Exhibit No.:	_____
Issue(s):	Depreciation
Witness/Type of Exhibit:	Robinett/Surrebuttal
Sponsoring Party:	Public Counsel
Case No.:	GR-2021-0241

SURREBUTTAL TESTIMONY

OF

JOHN A. ROBINETT

Submitted on Behalf of the Office of the Public Counsel

UNION ELECTRIC COMPANY
D/B/A AMEREN MISSOURI

FILE NO. GR-2021-0241

November 5, 2021

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Union Electric Company d/b/a Ameren Missouri's Tariffs to Increase its Revenues for Gas Service	)))))	Case No. GR-2021-0241

AFFIDAVIT OF JOHN A. ROBINETT

STATE OF MISSOURI)
) **ss**
COUNTY OF COLE)

John A. Robinett, of lawful age and being first duly sworn, deposes and states:

1. My name is John A. Robinett. I am a Utility Engineering Specialist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

John A. Robinett
Utility Engineering Specialist

Subscribed and sworn to me this 5th day of November 2021.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

TIFFANY HILDEBRAND
My Commission Expires
August 8, 2023
Cole County
Commission #15637121

Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2023.

SURREBUTTAL TESTIMONY

OF

JOHN A. ROBINETT

AMEREN MISSOURI GAS

CASE NO. GR-2021-0241

Q. What is your name and what is your business address?

A. John A. Robinett, PO Box 2230, Jefferson City, Missouri 65102.

Q. Are you the same John A. Robinett who filed direct testimony on behalf of the Missouri Office of the Public Counsel ("OPC") in this proceeding?

A. Yes.

Q. What is the purpose of your surrebuttal testimony?

A. I will discuss the Advanced Meter Infrastructure ("AMI") Gas Module recommendation provided by Ameren Missouri consultant John J. Spanos of Gannett Fleming.

Q. Did Ameren Missouri Gas make a recommended depreciation rate for AMI meters in its direct filing?

A. No. The depreciation study attached to Ameren Missouri Witness Mitchell Lansford contains no discussion of AMI gas module depreciation rates. Attached as Schedule JAR-S-1 are select pages of the depreciation study that show Ameren Missouri's depreciation recommendation and how an account and rate are not present for AMI meters or modules.

Q. When did Ameren Missouri Gas request a depreciation rate for AMI meters or modules?

A. The first time I am aware that this issue is discussed is in the rebuttal testimony of Ameren Missouri Consultant John J. Spanos page 14 lines 9 through 21.

Q. Does Mr. Spanos point to any testimony he is rebutting on this point?

A. No. This appears to be an issue that should have been part of the Company's direct filing but Mr. Spanos did not file any direct testimony in this gas case.

Q. What is the depreciation rate recommendation for AMI meters or modules?

A. Mr. Spanos is recommending a 15 year average service life with zero net salvage to arrive at a depreciation rate of 6.67%.

Q. Did Staff in its direct cost of service report address a depreciation rate recommendation for AMI meter modules for gas?

A. No. My review of the Staff depreciation schedule and portion of the cost of service report do not discuss average service lives for AMI meter modules for gas.

Q. Does Mr. Spanos provide any support for his AMI meter module recommendation?

A. No. Mr. Spanos has presented no evidence of historical retirements or other documentation that would support his depreciation rate recommendation.

Q. Is Mr. Spanos' recommendation consistent with how the assets for the electric business are being treated?

A. No. Attached as Schedule JAR-S-2 is the select pages of the recommended depreciation rates for the electric assets. Account 370.1 AMI meters Mr. Spanos recommends an average service life of 20 years for electric AMI meters with a -5.00% net salvage.

Q. Has Ameren Missouri provided any evidence that does not support Mr. Spanos' recommendation?

A. Yes. In Ameren Missouri's response to Staff data request number 0251, Mr. Jeff Esserman who is the smart meter program Director states that the operational life of the AMI gas

module is twenty years. This data request and Ameren Missouri's response is attached as Schedule JAR-S-3.

Q. Do you support Mr. Spanos' recommendation for a new property unit and subaccount?

A. Yes in part. I agree that a new retirement unit should be created for the AMI gas modules. I additionally agree that Ameren Missouri could create a separate subaccount under the meters account, but I believe that this device could also be booked under a subaccount for Federal Energy Regulatory Commission account 397 communication equipment as is done by some other utilities in the State.

Q. What is your biggest concern related to these AMI gas modules?

A. My greatest concern is that setting the life in this case for modules that will be installed in the future does not consider that the life expectancy of these modules may vary greatly depending on the age of the meter that they are placed on. If these devices cannot be reused after initial install, reserve deficiencies could be created if these devices are ultimately retired when the meter it is attached to is retired.

Q. What is your recommendation?

A. I recommend a five percent depreciation rate consistent with the life that Ameren Missouri's director of smart meter program stated was the expected life of the AMI gas modules.

Q. Does this conclude your surrebuttal testimony?

A. Yes, it does.

Ameren
MISSOURI

2019 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION
ACCRUALS RELATED TO GAS PLANT
AS OF DECEMBER 31, 2019

Prepared by:

Gannett Fleming

*Excellence Delivered **As Promised***

AMEREN MISSOURI - GAS

ST. LOUIS, MISSOURI

2019 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION
ACCRUALS RELATED TO GAS PLANT
AS OF DECEMBER 31, 2019

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC
Camp Hill, Pennsylvania

Gannett Fleming

*Excellence Delivered **As Promised***

June 30, 2020

Ameren Corporation
1901 Choteau Boulevard
St. Louis, MO 63103

Attention Wendy K. Tatro, Esq.
Director and Assistant General Counsel

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the gas plant of Ameren Missouri - Gas as of December 31, 2019. The attached report presents a description of the methods used in the estimation of depreciation, the summary of annual depreciation accrual rates, the statistical support for the life and net salvage estimates and the detailed tabulations of annual depreciation.

