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105 West Fir Avenue

Mailing Address:

P.O. Box 176

Fergus Falls, MN 56538-0176

(218) 736-6935

November 5, 2018

Daniel P. Wolf  
Executive Secretary  
Minnesota Public Utilities Commission  
121 East Seventh Place, Suite 350  
St. Paul, MN 55101-2147

RE: Docket No. G004/D-18-369  
Supplemental Reply Comments to the Comments of the Minnesota Department  
of Commerce, Division of Energy Resources

Dear Mr. Wolf:

Great Plains Natural Gas Co. (Great Plains), a Division of MDU Resources Group, Inc., herewith electronically files these Supplemental Comments to its Reply Comments submitted on October 4, 2018 regarding the Comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) filed on August 16, 2018.

Great Plains again appreciates the Department's review of the Company's annual depreciation study. Through the review process, one additional discrepancy that caused a change in the proposed depreciation rate for Account 396.1, resulting in an increase in depreciation of \$367 compared to the October 4, 2018 filing, along with revisions to vintage data for Accounts 396.1 and 396.2 was discovered as further explained below. Great Plains' herewith submits a 2<sup>nd</sup> revised 2018 Technical Depreciation Update reflecting the corrections.

Great Plains maintains Account Nos. 396.1 and 396.2 activity separately for each subaccount in its books and records. However, the depreciation rate was based on the combined activity in both accounts in prior studies whereas the current study was developed to establish separate depreciation rates for each account as explained in Great Plains' Reply Comments submitted on October 4, 2018. The combined account information was erroneously provided to Concentric (the Company's current depreciation consultant) rather than the specific information by subaccount as maintained by the Company.

The total change in the revised depreciation study provided in Attachment A versus the Company's June 1<sup>st</sup> study is a decrease in annual depreciation expense of \$4,428.

If you have any questions regarding these reply comments, please contact me at (701) 222-7856, or Brian Meloy, at (612) 335-1451.

Sincerely,

*/s/ Tamie A. Aberle*

Tamie A. Aberle  
Director of Regulatory Affairs



**2018 TECHNICAL DEPRECIATION UPDATE  
Great Plains Natural Gas Co.**

**TECHNICAL UPDATE  
Calculated Annual Depreciation Accrual Rates Applicable  
to Plant in Service as of December 31, 2017**

Prepared May 2018  
2<sup>nd</sup> Revised November 5, 2018

Concentric Advisors, ULC  
200 Rivercrest Drive SE, Ste 277  
Calgary, AB Canada T2C 2X5  
403.257.5946

Washington, D.C. Office  
1300 19th St NW, Ste 620  
Washington, DC 20036  
202.587.4470

Headquarters  
293 Boston Post Rd West, Ste 500  
Marlborough, MA 01752  
508.263.6200

Chicago, IL Office  
350 West Hubbard Street, Ste 600  
Chicago, IL 60654  
224.999.7372



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SECTION 1

1 STUDY HIGHLIGHTS

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Pursuant to request of the Great Plains Natural Gas Co. (“GPNG” or the “Company”), Concentric Energy Advisors (“Concentric”) completed a Technical Update (“the Update”) to the results of the depreciation study filed by GPNG in May 2017. The results of the Update contained herein relate to the natural gas transmission, distribution and General Plant assets as of December 31, 2017. The purpose of the update is to determine the annual depreciation accrual rates and amounts for ratemaking purposes applicable to the original cost of plant as of December 31, 2017.

The depreciation rates in this update have been calculated using the same depreciation methods, procedures and techniques employed in the last GPNG depreciation study. Additionally, the depreciation rate calculations are based on the average service life, retirement dispersion and net salvage estimates developed in the last full depreciation study.

The Update results are summarized at an aggregate functional group level as follows:

Summary of Original Cost, Currently Approved Accrual Percentages and Amounts, and Updated Accrual Percentage and Amounts

<b>Plant Group / Accounts</b>	<b>Original Cost</b>	<b>Annual Accrual</b>	<b>Annual Accrual Updated</b>
Transmission Plant	\$2,555,239	1.75%	\$44,717
Distribution Plant	\$43,806,947	4.57%	\$2,001,978
General Plant	\$6,334,250	3.60%	\$228,033
<b>TOTAL</b>	<b>\$52,696,436</b>	<b>4.31%</b>	<b>\$2,274,728</b>



## SECTION 2

**2 BASIS OF THE UPDATE**

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**2.1 Scope**

Concentric has been retained to develop a technical Update to the depreciation study completed in 2017 for GPNG. The purpose of the Update was to determine the annual depreciation accrual rates and amounts for ratemaking purposes applicable to the actual surviving original cost as of December 31, 2017. The depreciation accrual rates presented herein are based on generally-accepted methods and procedures for calculating depreciation.

The annual depreciation accrual rates and amounts are based on the broad group straight line method of depreciation using the Average Life Group (“ALG”) procedure and were applied using the remaining life technique. The calculations were based on the actual plant accounting ledger values as at December 31, 2017. Inherent in the application of the depreciation parameters with the remaining life technique, the accumulated depreciation accounts are trued up of any variances between the actual book accumulated depreciation reserve and calculated accrued depreciation requirement are amortized over the composite remaining life of each group of assets.

**2.1.1 Purpose of a technical update**

Concentric notes that the depreciation rates should be reviewed periodically as plant and accumulated depreciation account activity may result in materially different depreciation rates. The survivor curves, net salvage percentages, and amortization periods determined in the Company’s most recent full depreciation study should be the basis for the periodic recalculations. Complete depreciation studies, which re-evaluate these parameters, should be performed every three to five years.

