Exhibit No.:	
Issue(s):	*Expense - Depreciation*
Witness:	*Cedric E. Cunigan, PE*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Rebuttal Testimony*
Case No.:	*ER-2022-0337*
Date Testimony Prepared:	*February 15, 2023*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

ENGINEERING ANALYSIS DEPARTMENT

REBUTTAL TESTIMONY

OF

CEDRIC E. CUNIGAN, PE

UNION ELECTRIC COMPANY,
d/b/a AMEREN MISSOURI

CASE NO. ER-2022-0337

Jefferson City, Missouri
February 2023

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CASE NO. ER-2022-0337

Q. Please state your name and business address.

A. My name is Cedric E. Cunigan. My business address is 200 Madison Street, Jefferson City, Missouri 65101.

Q. Are you the same Cedric E. Cunigan that filed direct testimony in this case?

A. Yes.

EXECUTIVE SUMMARY

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to provide corrections to the depreciation schedule I submitted in direct COS testimony as schedule CEC-d2 in this case. I also address issues with the recording of retirements for accounts that use mass asset accounting.

CORRECTIONS TO DIRECT TESTIMONY

Q. What corrections do you need to make to your direct testimony?

A. The reserve balances need to be entered manually in the depreciation software used by Staff. It was brought to Staff's attention after filing of direct that Staff made manual errors entering the reserve balances for three accounts that affected the depreciation rates for those accounts. This error affected account 314 Boiler Plant Equipment for Labadie and account 332 Reservoirs, Dams and Waterways for Osage and Taum Sauk. The changes to

the rates are in the table below and in the corrected depreciation schedule attached to this testimony as Schedule CEC-r1.

Account	**Location**	**Incorrect Rate**	**Corrected Rate**
314 Boiler Plant Equipment	Labadie	4.32	2.97
332 Reservoirs, Dams and Waterways	Osage	3.92	2.94
332 Reservoirs, Dams and Waterways	Taum Sauk	19.47	2.40

Q. Are there differences between Staff's estimation of rates and the ones chosen by Ameren Missouri?

A. Yes. The main differences are in the choice of survival curves for the accounts listed below.

Account	Description	Staff Curve	Ameren Curve
316	MISCELLANEOUS POWER PLANT EQUIPMENT	40-L0	40-L0.5
346	MISCELLANEOUS POWER PLANT EQUIPMENT	27-L2	28-S1
364	POLES AND FIXTURES	58-L2.5	54-S1.5
373	STREET LIGHTING AND SIGNAL SYSTEMS	40-O1	38-S0

Staff believes that the curve choices chosen by Staff provide a better visual fit for the data. Staff would also like to note that Staff will recommend adjustments in its True-up testimony and accounting schedules for the amortized accounts to remove any plant in service that has aged beyond the amortization periods. Mr. Spanos has indicated he agrees with this method and Staff will consult with the Company when making the adjustments.

DEPRECIATION DATABASE AND PROPERTY UNIT CATALOG

Q. What are the relevant rules regarding the depreciation study database and property unit catalog?

A. 20 CSR 4240-3.175 Submission Requirements for Electric Utility Depreciation Studies and 20 CSR 4240-20.030 Uniform System of Accounts – Electrical Corporations outline the information needed to be recorded and how that is broken into separate accounts for the database and continuing property record("CPR"), which is also called a continuing plant inventory record. More specifically 20 CSR 4240-3.175(1)(A)2. outlines the information required in the database. The first is annual dollar additions and dollar retirements by vintage year and year retired beginning with the earliest year of available data.[1] And 20 CSR 4240-20.030(3)(A) states that an electric corporation subject to the commission's jurisdiction shall "Maintain plant records of the year of each unit's retirement as part of the 'continuing plant inventory records,' as the term is otherwise defined at Part 101 Definitions 8. and paragraph 15,001.8.[2]" Part 101 Definitions 8. B. requires the recording of quantity placed in service by vintage year and the average cost be recorded for each category of mass property.[3]

[1] 20 CSR 4240-3.175(1)(A)2.A.
[2] This reference refers to18 CFR Part 101.
[3] From 18 CFR Part 101 Definition 8, the plant records for mass property must provide the following information B. For each category of mass property:
(1) A general description of the property and quantity;