We gratefully acknowledge the assistance of Ameren Missouri - Gas personnel in the conduct of this study.

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

John J. Spanos

JOHN J. SPANOS
President

JJS:mle
067384

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AMEREN MISSOURI
GAS DIVISION

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL ACCRUAL RATES RELATED TO GAS PLANT AS OF DECEMBER 31, 2019

	DEPRECIABLE GROUP	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2019	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
DEPRECIABLE PLANT									
	TRANSMISSION PLANT								
367	MAINS	60 - R3	(10)	6,578,542.29	2,883,399	4,352,997	92,439	1.41	47.1
369	MEASURING AND REGULATING STATION EQUIPMENT	45 - R2.5	(5)	40,900.08	39,304	3,641	117	0.29	31.1
	TOTAL TRANSMISSION PLANT			**6,619,442.37**	**2,922,704**	**4,356,638**	**92,556**	**1.40**	**47.1**
	DISTRIBUTION PLANT								
375	STRUCTURES AND IMPROVEMENTS	45 - R2	(5)	184,148.49	12,210	181,146	6,152	3.34	29.4
376	MAINS	58 - S1.5	(10)	292,440,847.10	98,237,417	223,447,515	5,037,842	1.72	44.4
378	MEASURING AND REGULATING STATION EQUIPMENT - GENERAL	45 - R2	(5)	6,241,417.19	2,250,188	4,303,300	138,019	2.21	31.2
379	MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE	45 - R2	(5)	694,104.77	217,187	511,623	15,926	2.29	32.1
380	SERVICES	47 - S0.5	(10)	141,911,454.62	74,566,265	81,536,335	2,222,660	1.57	36.7
381	METERS	30 - S0	2	22,619,219.53	3,102,727	19,064,108	1,033,116	4.57	18.5
383	HOUSE REGULATORS	45 - R3	(25)	18,868,402.61	5,293,526	18,291,978	610,929	3.24	29.9
385	INDUSTRIAL MEASURING AND REGULATING STATION EQUIPMENT	40 - R1	0	1,353,553.44	605,655	747,898	26,591	1.96	28.1
	TOTAL DISTRIBUTION PLANT			**484,313,147.75**	**184,285,175**	**348,083,903**	**9,091,235**	**1.88**	**38.3**
	GENERAL PLANT								
390	STRUCTURES AND IMPROVEMENTS	38 - R2	(5)	9,900,479.49	1,142,554	9,252,950	295,916	2.99	31.3
391	OFFICE FURNITURE AND EQUIPMENT								
	FULLY ACCRUED	FULLY ACCRUED	0	21,614.88	21,615	-	-	-	-
	AMORTIZED	15 - SQ	0	459,789.55	171,800	287,990	30,657	6.67	9.4
	TOTAL OFFICE FURNITURE AND EQUIPMENT			*481,404.43*	*193,415*	*287,990*	*30,657*	*6.37*	*9.4*
391.2	OFFICE FURNITURE AND EQUIPMENT - COMPUTERS	5 - SQ	0	1,231,107.56	357,000	874,108	246,272	20.00	3.5
392	TRANSPORTATION EQUIPMENT	13 - S1.5	15	8,802,180.93	3,937,027	3,544,827	403,808	4.59	8.8
394	TOOLS, SHOP, AND GARAGE EQUIPMENT								
	FULLY ACCRUED	FULLY ACCRUED	0	459,479.77	459,480	-	-	-	-
	AMORTIZED	20 - SQ	0	2,584,468.63	1,066,000	1,518,469	129,100	5.00	11.8
	TOTAL TOOLS, SHOP, AND GARAGE EQUIPMENT			*3,043,948.40*	*1,525,480*	*1,518,469*	*129,109*	*4.24*	11.8
395	LABORATORY EQUIPMENT								
	FULLY ACCRUED	FULLY ACCRUED	0	8,605.24	8,605	-	-	-	-
	AMORTIZED	20 - SQ	0	90,129.67	43,900	46,230	4,508	5.00	10.3
	TOTAL LABORATORY EQUIPMENT			*98,734.91*	*52,505*	*46,230*	*4,508*	*4.57*	10.3
396	POWER OPERATED EQUIPMENT	15 - S2.5	20	3,515,092.09	1,040,987	1,771,086	203,677	5.79	8.7
397	COMMUNICATION EQUIPMENT								
	FULLY ACCRUED	FULLY ACCRUED	0	91,204.60	91,205	-	-	-	-
	AMORTIZED	15 - SQ	0	721,492.48	408,100	313,392	48,145	6.67	6.5
	TOTAL COMMUNICATIONS EQUIPMENT			*812,697.08*	*499,305*	*313,392*	*48,145*	*5.92*	6.5
398	MISCELLANEOUS EQUIPMENT	15 - SQ	0	3,335.88	2,557	779	223	6.68	3.5
	TOTAL GENERAL PLANT			**27,888,980.77**	**8,750,830**	**17,609,831**	**1,362,315**	**4.88**	**12.9**

AMEREN MISSOURI
GAS DIVISION

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENTS, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL ACCRUAL RATES RELATED TO GAS PLANT AS OF DECEMBER 31, 2019