When depreciation rates are calculated utilizing a remaining life technique, the depreciation rate is established by dividing the undepreciated value of each group of assets (after consideration to the net salvage requirements) by the composite remaining life of the group of assets. This calculation is made for each vintage surviving investment as of the date of the study (or Update), and then composited into a calculation for the account or group as a whole. As follows, this calculation requires two estimates:

- The actual booked accumulated depreciation for each vintage within each account. GPNG does not track the booked accumulated depreciation reserve by vintage within each account. The depreciation expense is calculated at an account level and booked to accumulated depreciation at the same account level. Concentric notes that this is the practice employed by virtually all regulated utilities. As such, the accumulated depreciation by account, is allocated within the account, to each vintage on the basis of the calculated accumulated by vintage. The calculated accumulated depreciation is a function of the estimated survivor curve, the average service life estimate, the net salvage estimates and the achieved age of each vintage.



- The estimated remaining life of each vintage with each account. The estimated remaining life of each account is a direct function of the achieved age of each vintage, the estimated survivor curve and the average service life estimate.

Once the above two estimates are determined (the allocated booked reserve by vintage and the average remaining life of each vintage) an annual accrual requirement for each vintage is determined by dividing the net book value for each vintage (considering the estimated future salvage requirements) by the average remaining life of the vintage. The annual requirement for each vintage is summed at the account level and divided into the sum of the accounts original cost surviving as of the study date to determine a required remaining life depreciation accrual rate for the account.

The calculations as described above are dependent upon the actual total account book depreciation and the estimated remaining life of each vintage. The depreciation rate can vary year over year due to plant addition and retirement activity. Additionally, the age of retirements in any given year can cause a required adjustment to the depreciation rate going forward. Therefore, annual technical updates are often required by regulators.

## 2.2 Information Provided by GPNG

GPNG has provided Concentric with the required information as of December 31, 2017 for all accounts being studied in this Update. The information includes the following:

- current balances by vintage year for each account (aged balances). The balances provide the amount of investment sorted by installation year currently in operation. GPNG arranged for the prior depreciation consultant (AUS Consultants) to forward the aged balances and service life files to Concentric to avoid the time and costs re-creating these existing files through December 31, 2016. The actual 2017 transaction plant accounting data was forwarded directly from GPNG to Concentric so that the 2016 files could be updated through December 31, 2017;
- the actual booked accumulated depreciation amounts by account as of December 31, 2017 were forwarded directly from GPNG to Concentric; and
- the last full depreciation study was provided to Concentric to use in the determination of prior depreciation practices and approved depreciation parameters.

## 2.3 Data Reconciliation

The above data was reviewed and reconciled to Company control schedules to ensure accuracy and reasonableness in use of the calculations developed in this Update. These checks include:

- that the surviving investment by account equals (or can be reconciled to) the Company's gross plant in service and accumulated depreciation ledger balances;
- that the surviving investment in each vintage is not negative. In other words, this check confirms that the sum of retirements from any given vintage have not exceeded the amount of plant additions to the vintage; and
- that this report reflects the consolidation of the "Mains" and "Services" plant accounts.



## SECTION 3

**3 DEVELOPMENT OF THE REQUIRED DEPRECIATION RATES**

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**3.1 Depreciation**

The development of the depreciation calculations requires the input of an Average Service Life, Iowa curve and Net Salvage recommendations (the “depreciation parameters”). Additionally, to complete the depreciation calculations, the calculation methods must be established. Specifically, the selection of the depreciation method must establish three types of additional input:

1. the choice of a depreciation method;
2. a basis upon which to apply the method, and
3. in the case of group assets, a procedure to use in grouping the assets.

In this Update, the depreciation rates for GPNG have been calculated in accordance with the Straight-Line method, the Average Life Group procedure and applied using the Remaining Life technique.

Depreciation in public utility regulation, is the loss in service value not restored by current maintenance, incurred with the consumption or prospective retirement of utility plant in service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among causes to be given consideration are: wear and tear; deterioration; action of the elements; inadequacy; obsolescence; changes in the art; changes in demand; and the requirements of public authorities. When considering the action of the elements, the average service life calculations have considered large catastrophic events that have occurred and impacted the life estimates of utilities across North America. The average service life of utilities has been influenced by events including forest fires, earthquakes, tornadoes, ice storms, wind storms, large scale flooding, fires, intentional actions of third parties and other natural forces of nature.

Depreciation, as used in accounting, is a method of distributing fixed capital costs less net salvage over a time period, by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing natural gas utility service. Normally, the time over which the fixed capital cost is allocated to the cost of service, is equal to the time over which an item renders service, that is the item's service life. The most prevalent method of allocation is to distribute an equal amount of cost to each year of service life. This method is known as the Straight-Line method of depreciation.

The calculation of annual and accrued depreciation based on the Straight-Line method requires the estimation of survivor curves and is described in the following sections of this Update. The development of the proposed depreciation rates also requires the selection of group depreciation procedures, as discussed below.

This Update uses the estimates as approved in the last full GPNG depreciation study. Imbedded in the remaining life calculations, the variances between the calculated accrued depreciation and the book accumulated depreciation are amortized over the composite remaining life of each account.





## SECTION 4

**4 RESULTS OF UPDATE**

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**4.1 Qualification of Results**

The calculated annual and accrued depreciation are the principal results of the update. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates. An assumption that accrual rates can remain unchanged over a long period of time implies a disregard for the inherent variability in service lives and salvage, and for the change of the composition of property in service. The annual accrual rates and the accrued depreciation were calculated in accordance with the Straight-line method, using the ALG procedure based on estimates which reflect considerations of current historical evidence and expected future conditions.

