94
TAUM SAUK	Jun-89	150-R2.5	-3	2.40
KEOKUK	Jun-55	150-R2.5	-1	2.25
333 WATER WHEELS, TURBINES AND GENERATORS				
OSAGE	Jun-47	95-S0	-7	2.86
TAUM SAUK	Jun-89	95-S0	-23	1.98
KEOKUK	Jun-55	95-S0	-9	2.76
334 ACCESSORY ELECTRIC EQUIPMENT				
OSAGE	Jun-47	70-R1.5	-1	2.97
TAUM SAUK	Jun-89	70-R1.5	-3	1.70
KEOKUK	Jun-55	70-R1.5	-1	2.53
335 MISCELLANEOUS POWER PLANT EQUIPMENT				
OSAGE	Jun-47	55-R0.5	0	4.27
TAUM SAUK	Jun-89	55-R0.5	0	2.05
KEOKUK	Jun-55	55-R0.5	0	2.97
335.21 MISCELLANEOUS POWER PLANT EQUIPMENT - FURNITURE				
OSAGE		20-SQ	0	5.00
TAUM SAUK		20-SQ	0	5.00
KEOKUK		20-SQ	0	5.00
335.22 MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE				
OSAGE		15-SQ	0	6.67
TAUM SAUK		15-SQ	0	6.67
KEOKUK		15-SQ	0	6.67
335.23 MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS				
OSAGE		5-SQ	0	20.00
TAUM SAUK		5-SQ	0	20.00
KEOKUK		5-SQ	0	20.00
336 ROADS, RAILROADS AND BRIDGES				
OSAGE	Jun-47	55-R0.5	0	
TAUM SAUK	Jun-89	55-R0.5	0	1.25
KEOKUK	Jun-55	55-R0.5	0	1.14

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<u>DEPRECIABLE GROUP</u>	<u>PROB. RET.</u>	<u>SURVIVOR</u>	<u>NET SALVAGE</u>	<u>DEPRECIATION RATE</u>
<u>OTHER PRODUCTION PLANT</u>	<u>DATE</u>	<u>CURVE</u>	<u>PERCENT</u>	
341 STRUCTURES AND IMPROVEMENTS		40-S2	-5	2.43
341.2 STRUCTURES AND IMPROVEMENTS - SOLAR		25-R4	0	4.03
341.4 STRUCTURES AND IMPROVEMENTS WIND				
ATCHISON WIND	Jun-51	60-R2.5	0	3.37
HIGH PRAIRIE WIND	Jun-50	60-R2.5	0	3.48
342 FUEL HOLDERS, PRODUCERS AND ACCESSORIES		45-R2.5	-5	2.04
344 GENERATORS - OTHER CTS		45-R4	-5	1.64
344.1 GENERATORS - MARYLAND HEIGHTS LANDFILL CTG		12-S2.5	40	0.83
344.2 GENERATORS - SOLAR		25-S1.5	0	5.13
344.4 GENERATORS - WIND				
ATCHISON WIND	Jun-51	40-R2.5	-1	3.58
HIGH PRAIRIE WIND	Jun-50	40-R2.5	-1	3.66
345 ACCESSORY ELECTRIC EQUIPMENT		45-R2.5	-5	1.68
345.2 ACCESSORY ELECTRIC EQUIPMENT - SOLAR		25-S2.5	0	4.03
345.4 ACCESSORY ELECTRIC EQUIPMENT - WIND				
ATCHISON WIND	Jun-51	40-R2.5	-1	3.54
HIGH PRAIRIE WIND	Jun-50	40-R2.5	-1	3.66
346 MISCELLANEOUS POWER PLANT EQUIPMENT		27-L2	0	1.65
346.2 MISCELLANEOUS POWER PLANT EQUIPMENT - SOLAR		20-S2.5	0	4.95
346.21 MISCELLANEOUS POWER PLANT EQUIPMENT - FURNITURE		20-SQ	0	5.00
346.22 MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE		15-SQ	0	6.67
346.23 MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ	0	20.00
346.4 MISCELLANEOUS POWER PLANT EQUIPMENT - WIND				
ATCHISON WIND	Jun-51	35-S2.5	0	2.36
HIGH PRAIRIE WIND	Jun-50	35-S2.5	0	2.63
OUTLAW WIND		35-S2.5	0	2.60
352 STRUCTURES AND IMPROVEMENTS		70-R2.5	-5	1.59
353 STATION EQUIPMENT		60-S1	-10	1.88
354 TOWERS AND FIXTURES		75-R4	-50	2.78
355 POLES AND FIXTURES		60-R3	-100	3.39
356 OVERHEAD CONDUCTORS AND DEVICES		75-R3	-40	1.82
359 ROADS AND TRAILS		75-R4	0	
DISTRIBUTION PLANT				
361 STRUCTURES AND IMPROVEMENTS		60-R2	-5	1.74
362 STATION EQUIPMENT		60-R2	-10	1.83
364 POLES AND FIXTURES		58-L2.5	-150	3.78
365 OVERHEAD CONDUCTORS AND DEVICES		60-R0.5	-50	2.26
366 UNDERGROUND CONDUIT		75-R3	-50	2.12
367 UNDERGROUND CONDUCTORS AND DEVICES		57-R2	-40	2.58
368 LINE TRANSFORMERS		46-S1	0	1.98
369.01 OVERHEAD SERVICES		55-R2	-170	3.28
369.02 UNDERGROUND SERVICES		65-R3	-90	2.43
370 METERS	Dec-24	28-S0.5	-5	23.80
370.1 METERS - AMI		20-S2.5	-5	5.35
371 INSTALLATIONS ON CUSTOMERS' PREMISES		30-O1	0	1.23
373 STREET LIGHTING AND SIGNAL SYSTEMS		40-O1	-30	2.47

AMEREN MISSOURI
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<u>DEPRECIABLE GROUP</u>	<u>PROB. RET.</u>	<u>SURVIVOR</u>	<u>NET SALVAGE</u>	<u>DEPRECIATION RATE</u>
GENERAL PLANT	<u>DATE</u>	<u>CURVE</u>	<u>PERCENT</u>	
390		50-R1	-10	2.32
390.01		45-S0	-10	4.07
390.05		5-SQ	0	20.00
391		20-SQ	0	5.00
391.2		5-SQ	0	20.00
391.3		15-SQ	0	6.67
392		11-R2	15	5.88
392.05		5-SQ	0	20.00
393		20-SQ	0	5.00
394		20-SQ	0	5.00
394.05		5-SQ	0	20.00
395		20-SQ	0	5.00
396		15-L1.5	15	6.45
397		15-SQ	0	6.67
397.05		5-SQ	0	20.00
398		20-SQ	0	5.00