	DEPRECIABLE GROUP	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2019	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)=(6)/(7)
RESERVE ADJUSTMENT FOR AMORTIZATION									
391	OFFICE FURNITURE AND EQUIPMENT				(93,611)		18,722 *		
391.2	OFFICE FURNITURE AND EQUIPMENT - COMPUTERS				164,555		(32,911) *		
394	TOOLS, SHOP, AND GARAGE EQUIPMENT				(203,062)		40,612 *		
395	LABORATORY EQUIPMENT				(12,268)		2,454 *		
397	COMMUNICATIONS EQUIPMENT				(60,270)		12,054 *		
398	MISCELLANEOUS EQUIPMENT				(1,666)		333 *		
TOTAL RESERVE ADJUSTMENT FOR AMORTIZATION					(206,322)		41,264		
TOTAL DEPRECIABLE PLANT				518,821,570.89	195,752,387	370,050,372	10,587,370	2.04	35.0
ACCOUNTS NOT STUDIED									
303	MISCELLANEOUS INTANGIBLE PLANT - SOFTWARE 5 YEAR			4,496,558.05	913,454				
365.1	LAND AND LAND RIGHTS			1,281.92					
365.2	RIGHTS-OF-WAY			118,249.78					
374	LAND AND LAND RIGHTS			2,515,245.93	2,143				
389	LAND AND LAND RIGHTS			2,307,982.13					
TOTAL ACCOUNTS NOT STUDIED				9,439,317.81	915,597				
TOTAL GAS PLANT				528,260,888.70	196,667,984		10,587,370		

* 5 year Amortization of Adjusted Reserve related to implementation of Amortization Accounting.

AMEREN MISSOURI

ST. LOUIS, MISSOURI

2020 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2020

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC

Camp Hill, Pennsylvania

Gannett Fleming

Excellence Delivered ***As Promised***

March 25, 2021

Ameren Corporation
1901 Choteau Boulevard
St. Louis, MO 63103

Attention Wendy K. Tatro, Esq.
Director and Assistant General Counsel

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the electric plant of Ameren Missouri as of December 31, 2020. The attached report presents a description of the methods used in the estimation of depreciation, the summary of annual depreciation accrual rates, the statistical support for the life and net salvage estimates and the detailed tabulations of annual depreciation.

We gratefully acknowledge the assistance of Ameren Missouri personnel in the conduct of this study.

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

John J. Spanos

JOHN J. SPANOS
President

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AMEREN MISSOURI
ELECTRIC DIVISION

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2020

	DEPRECIABLE GROUP	PROBABLE RETIREMENT YEAR	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2020	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
	ELECTRIC PLANT										
	STEAM PRODUCTION PLANT										
	MERAMEC STEAM PRODUCTION PLANT										
311.00	STRUCTURES AND IMPROVEMENTS	12-2022	95-R1.5	*	0	52,373,524.26	43,258,659	9,114,865	4,570,600	8.73	2.0
312.00	BOILER PLANT EQUIPMENT	12-2022	55-R0.5	*	0	448,959,394.42	372,175,981	76,783,413	38,808,419	8.64	2.0
314.00	TURBOGENERATOR UNITS	12-2022	60-S0.5	*	0	112,741,497.50	98,898,715	13,842,782	6,975,429	6.19	2.0
315.00	ACCESSORY ELECTRIC EQUIPMENT	12-2022	75-S0	*	0	60,199,477.73	47,059,614	13,139,864	6,603,909	10.97	2.0
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	12-2022	40-L0	*	0	10,445,081.43	5,966,391	4,478,670	2,278,548	21.81	2.0
316.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE		20-SQ		0	495,939.67	251,400	244,540	27,115	5.47	9.0
316.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT		15-SQ		0	314,813.63	192,518	122,296	25,769	8.19	4.7
316.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ		0	559,195.24	180,299	378,896	116,623	20.86	3.2
	TOTAL MERAMEC STEAM PRODUCTION PLANT					*686,088,903.88*	*567,983,577*	*118,105,326*	*59,406,421*	*8.66*	
	SIOUX STEAM PRODUCTION PLANT										
311.00	STRUCTURES AND IMPROVEMENTS	12-2028	95-R1.5	*	0	61,084,741.90	30,637,233	30,447,509	3,850,575	6.30	7.9
312.00	BOILER PLANT EQUIPMENT	12-2028	55-R0.5	*	(2)	1,057,512,079.51	431,832,726	646,829,595	83,802,802	7.92	7.7
314.00	TURBOGENERATOR UNITS	12-2028	60-S0.5	*	0	170,673,443.87	74,340,190	96,333,254	12,337,948	7.23	7.8
315.00	ACCESSORY ELECTRIC EQUIPMENT	12-2028	75-S0	*	0	139,689,904.75	49,560,031	90,129,874	11,463,643	8.21	7.9
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	12-2028	40-L0	*	0	15,287,119.11	4,123,716	11,163,403	1,491,958	9.76	7.5
316.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE		20-SQ		0	1,538,248.56	364,732	1,173,517	84,172	5.47	13.9
316.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT		15-SQ		0	409,938.83	342,645	67,294	4,964	1.21	13.6
316.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ		0	1,307,202.05	513,671	793,531	233,837	17.89	3.4
	TOTAL SIOUX STEAM PRODUCTION PLANT					*1,447,502,678.58*	*591,714,944*	*876,937,977*	*113,269,899*	*7.83*	
	LABADIE STEAM PRODUCTION PLANT										
311.00	STRUCTURES AND IMPROVEMENTS	12-2042	95-R1.5	*	(2)	129,777,519.91	44,749,970	87,623,100	4,116,377	3.17	21.3
312.00	BOILER PLANT EQUIPMENT	12-2042	55-R0.5	*	(6)	1,095,595,126.87	328,211,376	833,119,458	42,520,255	3.88	19.6
312.03	BOILER PLANT EQUIPMENT - ALUMINUM COAL CARS		35-R2		25	76,902,102.88	55,220,082	2,456,495	134,822	0.18	18.2
314.00	TURBOGENERATOR UNITS	12-2042	60-S0.5	*	(2)	269,904,003.77	116,485,573	158,816,511	7,941,964	2.94	20.0
315.00	ACCESSORY ELECTRIC EQUIPMENT	12-2042	75-S0	*	(2)	128,006,056.49	52,454,302	78,111,876	3,791,080	2.96	20.6
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	12-2042	40-L0	*	0	19,478,984.09	6,122,045	13,356,939	770,677	3.96	17.3
316.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE		20-SQ		0	702,598.94	276,658	425,941	37,819	5.38	11.3
316.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT		15-SQ		0	2,277,041.21	403,483	1,873,558	149,450	6.56	12.5
316.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ		0	2,631,587.80	1,148,652	1,482,936	533,899	20.29	2.8
	TOTAL LABADIE STEAM PRODUCTION PLANT					*1,725,275,022.05*	*605,072,141*	*1,177,266,814*	*59,996,343*	*3.48*	
	RUSH ISLAND STEAM PRODUCTION PLANT										
311.00	STRUCTURES AND IMPROVEMENTS	12-2039	95-R1.5	*	(1)	103,786,503.61	38,874,444	65,049,025	3,573,210	3.44	18.5
312.00	BOILER PLANT EQUIPMENT	12-2039	55-R0.5	*	(5)	545,129,704.44	188,849,228	383,537,056	22,380,692	4.11	17.1
314.00	TURBOGENERATOR UNITS	12-2039	60-S0.5	*	(2)	171,821,146.45	73,885,504	101,372,065	5,808,824	3.38	17.5
315.00	ACCESSORY ELECTRIC EQUIPMENT	12-2039	75-S0	*	(1)	66,399,975.29	26,488,438	40,575,537	2,250,780	3.39	18.0
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	12-2039	40-L0	*	0	16,795,126.97	3,342,780	13,452,347	848,252	5.05	15.9
316.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE		20-SQ		0	690,643.36	311,403	379,240	40,952	5.93	9.3
316.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT		15-SQ		0	455,841.12	302,397	153,444	14,673	3.22	10.5
316.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ		0	1,610,828.46	667,398	943,430	358,370	22.25	2.6
	TOTAL RUSH ISLAND STEAM PRODUCTION PLANT					*906,689,859.70*	*332,721,592*	*606,363,044*	*35,275,753*	*3.89*	