**4.2 Description of Detailed Tabulations**

The following tables provides summaries by account of the original cost of investment, calculated and booked accumulated depreciation amounts, the required amount of annual depreciation expense, the required depreciation rate to be applied against the original cost of the account and the estimated composite remaining life of the surviving plant in service.

The detailed calculations of annual depreciation applicable to depreciable assets, as of December 31, 2017, are presented in account sequence starting in Section 5. The tables indicate the estimated average survivor curves used in the calculations. The tables set forth (for each installation year) the original cost, calculated accrued depreciation and the calculated annual accrual.

**GREAT PLAINS NATURAL GAS CO.**

**TABLE 1. REVISED SUMMARY OF SERVICE LIFE AND NET SALVAGE ESTIMATES AND CALCULATED ANNUAL AND ACCRUED DEPRECIATION RELATED TO THE RECOVERY OF AVERAGE ORIGINAL COST IN GAS PLANT AS OF DECEMBER 31, 2017**

- TOTAL -

ACCOUNT	DESCRIPTION	ESTIMATED SURVIVOR CURVE	NET SALVAGE PERCENT	SURVIVING ORIGINAL COST AS OF 12/31/2017	CALCULATED ACCRUED DEPRECIATION	BOOK RESERVE	ANNUAL ACCRUAL AMOUNT	RATE	REMAINING LIFE
<b>TRANSMISSION PLANT</b>									
365.2	RIGHTS OF WAY	50-R2.5	0	158,152	100,231	124,001	1,228	0.78	18.3
367.0	TRANSMISSION MAINS	50-R3	-20	1,541,179	1,163,374	1,461,591	8,838	0.57	18.6
369.0	MEAS & REG STATION EQUIPMENT	40-R0.5	-10	855,908	158,200	206,134	21,492	2.51	33.3
<b>TOTAL TRANSMISSION PLANT</b>				<b>2,555,239</b>	<b>1,421,805</b>	<b>1,791,726</b>	<b>31,558</b>	<b>1.24</b>	
<b>DISTRIBUTION PLANT</b>									
374.2	RIGHTS OF WAY	50-R2.5	0	17,654	9,171	8,791	373	2.11	24.0
375.0	DISTR. MEAS & REG STATION STRUCTURES	N/A	-5	32,251	N/A	27,085	916	2.84	N/A
376.0	MAINS	46-R3	-55	19,426,616	9,205,986	9,867,471	604,015	3.11	31.9
378.0	MEAS & REG STATION EQUIP-GENERAL	N/A	-25	511,305	N/A	351,279	64,169	12.55	N/A
379.0	MEAS & REG STATION EQUIP-CITY GATE	28-R3	-5	484,883	129,199	113,979	19,539	4.03	20.9
380.0	SERVICES	39-R3	-75	15,937,760	8,149,111	9,392,445	609,125	3.82	27.6
381.0	METERS & METER INSTALLATIONS	N/A	-25	6,438,021	N/A	3,905,077	638,008	9.91	N/A
383.0	HOUSE REGULATORS	N/A	-5	774,939	N/A	439,509	51,301	6.62	N/A
385.0	INDUSTRIAL MEAS. & REG. STATION EQUIPMENT	40-S4	0	162,784	14,248	13,804	4,091	2.51	36.5
387.1	CATHODIC PROTECTION EQUIPMENT	25-R3	0	9,235	3,661	3,249	410	4.44	15.1
387.2	OTHER EQUIPMENT	30-R3	0	11,498	9,594	11,498	-	-	5.0
<b>TOTAL DISTRIBUTION PLANT</b>				<b>43,806,947</b>	<b>17,520,970</b>	<b>24,134,187</b>	<b>1,991,946</b>	<b>4.55</b>	
<b>GENERAL PLANT</b>									
390.0	GENERAL STRUCTURES & IMPROVEMENTS	45-R4	0	2,528,697	650,371	973,232	42,387	1.68	33.4
391.1	OFFICE FURNITURE & EQUIPMENT	16-SQ	0	95,317	59,254	58,979	5,814	6.10	6.1
391.3	COMPUTER & ELECTRONIC EQUIPMENT	4-SQ	0	61,617	38,511	26,529	23,392	37.96	1.5
392.1	TRANSPORTATION EQUIPMENT - TRAILERS	12-R1	10	31,167	19,560	25,947	280	0.90	3.6
392.2	TRANSPORTATION EQUIPMENT	7-L2	20	1,380,893	490,542	648,860	107,138	7.76	3.9
394.0	TOOLS, SHOP, & GARAGE EQUIPMENT	20-SQ	0	628,270	227,794	222,312	32,474	5.17	12.8
396.1	POWER OPERATED EQUIPMENT - TRAILERS	6-L0	65	151,442	16,034	33,224	3,902	2.58	4.2
396.2	POWER OPERATED EQUIPMENT	6-L0	65	1,101,925	98,366	300,745	15,068	1.37	4.5
397.0	COMMUNICATION EQUIPMENT	18-SQ	0	303,583	195,944	194,381	17,108	5.64	6.4
398.0	MISCELLANEOUS EQUIPMENT	25-SQ	0	51,339	20,175	18,341	2,175	4.24	15.2
<b>TOTAL GENERAL PLANT</b>				<b>6,334,250</b>	<b>1,816,551</b>	<b>2,502,550</b>	<b>249,738</b>	<b>3.94</b>	
<b>TOTAL GAS PLANT STUDIED</b>				<b>52,696,436</b>	<b>20,759,326</b>	<b>28,428,463</b>	<b>2,273,242</b>	<b>4.31</b>	
<b>PLANT NOT STUDIED</b>									
301.0	ORGANIZATION COSTS			5,006					
302.0	FRANCHISE COSTS			73,680					
303.0	INTANGIBLE ASSETS			2,783,783					
365.0	LAND			5,585					
374.0	LAND			2,978					
389.0	LAND & LAND RIGHTS GENERAL			48,658.66					
<b>TOTAL PLANT</b>				<b>55,616,128</b>					

**Notes:**

- 1 Interim Retirement Rate. Service lives vary.
- 2 Based upon anticipated district regulator change out / eliminations.
- 3 Based upon 20 ERT battery life and remaining PVC program term 2016 - 2026.