Q. Has the company adhered to these rules?

A. No. Staff's understanding is that the company does not accurately track vintage year information for retirements of mass property accounts. From Data Request responses, Staff has gathered that the Company allows the PowerPlan software to determine which assets to retire based off of the survival curve chosen in the depreciation study. In response to Staff Data Request 0209.3, the Company states the following:

> "Ameren uses the Power Plan system to select assets for retirement based on Iowa survivor curves for mass property accounts based on the type of asset. The survivor curve reflects current dispersion patterns of the assets which has been determined in the most recent depreciation study or studies (as other intervenors including Staff study the appropriate depreciation parameters for our investments)".

Q. Why is this an issue?

A. Aside from potentially violating the Commission's rules, this is problematic because the retirement data no longer matches Ameren Missouri's plant in service, and that same retirement data is then used in the depreciation study to determine the survivor curve[4], which determines what PowerPlan retires. The Company states that the practices outlined above are used on the following accounts:

- Account 364 – Poles, Towers and Fixtures Account
- 365 – Overhead Conductor and Devices Account
- 366 – Underground Conduit Account
- 367 – Underground Conductors and Devices Account
- 368 – Line Transformers Account

(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.

[4] The Iowa curve that estimates the life of an asset group.

- 369 – Services Account
- 370 – Meters Account
- 371 – Installation on Customers' Premises Account
- 373 – Street Lighting and Signal Systems

The combined plant balance and book reserve for these accounts is $6,391,076,638 and -$2,945,110,727, respectively. Staff is unable to determine the magnitude of the difference between the book values and what plant is actually in service at this time. It could be a relatively small impact percentage-wise, but only a full inventory of these accounts would be able to determine the extent of the variation.

Q. What does Staff recommend?

A. Staff strongly recommends that the Commission order the Company to stop its practice of allowing the PowerPlan software to determine what vintages to retire, and order the Company to record this information going forward. Staff will continue conversations with the Company to better understand the magnitude of this issue and if a full inventory would be appropriate or some other manner of adjusting books is necessary.

Q. Does this conclude your rebuttal 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 *Rebuttal 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 15th day of February 2023.

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

	DEPRECIABLE GROUP	PROB. RET. DATE	SURVIVOR CURVE	NET SALVAGE PERCENT	DEPRECIATION RATE
	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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	NUCLEAR PRODUCTION PLANT				
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
	HYDRAULIC PRODUCTION PLANT				
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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	OTHER PRODUCTION PLANT				
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		28-S0.5	-5	4.39
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

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	GENERAL PLANT				
390	STRUCTURES AND IMPROVEMENTS		50-R1	-10	2.32
390.01	MISCELLANEOUS OLD STRUCTURES		45-S0	-10	4.07
390.05	STRUCTURES AND IMPROVEMENTS - TRAINING ASSETS		5-SQ	0	20.00
391	OFFICE FURNITURE AND EQUIPMENT - FURNITURE		20-SQ	0	5.00
391.2	OFFICE FURNITURE AND EQUIPMENT - PERSONAL COMPUTERS		5-SQ	0	20.00
391.3	OFFICE FURNITURE AND EQUIPMENT- EQUIPMENT		15-SQ	0	6.67
392	TRANSPORTATION EQUIPMENT		11-R2	15	5.88
392.05	TRANSPORTATION EQUIPMENT - TRAINING ASSETS		5-SQ	0	20.00
393	STORES EQUIPMENT		20-SQ	0	5.00
394	TOOLS, SHOP AND GARAGE EQUIPMENT		20-SQ	0	5.00
394.05	TOOLS, SHOP AND GARAGE EQUIPMENT - TRAINING ASSETS		5-SQ	0	20.00
395	LABORATORY EQUIPMENT		20-SQ	0	5.00
396	POWER OPERATED EQUIPMENT		15-L1.5	15	6.45
397	COMMUNICATION EQUIPMENT		15-SQ	0	6.67
397.05	COMMUNICATION EQUIPMENT - TRAINING ASSETS		5-SQ	0	20.00
398	MISCELLANEOUS EQUIPMENT		20-SQ	0	5.00