AMEREN MISSOURI
ELECTRIC DIVISION

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2020

	DEPRECIABLE GROUP	PROBABLE RETIREMENT YEAR	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2020	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
	COMMON - ALL STEAM PLANTS										
311.00	STRUCTURES AND IMPROVEMENTS	12-2028	95-R1.5	*	0	1,976,444.53	911,076	1,065,369	134,688	6.81	7.9
312.00	BOILER PLANT EQUIPMENT	12-2028	55-R0.5	*	(2)	36,395,109.40	19,988,926	17,134,086	2,228,184	6.12	7.7
315.00	ACCESSORY ELECTRIC EQUIPMENT	12-2028	75-S0	*	0	3,120,974.57	1,492,149	1,637,826	209,706	6.70	7.8
316.00	MISCELLANEOUS POWER PLANT EQUIPMENT	12-2028	40-L0	*	0	17,331.45	7,468	9,863	1,344	7.75	7.3
	TOTAL COMMON - ALL STEAM PLANTS					*41,518,859.95*	*22,399,619*	*19,847,144*	*2,573,922*	*6.20*	
	TOTAL STEAM PRODUCTION PLANT					**4,807,075,324.16**	**2,119,891,873**	**2,798,520,305**	**270,522,338**	**5.63**	
	NUCLEAR PRODUCTION PLANT										
	CALLAWAY NUCLEAR PRODUCTION PLANT										
321.00	STRUCTURES AND IMPROVEMENTS	10-2044	90-R2	*	(1)	979,990,439.99	633,156,488	356,633,856	15,673,340	1.60	22.8
322.00	REACTOR PLANT EQUIPMENT	10-2044	55-S0.5	*	(3)	1,362,278,342.82	617,737,311	785,409,382	37,993,562	2.79	20.7
323.00	TURBOGENERATOR UNITS	10-2044	50-S0.5	*	(4)	554,053,953.63	281,206,127	295,009,985	15,018,534	2.71	19.6
324.00	ACCESSORY ELECTRIC EQUIPMENT	10-2044	75-R2	*	(1)	307,598,841.95	155,306,188	155,368,642	6,886,123	2.24	22.6
325.00	MISCELLANEOUS POWER PLANT EQUIPMENT	10-2044	40-L0	*	0	159,141,299.84	40,151,248	118,990,052	6,505,663	4.09	18.3
325.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE		20-SQ		0	17,922,118.53	4,505,834	13,416,285	975,227	5.44	13.8
325.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT		15-SQ		0	4,343,732.59	2,032,918	2,310,815	320,036	7.37	7.0
325.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ		0	20,039,300.77	6,859,127	13,180,174	4,565,736	22.78	2.9
	TOTAL NUCLEAR PRODUCTION PLANT					**3,405,368,030.12**	**1,740,955,241**	**1,740,319,191**	**87,947,221**	**2.58**	
	HYDRAULIC PRODUCTION PLANT										
	OSAGE HYDRAULIC PRODUCTION PLANT										
331.00	STRUCTURES AND IMPROVEMENTS	06-2047	125-R1	*	(2)	10,087,540.26	1,607,872	8,681,419	341,264	3.38	25.4
332.00	RESERVOIRS, DAMS AND WATERWAYS	06-2047	150-R2.5	*	(1)	86,439,757.28	21,835,007	65,469,148	2,497,743	2.89	26.2
333.00	WATER WHEELS, TURBINES AND GENERATORS	06-2047	95-S0	*	(7)	65,731,157.76	23,539,973	46,792,366	1,859,969	2.83	25.2
334.00	ACCESSORY ELECTRIC EQUIPMENT	06-2047	65-R1	*	(1)	30,682,358.16	8,111,385	22,877,797	939,510	3.06	24.4
335.00	MISCELLANEOUS POWER PLANT EQUIPMENT	06-2047	50-R0.5	*	0	2,789,808.15	36,288	2,753,520	122,371	4.39	22.5
335.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE		20-SQ		0	94,749.34	34,323	60,426	4,977	5.25	12.1
335.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT		15-SQ		0	110,308.60	55,370	54,939	7,435	6.74	7.4
335.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ		0	624,128.90	395,067	229,062	90,237	14.46	2.5
336.00	ROADS, RAILROADS AND BRIDGES	06-2047	50-R0.5	*	0	77,445.03	122,067	(44,622)	0	-	-
	TOTAL OSAGE HYDRAULIC PRODUCTION PLANT					*196,637,253.48*	*55,737,352*	*146,874,055*	*5,863,506*	*2.98*	
	TAUM SAUK HYDRAULIC PRODUCTION PLANT										
331.00	STRUCTURES AND IMPROVEMENTS	06-2089	125-R1	*	(5)	21,594,589.87	4,932,185	17,742,134	290,019	1.34	61.2
332.00	RESERVOIRS, DAMS AND WATERWAYS	06-2089	150-R2.5	*	(3)	12,341,529.96	(6,063,716)	18,775,492	296,085	2.40	63.4
333.00	WATER WHEELS, TURBINES AND GENERATORS	06-2089	95-S0	*	(23)	109,988,402.14	11,510,133	123,775,602	2,173,159	1.98	57.0
334.00	ACCESSORY ELECTRIC EQUIPMENT	06-2089	65-R1	*	(3)	14,085,274.82	2,242,808	12,265,025	253,812	1.80	48.3
335.00	MISCELLANEOUS POWER PLANT EQUIPMENT	06-2089	50-R0.5	*	0	6,271,632.50	206,713	6,064,920	146,627	2.34	41.4
335.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE		20-SQ		0	147,065.45	47,506	99,559	7,503	5.10	13.3
335.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT		15-SQ		0	1,260,725.11	428,249	832,476	90,454	7.17	9.2
335.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ		0	674,004.12	200,727	473,277	135,906	20.16	3.5
336.00	ROADS, RAILROADS AND BRIDGES	06-2089	50-R0.5	*	0	232,751.79	101,228	131,524	3,167	1.36	41.5
	TOTAL TAUM SAUK HYDRAULIC PRODUCTION PLANT					*166,595,975.76*	*13,605,833*	*180,160,009*	*3,396,732*	*2.04*	

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TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2020