All currently approved rates include salvage portion.

**GREAT PLAINS NATURAL GAS CO.**

**TABLE 1A. REVISED SUMMARY OF SERVICE LIFE AND NET SALVAGE ESTIMATES AND CALCULATED ANNUAL AND ACCRUED DEPRECIATION RELATED TO THE RECOVERY OF AVERAGE ORIGINAL COST IN GAS PLANT AS OF DECEMBER 31, 2017**

- LIFE -

ACCOUNT	DESCRIPTION	ESTIMATED SURVIVOR CURVE	NET SALVAGE PERCENT	SURVIVING ORIGINAL COST AS OF 12/31/2017	CALCULATED ACCRUED DEPRECIATION	BOOK RESERVE	ANNUAL ACCRUAL AMOUNT	RATE	REMAINING LIFE	
<b>TRANSMISSION PLANT</b>										
365.2	RIGHTS OF WAY	50-R2.5	-	158,152	100,231	124,001	1,228	0.78	18.3	
367.0	TRANSMISSION MAINS	50-R3	-	1,541,179	969,478	1,164,039	11,217	0.73	18.6	
369.0	MEAS & REG STATION EQUIPMENT	40-R0.5	-	855,908	143,818	215,507	18,408	2.15	33.3	
<b>TOTAL TRANSMISSION PLANT</b>				<b>2,555,239</b>	<b>1,213,527</b>	<b>1,503,547</b>	<b>30,853</b>	<b>1.21</b>		
<b>DISTRIBUTION PLANT</b>										
374.2	RIGHTS OF WAY	50-R2.5	-	17,654	9,171	8,791	373	2.11	24.0	
375.0	DISTR. MEAS & REG STATION STRUCTURES	N/A	-	32,251	N/A	25,820	826	1	2.69	N/A
376.0	MAINS	46-R3	-	19,426,616	5,939,346	6,778,294	358,249	1.84	31.9	
378.0	MEAS & REG STATION EQUIP-GENERAL	N/A	-	511,305	N/A	308,692	35,955	2	8.79	N/A
379.0	MEAS & REG STATION EQUIP-CITY GATE	28-R3	-	484,883	123,046	136,559	16,119	3.32	20.9	
380.0	SERVICES	39-R3	-	15,937,760	4,656,635	5,280,476	353,948	2.22	27.6	
381.0	METERS & METER INSTALLATIONS	N/A	-	6,438,021	N/A	3,460,968	362,074	3	7.03	N/A
383.0	HOUSE REGULATORS	N/A	-	774,939	N/A	439,509	43,618	3	5.91	N/A
385.0	INDUSTRIAL MEAS. & REG. STATION EQUIPMENT	40-S4	-	162,784	14,248	13,804	4,091	2.51	36.5	
387.1	CATHODIC PROTECTION EQUIPMENT	25-R3	-	9,235	3,661	3,249	410	4.44	15.1	
387.2	OTHER EQUIPMENT	30-R3	-	11,498	9,594	11,498	-	-	5.0	
<b>TOTAL DISTRIBUTION PLANT</b>				<b>43,806,948</b>	<b>10,755,701</b>	<b>16,467,660</b>	<b>1,175,663</b>	<b>2.68</b>		
<b>GENERAL PLANT</b>										
390.0	GENERAL STRUCTURES & IMPROVEMENTS	45-R4	-	2,528,697	650,371	973,232	42,387	1.68	33.4	
391.1	OFFICE FURNITURE & EQUIPMENT	16-SQ	-	95,317	59,254	58,979	5,814	6.10	6.1	
391.3	COMPUTER & ELECTRONIC EQUIPMENT	4-SQ	-	61,617	38,511	26,529	23,392	37.96	1.5	
392.1	TRANSPORTATION EQUIPMENT - TRAILERS	12-R1	-	31,167	21,733	25,947	754	2.42	3.6	
392.2	TRANSPORTATION EQUIPMENT	7-L2	-	1,380,893	613,177	648,860	185,443	13.43	3.9	
394.0	TOOLS, SHOP, & GARAGE EQUIPMENT	20-SQ	-	628,270	227,794	222,312	32,474	5.17	12.8	
396.1	POWER OPERATED EQUIPMENT - TRAILERS	6-LO	-	151,442	45,813	33,224	30,893	20.40	4.2	
396.2	POWER OPERATED EQUIPMENT	6-LO	-	1,101,925	281,046	300,745	175,164	15.90	4.5	
397.0	COMMUNICATION EQUIPMENT	18-SQ	-	303,583	195,944	194,381	17,108	5.64	6.4	
398.0	MISCELLANEOUS EQUIPMENT	25-SQ	-	51,339	20,175	18,341	2,175	4.24	15.2	
<b>TOTAL GENERAL PLANT</b>				<b>6,334,250</b>	<b>2,153,818</b>	<b>2,502,550</b>	<b>515,604</b>	<b>8.14</b>		
<b>TOTAL GAS PLANT STUDIED</b>				<b>52,696,437</b>	<b>14,123,046</b>	<b>20,473,757</b>	<b>1,722,120</b>	<b>3.27</b>		
<b>PLANT NOT STUDIED</b>										
301.0	ORGANIZATION COSTS			5,006						
302.0	FRANCHISE COSTS			73,680						
303.0	INTANGIBLE ASSETS			2,783,783						
365.0	LAND			5,585						
375.0	LAND			2,978						
389.0	LAND & LAND RIGHTS GENERAL			48,658.66						
<b>TOTAL PLANT</b>				<b>55,616,128</b>						

**Notes:**

- 1 Interim Retirement Rate. Service lives vary.
- 2 Based upon anticipated district regulator change out / eliminations.
- 3 Based upon 20 ERT battery life and remaining PVC program term 2016 - 2026.