	DEPRECIABLE GROUP	PROBABLE RETIREMENT YEAR	SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2020	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)		(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
	KEOKUK HYDRAULIC PRODUCTION PLANT										
331.00	STRUCTURES AND IMPROVEMENTS	06-2055	125-R1	*	(2)	10,654,732.42	2,469,767	8,398,060	256,645	2.41	32.7
332.00	RESERVOIRS, DAMS AND WATERWAYS	06-2055	150-R2.5	*	(2)	18,654,170.41	8,068,179	10,959,075	325,991	1.75	33.6
333.00	WATER WHEELS, TURBINES AND GENERATORS	06-2055	95-S0	*	(10)	139,245,701.29	35,773,543	117,396,728	3,654,411	2.62	32.1
334.00	ACCESSORY ELECTRIC EQUIPMENT	06-2055	65-R1	*	(1)	21,011,201.57	4,503,125	16,718,189	551,799	2.63	30.3
335.00	MISCELLANEOUS POWER PLANT EQUIPMENT	06-2055	50-R0.5	*	0	4,203,034.45	761,132	3,441,902	127,099	3.02	27.1
335.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE		20-SQ		0	82,792.56	53,760	29,033	4,644	5.61	6.3
335.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT		15-SQ		0	154,171.38	72,540	81,631	11,812	7.66	6.9
335.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ		0	352,840.95	14,128	338,713	143,006	40.53	2.4
336.00	ROADS, RAILROADS AND BRIDGES	06-2055	50-R0.5	*	0	114,926.08	81,368	33,558	1,350	1.17	24.9
	TOTAL KEOKUK HYDRAULIC PRODUCTION PLANT					*194,473,571.11*	*51,797,542*	*157,396,889*	*5,076,757*	*2.61*	
	TOTAL HYDRAULIC PRODUCTION PLANT					**557,706,800.35**	**121,140,727**	**484,430,953**	**14,336,995**	**2.57**	
	OTHER PRODUCTION PLANT										
341.00	STRUCTURES AND IMPROVEMENTS		40-S2		(5)	50,335,342.45	21,054,314	31,797,796	1,225,500	2.43	25.9
341.20	STRUCTURES AND IMPROVEMENTS - SOLAR		20-R4		0	304,493.13	13,184	291,309	15,746	5.17	18.5
342.00	FUEL HOLDERS, PRODUCERS AND ACCESSORIES		45-R2.5		(5)	49,241,103.55	19,430,676	32,272,483	1,002,621	2.04	32.2
344.00	GENERATORS		45-R4		(5)	1,013,641,514.28	599,862,833	464,460,757	16,614,793	1.64	28.0
344.10	GENERATORS - MARYLAND HEIGHTS LANDFILL CTG		10-S2.5		40	8,052,980.92	4,251,463	580,326	102,713	1.28	5.6
344.20	GENERATORS - SOLAR		20-S2.5		0	14,371,989.90	565,363	13,806,627	964,077	6.71	14.3
345.00	ACCESSORY ELECTRIC EQUIPMENT		40-R2.5		(5)	131,251,914.81	67,852,785	69,961,726	2,693,988	2.05	26.0
345.20	ACCESSORY ELECTRIC EQUIPMENT - SOLAR		25-S2.5		0	1,716,201.08	50,718	1,665,483	70,872	4.13	23.5
346.00	MISCELLANEOUS POWER PLANT EQUIPMENT		25-L2.5		0	9,000,371.50	5,312,334	3,688,038	190,117	2.11	19.4
346.20	MISCELLANEOUS POWER PLANT EQUIPMENT - SOLAR		20-S2.5		0	57,775.55	3,190	54,586	2,951	5.11	18.5
346.21	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE FURNITURE		20-SQ		0	299,148.85	215,735	83,414	23,158	7.74	3.6
346.22	MISCELLANEOUS POWER PLANT EQUIPMENT - OFFICE EQUIPMENT		15-SQ		0	465,575.31	224,309	241,266	35,639	7.65	6.8
346.23	MISCELLANEOUS POWER PLANT EQUIPMENT - COMPUTERS		5-SQ		0	1,486,423.33	481,177	1,005,246	309,145	20.80	3.3
346.40	MISCELLANEOUS POWER PLANT EQUIPMENT - WIND - OTHER		35-S2.5		0	15,123.50	34	15,090	437	2.89	34.5
	HIGH PRARIE WIND FARM										
341.40	STRUCTURES AND IMPROVEMENTS	06-2050	70-R2.5	*	0	39,688,422.20	58,375	39,630,047	1,373,658	3.46	28.9
344.40	GENERATORS	06-2050	45-R2	*	(1)	502,842,852.06	778,905	507,092,376	18,446,431	3.67	27.5
345.40	ACCESSORY ELECTRIC EQUIPMENT	06-2050	40-R2.5	*	(1)	70,838,619.57	109,210	71,437,796	2,593,023	3.66	27.6
346.40	MISCELLANEOUS POWER PLANT EQUIPMENT	06-2050	35-S2.5	*	0	3,753.07	11	3,742	136	3.62	27.5
	TOTAL HIGH PRARIE WIND FARM					*613,373,646.90*	*946,501*	*618,163,961*	*22,413,248*	*3.65*	
	TOTAL OTHER PRODUCTION PLANT					**1,893,613,605.06**	**720,264,616**	**1,238,088,108**	**45,665,005**	**2.41**	
	TOTAL PRODUCTION PLANT					**10,663,763,759.69**	**4,702,252,457**	**6,261,358,557**	**418,471,559**	**3.92**	

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TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2020