All currently approved rates include salvage portion.

## GREAT PLAINS NATURAL GAS CO.

**TABLE 1B. REVISED SUMMARY OF SERVICE LIFE AND NET SALVAGE ESTIMATES AND CALCULATED ANNUAL AND ACCRUED DEPRECIATION RELATED TO THE RECOVERY OF AVERAGE ORIGINAL COST IN GAS PLANT AS OF DECEMBER 31, 2017**

### - NET SALVAGE -

ACCOUNT	DESCRIPTION	ESTIMATED SURVIVOR CURVE	NET SALVAGE PERCENT	SURVIVING ORIGINAL COST AS OF 12/31/2017	CALCULATED ACCRUED DEPRECIATION	BOOK RESERVE	ANNUAL ACCRUAL AMOUNT	RATE
<b>TRANSMISSION PLANT</b>								
365.2	RIGHTS OF WAY	50-R2.5	-	158,152.03	-	-	-	0.00
367.0	TRANSMISSION MAINS	50-R3	-20	1,541,178.76	193,896	297,552	(2,379)	(0.16)
369.0	MEAS & REG STATION EQUIPMENT	40-R0.5	-10	855,907.98	14,382	(9,373)	3,084	0.36
<b>TOTAL TRANSMISSION PLANT</b>				<b>2,555,239</b>	<b>208,278</b>	<b>288,179</b>	<b>705</b>	<b>0.03</b>
<b>DISTRIBUTION PLANT</b>								
374.2	RIGHTS OF WAY	50-R2.5	-	17,653.59	-	-	-	0.00
375.0	DISTR. MEAS & REG STATION STRUCTURES	N/A	-5	32,251	N/A	1,265	90	0.15
376.0	MAINS	46-R3	-55	19,426,616.45	3,266,640	3,089,177	245,765	1.27
378.0	MEAS & REG STATION EQUIP-GENERAL	N/A	-25	511,305	N/A	42,587	28,214	3.76
379.0	MEAS & REG STATION EQUIP-CITY GATE	28-R3	-5	484,883.13	6,153	(22,580)	3,421	0.71
380.0	SERVICES	39-R3	-75	15,937,760.04	3,492,476	4,111,969	255,177	1.60
381.0	METERS & METER INSTALLATIONS	N/A	-25	6,438,021	N/A	444,109	275,934	2.88
383.0	HOUSE REGULATORS	N/A	-5	774,939	N/A	-	7,683	0.71
385.0	INDUSTRIAL MEAS. & REG. STATION EQUIPMENT	40-S4	-	162,784.41	-	-	-	0.00
387.1	CATHODIC PROTECTION EQUIPMENT	25-R3	-	9,235.11	-	-	-	0.00
387.2	OTHER EQUIPMENT	30-R3	-	11,498	-	-	-	0.00
<b>TOTAL DISTRIBUTION PLANT</b>				<b>43,806,948</b>	<b>6,765,269</b>	<b>7,666,527</b>	<b>816,283</b>	<b>1.87</b>
<b>GENERAL PLANT</b>								
390.0	GENERAL STRUCTURES & IMPROVEMENTS	45-R4	-	2,528,697.41	-	-	-	0.00
391.1	OFFICE FURNITURE & EQUIPMENT	16-SQ	-	95,317.30	-	-	-	0.00
391.3	COMPUTER & ELECTRONIC EQUIPMENT	4-SQ	-	61,616.92	-	-	-	0.00
392.1	TRANSPORTATION EQUIPMENT - TRAILERS	12-R1	10	31,167.46	(2,173)	-	(474)	(1.52)
392.2	TRANSPORTATION EQUIPMENT	7-L2	20	1,380,893.11	(122,635)	-	(78,305)	(5.67)
394.0	TOOLS, SHOP, & GARAGE EQUIPMENT	20-SQ	-	628,269.65	-	-	-	0.00
396.1	POWER OPERATED EQUIPMENT - TRAILERS	6-L0	65	151,442.08	(29,779)	-	(26,991)	(17.82)
396.2	POWER OPERATED EQUIPMENT	6-L0	65	1,101,925.11	(182,680)	-	(160,096)	(14.53)
397.0	COMMUNICATION EQUIPMENT	18-SQ	-	303,582.84	-	-	-	0.00
398.0	MISCELLANEOUS EQUIPMENT	25-SQ	-	51,338.57	-	-	-	0.00
<b>TOTAL GENERAL PLANT</b>				<b>6,334,250</b>	<b>(337,267)</b>	<b>-</b>	<b>(265,866)</b>	<b>(4.20)</b>
<b>TOTAL GAS PLANT STUDIED</b>				<b>52,696,437</b>	<b>6,636,280</b>	<b>7,954,706</b>	<b>551,121</b>	<b>1.04</b>
<b>PLANT NOT STUDIED</b>								
301.0	ORGANIZATION COSTS			5,006				
302.0	FRANCHISE COSTS			73,680				
303.0	INTANGIBLE ASSETS			2,783,783				
365.0	LAND			5,585				
375.0	LAND			2,978				
389.0	LAND & LAND RIGHTS GENERAL			48,658.66				
<b>TOTAL PLANT</b>				<b>55,616,128</b>				



SECTION 5

**5 DETAILED DEPRECIATION CALCULATIONS**

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# GREAT PLAINS NATURAL GAS CO.

Account #: 365.2 - TRANSMISSION - RIGHTS OF WAY

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R2.5

ASL: 50

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1965	4,066.02	3,183	3,938	0.9685	128	10.86	12	52.5
1966	107,419.75	83,183	102,910	0.9580	4,510	11.28	400	51.5
1967	2,490.06	1,906	2,358	0.9471	132	11.72	11	50.5
1976	3.00	2	2	0.8298	1	16.46	0	41.5
1981	297.10	180	223	0.7515	74	19.63	4	36.5
1985	61.73	34	42	0.6831	20	22.39	1	32.5
2000	2,732.55	865	1,070	0.3915	1,663	34.18	49	17.5
2003	41,081.82	10,877	13,457	0.3276	27,625	36.76	751	14.5
<b>TOTAL</b>	<b>158,152.03</b>	<b>100,231</b>	<b>124,001</b>		<b>34,151</b>		<b>1,228</b>	

COMPOSITE ANNUAL ACCRUAL RATE 0.78%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.78

COMPOSITE AVERAGE AGE (YEARS) 41.28

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 18.31

# GREAT PLAINS NATURAL GAS CO.

Account #: 367 - TRANSMISSION - MAINS

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION  
 BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R3

ASL: 50

Net Salvage: -20%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1966	1,086,313.43	1,058,298	1,303,576	1.2000	0	9.41	0	51.5
1970	8,044.40	7,467	9,653	1.2000	0	11.32	0	47.5
1971	18,005.73	16,486	21,607	1.2000	0	11.85	0	46.5
1972	4,225.53	3,814	5,071	1.2000	0	12.40	0	45.5
1976	1,809.24	1,530	2,171	1.2000	0	14.76	0	41.5
1977	2,658.13	2,208	3,190	1.2000	0	15.39	0	40.5
1978	122.93	100	148	1.2000	0	16.04	0	39.5
1981	7.50	6	9	1.2000	0	18.07	0	36.5
1986	3,413.47	2,317	3,663	1.0732	433	21.72	20	31.5
1987	84.97	56	89	1.0441	13	22.49	1	30.5
1988	15,177.96	9,739	15,399	1.0146	2,814	23.27	121	29.5
1990	7,026.13	4,240	6,705	0.9543	1,726	24.85	69	27.5
1991	805.75	471	744	0.9236	223	25.66	9	26.5
1993	510.97	278	440	0.8610	173	27.31	6	24.5
1994	4,189.75	2,197	3,474	0.8291	1,554	28.15	55	23.5
1996	654.99	317	501	0.7643	285	29.86	10	21.5
1997	34.74	16	25	0.7314	16	30.73	1	20.5
1998	705.65	312	493	0.6982	354	31.60	11	19.5
2003	73,092.92	24,373	38,540	0.5273	49,171	36.11	1,362	14.5
2013	227,018.27	24,007	37,962	0.1672	234,460	45.59	5,142	4.5
2015	87,276.30	5,143	8,132	0.0932	96,600	47.54	2,032	2.5

# GREAT PLAINS NATURAL GAS CO.

Account #: 367 - TRANSMISSION - MAINS

## CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life  
Survivor Curve: R3  
ASL: 50  
Net Salvage: -20%  
Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
TOTAL	1,541,178.76	1,163,374	1,461,591		387,824		8,838	
COMPOSITE ANNUAL ACCRUAL RATE				0.57%				
THEORETICAL ACCUMULATED DEPRECIATION FACTOR				0.95				
COMPOSITE AVERAGE AGE (YEARS)				39.42				
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)				18.55				



# GREAT PLAINS NATURAL GAS CO.

Account #: 369 - TRANSMISSION - MEAS. & REG. STATION EQUIP

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R0.5

ASL: 40

Net Salvage: -10%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1966	31,450.57	24,116	31,423	0.9991	3,173	12.12	262	51.5
1967	2,421.95	1,829	2,383	0.9840	281	12.54	22	50.5
1970	3,945.54	2,839	3,699	0.9376	641	13.83	46	47.5
1972	1,939.04	1,348	1,756	0.9058	377	14.72	26	45.5
1975	467.11	307	400	0.8567	114	16.09	7	42.5
1976	1,565.23	1,009	1,315	0.8399	407	16.56	25	41.5
1978	3,150.24	1,948	2,538	0.8057	927	17.51	53	39.5
1982	913.24	515	671	0.7349	333	19.49	17	35.5
1983	451.82	249	324	0.7167	173	20.00	9	34.5
1984	233.70	125	163	0.6983	94	20.51	5	33.5
1987	602.12	297	386	0.6418	276	22.09	12	30.5
1988	3,731.27	1,783	2,323	0.6226	1,781	22.63	79	29.5
1991	26,085.44	11,286	14,706	0.5638	13,988	24.27	576	26.5
1992	3,977.45	1,660	2,163	0.5438	2,212	24.82	89	25.5
1993	9,293.25	3,735	4,867	0.5237	5,356	25.38	211	24.5
1994	46,177.86	17,842	23,248	0.5034	27,548	25.95	1,062	23.5
1995	771.37	286	373	0.4830	476	26.52	18	22.5
1996	40,220.96	14,275	18,601	0.4625	25,642	27.09	946	21.5
1997	5,766.13	1,955	2,547	0.4418	3,795	27.67	137	20.5
1998	1,757.64	568	740	0.4210	1,193	28.25	42	19.5
1999	9,401.27	2,886	3,761	0.4001	6,580	28.84	228	18.5
2003	18,967.71	4,592	5,984	0.3155	14,881	31.20	477	14.5
2010	352,403.98	44,599	58,112	0.1649	329,532	35.40	9,309	7.5
2012	121,221.49	11,287	14,707	0.1213	118,637	36.61	3,240	5.5
2013	13,188.03	1,006	1,311	0.0994	13,196	37.23	354	4.5
2014	24,893.47	1,480	1,928	0.0775	25,455	37.84	673	3.5
2015	95,971.70	4,081	5,317	0.0554	100,252	38.45	2,607	2.5
2017	34,938.40	297	387	0.0111	38,045	39.69	959	0.5