	DEPRECIABLE GROUP	PROBABLE RETIREMENT YEAR	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2020	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
	TRANSMISSION PLANT									
352.00	STRUCTURES AND IMPROVEMENTS		65-R2.5	(5)	9,956,601.15	2,972,454	7,481,977	182,378	1.83	41.0
353.00	STATION EQUIPMENT		60-S0	(5)	413,358,199.44	94,722,135	339,303,974	6,903,247	1.67	49.2
354.00	TOWERS AND FIXTURES		70-R4	(40)	99,597,608.63	55,629,074	83,807,578	2,459,280	2.47	34.1
355.00	POLES AND FIXTURES		58-R3	(100)	558,657,654.07	149,444,279	967,871,029	19,805,517	3.55	48.9
356.00	OVERHEAD CONDUCTORS AND DEVICES		65-R3	(30)	343,620,006.20	102,928,284	343,777,724	6,829,364	1.99	50.3
359.00	ROADS AND TRAILS		70-R4	0	71,788.00	94,154	(22,366)	0	-	-
	TOTAL TRANSMISSION PLANT				**1,425,261,857.49**	**405,790,380**	**1,742,219,916**	**36,179,795**	**2.54**	
	DISTRIBUTION PLANT									
361.00	STRUCTURES AND IMPROVEMENTS		60-R2.5	(5)	17,948,047.04	6,790,943	12,054,506	330,398	1.84	36.5
362.00	STATION EQUIPMENT		60-R2	(10)	1,196,340,823.00	301,588,486	1,014,386,419	21,843,135	1.83	46.4
364.00	POLES AND FIXTURES		52-R2.5	(150)	1,282,350,820.53	1,082,063,490	2,123,813,561	55,183,680	4.30	38.5
365.00	OVERHEAD CONDUCTORS AND DEVICES		52-R1	(50)	1,442,349,111.67	522,768,319	1,640,755,349	40,699,560	2.82	40.3
366.00	UNDERGROUND CONDUIT		70-R3	(50)	591,799,312.82	123,124,738	764,574,231	13,787,524	2.33	55.5
367.00	UNDERGROUND CONDUCTORS AND DEVICES		57-R2	(40)	955,320,836.01	276,915,858	1,060,533,312	24,545,701	2.57	43.2
368.00	LINE TRANSFORMERS		42-R2.5	0	521,169,770.16	195,462,852	325,706,918	12,652,315	2.43	25.7
369.10	OVERHEAD SERVICES		48-R2.5	(170)	214,886,696.70	284,335,136	295,858,945	8,564,515	3.99	34.5
369.20	UNDERGROUND SERVICES		60-R3	(90)	182,120,702.62	140,976,055	205,053,280	5,027,069	2.76	40.8
370.00	METERS	12-2024	28-S0.5	(5)	103,632,157.27	49,382,761	59,431,004	16,144,661	15.58	3.7
370.10	METERS - AMI		20-S2.5	(5)	49,460,710.19	551,445	51,382,301	2,635,231	5.33	19.5
371.00	INSTALLATIONS ON CUSTOMERS' PREMISES		30-O1	0	247,087.65	169,371	77,717	2,915	1.18	26.7
373.00	STREET LIGHTING AND SIGNAL SYSTEMS		38-S0	(30)	192,200,060.31	85,860,049	164,000,029	5,516,205	2.87	29.7
	TOTAL DISTRIBUTION PLANT				**6,749,826,135.97**	**3,069,989,503**	**7,717,627,572**	**206,932,909**	**3.07**	
	GENERAL PLANT									
390.00	STRUCTURES AND IMPROVEMENTS									
	LARGE STRUCTURES		55-R1	(10)	346,844,134.19	73,864,831	307,663,717	6,821,617	1.97	45.1
	MISCELLANEOUS STRUCTURES - OLD		45-S0	(10)	4,061,767.61	3,840,165	627,779	67,881	1.67	9.2
	TOTAL STRUCTURES AND IMPROVEMENTS				350,905,901.80	77,704,996	308,291,496	6,889,498	1.96	
390.05	STRUCTURES AND IMPROVEMENTS - TRAINING ASSETS		5-SQ	0	934,005.31	934,005	0	0	-	-
391.00	OFFICE FURNITURE AND EQUIPMENT - FURNITURE		20-SQ	0	53,391,787.55	18,646,915	34,744,873	2,494,584	4.67	13.9