# GREAT PLAINS NATURAL GAS CO.

Account #: 369 - TRANSMISSION - MEAS. & REG. STATION EQUIP

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life  
 Survivor Curve: R0.5  
 ASL: 40  
 Net Salvage: -10%  
 Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
TOTAL	855,907.98	158,200	206,134		735,365		21,492	
COMPOSITE ANNUAL ACCRUAL RATE				2.51%				
THEORETICAL ACCUMULATED DEPRECIATION FACTOR				0.24				
COMPOSITE AVERAGE AGE (YEARS)				11.35				
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)				33.28				

# GREAT PLAINS NATURAL GAS CO.

Account #: 374.2 - DISTRIBUTION - RIGHTS OF WAY

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R2.5

ASL: 50

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1969	2,371.92	1,771	1,698	0.7159	674	12.66	53	48.5
1970	24.30	18	17	0.7064	7	13.15	1	47.5
1974	385.40	268	256	0.6653	129	15.29	8	43.5
1975	160.20	109	105	0.6543	55	15.87	3	42.5
1978	2,137.36	1,381	1,324	0.6194	813	17.69	46	39.5
1979	10.00	6	6	0.6073	4	18.32	0	38.5
1980	23.00	14	14	0.5949	9	18.97	0	37.5
1981	1,005.00	610	585	0.5822	420	19.63	21	36.5
1982	25.00	15	14	0.5693	11	20.30	1	35.5
1983	4.00	2	2	0.5562	2	20.99	0	34.5
1984	2.00	1	1	0.5428	1	21.68	0	33.5
1985	5,449.84	3,009	2,884	0.5293	2,565	22.39	115	32.5
1986	3.00	2	2	0.5155	1	23.11	0	31.5
1987	11.00	6	6	0.5015	5	23.84	0	30.5
1988	10.00	5	5	0.4874	5	24.58	0	29.5
1990	12.00	6	6	0.4584	6	26.09	0	27.5
1991	437.00	202	194	0.4437	243	26.86	9	26.5
1992	712.30	319	305	0.4288	407	27.63	15	25.5
1994	42.00	17	17	0.3984	25	29.22	1	23.5
1995	1,474.25	589	565	0.3829	910	30.02	30	22.5
1996	19.50	7	7	0.3673	12	30.84	0	21.5
1997	226.50	83	80	0.3516	147	31.66	5	20.5
1998	60.00	21	20	0.3356	40	32.49	1	19.5
1999	821.72	274	263	0.3196	559	33.33	17	18.5
2000	19.50	6	6	0.3033	14	34.18	0	17.5
2007	2,206.80	428	410	0.1859	1,796	40.30	45	10.5

# GREAT PLAINS NATURAL GAS CO.

Account #: 374.2 - DISTRIBUTION - RIGHTS OF WAY

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION  
 BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life  
 Survivor Curve: R2.5  
 ASL: 50  
 Net Salvage: 0%  
 Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
TOTAL	17,653.59	9,171	8,791		8,863		373	
COMPOSITE ANNUAL ACCRUAL RATE				2.11%				
THEORETICAL ACCUMULATED DEPRECIATION FACTOR				0.50				
COMPOSITE AVERAGE AGE (YEARS)				31.17				
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)				24.02				

# GREAT PLAINS NATURAL GAS CO.

Account #: 376 - DISTRIBUTION - STEEL MAINS

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION  
 BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R3

ASL: 46

Net Salvage: -55%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1960	45,803.96	63,097	67,631	1.4765	3,365	5.12	657	57.5
1966	695,419.32	913,648	979,297	1.4082	98,603	7.01	14,067	51.5
1967	1,436,335.63	1,869,164	2,003,471	1.3948	222,849	7.38	30,198	50.5
1968	36,396.60	46,888	50,257	1.3808	6,158	7.77	793	49.5
1969	90,140.99	114,884	123,138	1.3661	16,580	8.18	2,028	48.5
1970	49,919.32	62,901	67,421	1.3506	9,954	8.60	1,157	47.5
1971	23,240.90	28,934	31,013	1.3344	5,011	9.05	554	46.5
1972	35,439.27	43,559	46,689	1.3174	8,241	9.52	865	45.5
1973	51,056.56	61,912	66,360	1.2997	12,778	10.01	1,276	44.5
1974	23,853.32	28,514	30,563	1.2813	6,410	10.52	609	43.5
1975	190,620.94	224,453	240,581	1.2621	54,881	11.06	4,964	42.5
1976	49,770.53	57,679	61,824	1.2422	15,320	11.61	1,320	41.5
1977	16,608.62	18,928	20,288	1.2216	5,455	12.18	448	40.5
1978	55,385.38	62,018	66,475	1.2002	19,373	12.77	1,517	39.5
1979	63,030.82	69,285	74,264	1.1782	23,434	13.38	1,752	38.5
1980	43,224.25	46,600	49,948	1.1556	17,049	14.00	1,217	37.5
1981	80,857.82	85,417	91,554	1.1323	33,776	14.65	2,306	36.5
1982	35,946.91	37,173	39,844	1.1084	15,874	15.31	1,037	35.5
1983	107,259.77	108,473	116,267	1.0840	49,986	15.99	3,127	34.5
1984	109,651.40	108,332	116,116	1.0590	53,844	16.68	3,228	33.5
1985	993,281.89	957,661	1,026,473	1.0334	513,114	17.39	29,512	32.5
1986	213,541.46	200,694	215,115	1.0074	115,874	18.11	6,399	31.5
1987	174,683.41	159,850	171,336	0.9808	99,423	18.84	5,276	30.5
1988	110,089.22	97,968	105,007	0.9538	65,631	19.59	3,350	29.5
1989	59,632.72	51,539	55,242	0.9264	37,189	20.35	1,827	28.5
1990	86,365.92	72,394	77,596	0.8985	56,272	21.12	2,664	27.5
1991	219,197.68	177,939	190,724	0.8701	149,032	21.91	6,802	26.5
1992	194,289.26	152,505	163,463	0.8413	137,685	22.71	6,064	25.5