391.20	OFFICE FURNITURE AND EQUIPMENT - PERSONAL COMPUTERS		5-SQ	0	75,814,481.36	28,518,106	47,296,375	16,546,688	21.83	2.9
391.30	OFFICE FURNITURE AND EQUIPMENT - EQUIPMENT		15-SQ	0	4,057,745.09	2,108,449	1,949,296	246,595	6.08	7.9
392.00	TRANSPORTATION EQUIPMENT		11-R2	15	159,108,923.52	66,842,608	68,399,977	10,026,633	6.30	6.8
392.05	TRANSPORTATION EQUIPMENT - TRAINING ASSETS		5-SQ	0	159,840.86	159,841	0	0	-	-
393.00	STORES EQUIPMENT		20-SQ	0	5,070,788.34	1,935,596	3,135,192	254,688	5.02	12.3
394.00	TOOLS, SHOP, AND GARAGE EQUIPMENT		20-SQ	0	31,519,594.06	11,549,966	19,969,628	1,642,346	5.21	12.2
394.05	TOOLS, SHOP, AND GARAGE EQUIPMENT - TRAINING ASSETS		5-SQ	0	2,116,666.09	2,116,666	0	0	-	-
395.00	LABORATORY EQUIPMENT		20-SQ	0	7,620,698.43	3,632,508	3,988,190	379,529	4.98	10.5
396.00	POWER OPERATED EQUIPMENT		15-L2	15	16,739,602.16	3,576,150	10,652,512	1,114,582	6.66	9.6
397.00	COMMUNICATION EQUIPMENT		15-SQ	0	119,413,232.81	40,543,567	78,869,666	8,024,756	6.72	9.8
397.05	COMMUNICATION EQUIPMENT - TRAINING ASSETS		5-SQ	0	12,326.14	12,326	0	0	-	-
398.00	MISCELLANEOUS EQUIPMENT		20-SQ	0	3,046,733.95	697,317	2,349,417	153,034	5.02	15.4
	TOTAL GENERAL PLANT				**829,912,327.47**	**258,979,016**	**579,646,622**	**47,772,933**	**5.76**	
	TOTAL DEPRECIABLE PLANT				**19,668,764,080.62**	**8,437,011,356**	**16,300,852,667**	**709,357,196**	**3.61**	

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TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVE, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO ELECTRIC PLANT AS OF DECEMBER 31, 2020

	DEPRECIABLE GROUP	PROBABLE RETIREMENT YEAR	SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2020	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(8)/(5)	(10)=(7)/(8)
	NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED									
302.00	FRANCHISES AND CONSENTS				100,173,057.00	26,107,080				
303.00	MISCELLANEOUS INTANGIBLE PLANT				421,780,868.00	189,239,367				
310.00	LAND AND LAND RIGHTS				15,527,875.00					
312.70	BOILER PLANT EQUIPMENT - LEASED				27,710,798.35	5,838,565				
317.00	ARO - STEAM PRODUCTION				157,061,474.00	105,978,228				
320.00	LAND AND LAND RIGHTS				9,793,885.00					
326.00	ARO - NUCLEAR PRODUCTION				101,674,757.00	(12,830,757)				
330.00	LAND AND LAND RIGHTS				18,104,861.00					
340.00	LAND AND LAND RIGHTS				7,471,040.00					
347.00	ARO - OTHER PRODUCTION				35,998,038.00					
350.00	LAND AND LAND RIGHTS				57,261,647.00					
360.00	LAND AND LAND RIGHTS				36,586,933.00					
373.10	ARO - DISTRIBUTION PLANT				(2,913,604.30)					
374.00	ARO - DISTRIBUTION PLANT					(108)				
389.00	LAND AND LAND RIGHTS				16,090,700.00					
390.70	STRUCTURES AND IMPROVEMENTS - LEASED				3,537,502.96	2,301,112				
399.10	ARO - GENERAL PLANT				2,551,590.00	751,385				
	TOTAL NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED				1,008,411,422.01	317,384,872				
	TOTAL ELECTRIC PLANT				20,677,175,502.63	8,754,396,228				

* CURVE SHOWN IS INTERIM SURVIVOR CURVE

NOTES: NEW ADDITIONS FOR LARGE WIND FARM FACILITIES WILL HAVE THE FOLLOWING RATES:

ACCOUNT	DESCRIPTION	ACCRUAL RATE
341.40	STRUCTURES AND IMPROVEMENTS	3.47
344.40	GENERATORS	3.67
345.40	ACCESSORY ELECTRIC EQUIPMENT	3.67
346.40	MISCELLANEOUS POWER PLANT EQUIPMENT	3.63

NEW ADDITIONS FOR SMALLER WIND FARM FACILITIES WILL HAVE THE FOLLOWING RATES:

ACCOUNT	DESCRIPTION	ACCRUAL RATE
341.40	STRUCTURES AND IMPROVEMENTS	4.15
344.40	GENERATORS	4.34
345.40	ACCESSORY ELECTRIC EQUIPMENT	4.32
346.40	MISCELLANEOUS POWER PLANT EQUIPMENT	4.22

NEW ADDITIONS FOR LARGE SOLAR GENERATION FACILITIES WILL HAVE THE FOLLOWING RATES:

ACCOUNT	DESCRIPTION	ACCRUAL RATE
341.20	STRUCTURES AND IMPROVEMENTS	3.47
344.20	GENERATORS	3.89
345.20	ACCESSORY ELECTRIC EQUIPMENT	3.83
346.20	MISCELLANEOUS POWER PLANT EQUIPMENT	3.82

NEW ADDITIONS FOR ENERGY STORAGE EQUIPMENT AND SURGE PROTECTORS WILL HAVE THE FOLLOWING RATES:

ACCOUNT	DESCRIPTION	ACCRUAL RATE
348.00	ENERGY STORAGE EQUIPMENT	10.00
351.00	ENERGY STORAGE EQUIPMENT	10.00
363.00	STORAGE BATTERY EQUIPMENT	10.00
370.20	METERS - SURGE PROTECTION DEVICES	6.85

Ameren Missouri's
Response to MPSC Data Request - MPSC
GR-2021-0241
In the Matter of Union Electric Company d/b/a Ameren Missouri's Tariffs to Adjust Its Revenues for Natural Gas Service

No.: MPSC 0251

1. Please provide a detailed discussion of the current status of Ameren Missouri's plan/strategy to install AMI meters in its gas service territory. The discussion should include but not be limited to the total number and dollar amount of AMI meters to be installed, the total number and dollar amount of AMI meters that have been installed, total number and dollar amount of AMI meters that would be necessary for inventory (if applicable), timeframes for completion and installation, any labor implications, outside consultants and description of services they provide, proposed depreciation rates, anticipated cost savings by elimination of previous costs or any other means, who manufactures the meters, who provides maintenance for the meters, plans for usage of customer meter data (internally or externally) and any associated ongoing O&M expense related to the AMI meters. 2. Is there a different plan/strategy for AMI meters for electric operations and gas operations? Please explain in detail. 3. Please provide the total number of AMI smart meters and the associated area in the gas service territory where they have been installed by month that have been installed from beginning of installation through September 30, 2021. 4. Please provide the amount of investment by month, by FERC account related to gas AMI smart meters that have been installed by Ameren Missouri from the beginning of installation through September 30, 2021 with all applicable allocation factors. 5. Please provide the total number and dollar amount of AMI meters that are kept in inventory (if applicable) by month from the beginning of installation through September 30, 2021. Data Request submitted by Lisa Ferguson (Lisa.Ferguson@psc.mo.gov).

RESPONSE

Prepared By: Jeff Esserman
Title: Director, Smart Meter Program
Date: 5/14/2021

The AMR infrastructure (owned and operated by Landis+Gyr) that was deployed in Ameren Missouri's service territory in the late 1990's to support its electric meter population is the same infrastructure that supports its gas meter population today. That infrastructure is end of life, and requires replacement.

Ameren Missouri plans to begin upgrading the gas system by retrofitting AMI gas modules, purchased from Landis+Gyr, onto existing gas meters beginning in midyear-2023. Ameren

Missouri plans to have the entire gas population retrofitted with AMI modules by approximately end-of-year 2024. Ameren Missouri intends to retrofit its entire meter population, roughly 135k meters with AMI gas modules. No AMI gas modules have been deployed within Ameren Missouri's service territory to-date. The material cost to purchase the AMI gas modules is approximately $7,052,758.
As is currently the case, gas meters will continue to be maintained by Ameren Missouri personnel. The Ameren Missouri approach to AMI gas is consistent with its electric AMI approach; Ameren Missouri personnel will perform the management of data and AMI endpoint monitoring and maintenance.

The approach for data usage from the AMI gas system will be consistent with that of electric. Data will be used for customer billing, operational reporting and response, as well as customer presentment. Residential customers will be able to see their usage information in 15-minute interval increments; this will allow greater energy insight and control.

Over the 20-year operating life of the AMI gas module, the primary cost savings are associated with the avoided cost of AMR read fees. These costs are consistent with the avoided costs for electric, and sum to approximately $43,245,537, specific to gas, over the operating life of the system.

With our gas module deployment plan scheduled for 2023, we do not have inventory of gas modules in our plan for 2021.