# GREAT PLAINS NATURAL GAS CO.

Account #: 376 - DISTRIBUTION - STEEL MAINS

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION  
 BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R3

ASL: 46

Net Salvage: -55%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1993	204,363.79	154,851	165,977	0.8122	150,787	23.51	6,413	24.5
1994	137,414.33	100,331	107,540	0.7826	105,452	24.33	4,334	23.5
1995	312,311.27	219,297	235,055	0.7526	249,028	25.16	9,897	22.5
1996	103,532.51	69,766	74,779	0.7223	85,697	26.00	3,296	21.5
1997	591,717.83	381,770	409,202	0.6915	507,961	26.85	18,917	20.5
1998	197,008.12	121,394	130,117	0.6605	175,246	27.71	6,324	19.5
1999	168,983.87	99,170	106,296	0.6290	155,629	28.58	5,445	18.5
2000	13,027.77	7,259	7,781	0.5973	12,412	29.46	421	17.5
2001	194,688.38	102,651	110,027	0.5651	191,740	30.35	6,317	16.5
2002	40,121.00	19,940	21,373	0.5327	40,814	31.25	1,306	15.5
2003	283,066.50	132,040	141,528	0.5000	297,225	32.16	9,243	14.5
2004	582,937.82	253,960	272,208	0.4670	631,345	33.07	19,091	13.5
2005	333,012.03	134,733	144,415	0.4337	371,754	33.99	10,936	12.5
2006	222,111.67	82,910	88,867	0.4001	255,406	34.92	7,314	11.5
2007	298,349.61	101,955	109,281	0.3663	353,161	35.86	9,849	10.5
2008	657,890.17	203,923	218,575	0.3322	801,154	36.80	21,770	9.5
2009	249,071.36	69,241	74,216	0.2980	311,844	37.75	8,261	8.5
2010	685,233.85	168,459	180,564	0.2635	881,549	38.70	22,777	7.5
2011	753,610.63	160,905	172,467	0.2289	995,630	39.66	25,102	6.5
2012	959,857.37	173,753	186,238	0.1940	1,301,541	40.63	32,036	5.5
2013	910,468.07	135,092	144,798	0.1590	1,266,427	41.60	30,445	4.5
2014	1,500,404.18	173,445	185,907	0.1239	2,139,719	42.57	50,264	3.5
2015	1,430,196.33	118,277	126,776	0.0886	2,090,029	43.55	47,996	2.5
2016	1,317,490.68	65,469	70,173	0.0533	1,971,938	44.53	44,288	1.5
2017	1,988,703.44	32,984	35,354	0.0178	3,047,136	45.51	66,959	0.5

# GREAT PLAINS NATURAL GAS CO.

Account #: 376 - DISTRIBUTION - STEEL MAINS

## CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life  
Survivor Curve: R3  
ASL: 46  
Net Salvage: -55%  
Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
TOTAL	19,426,616.45	9,205,986	9,867,471		20,243,784		604,015	
COMPOSITE ANNUAL ACCRUAL RATE				3.11%				
THEORETICAL ACCUMULATED DEPRECIATION FACTOR				0.51				
COMPOSITE AVERAGE AGE (YEARS)				16.40				
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)				31.94				

# GREAT PLAINS NATURAL GAS CO.

Account #: 379 - MEAS & REG STATION EQUIP-CITY GATE

## CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R3

ASL: 28

Net Salvage: -5%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1977	260.06	256	226	0.8699	47	1.70	28	40.5
1985	17,563.08	15,887	14,015	0.7980	4,426	3.88	1,141	32.5
1995	285.91	207	182	0.6373	118	8.74	14	22.5
1997	31,122.11	20,916	18,452	0.5929	14,226	10.08	1,412	20.5
1998	59.59	38	34	0.5694	29	10.79	3	19.5
1999	31,161.24	19,259	16,990	0.5452	15,729	11.52	1,366	18.5
2004	32,490.96	15,255	13,458	0.4142	20,658	15.48	1,335	13.5
2009	6,781.83	2,067	1,824	0.2689	5,297	19.87	267	8.5
2011	24,489.78	5,763	5,084	0.2076	20,630	21.72	950	6.5
2012	200,929.99	40,173	35,440	0.1764	175,536	22.67	7,744	5.5
2015	92,705.87	8,510	7,508	0.0810	89,833	25.55	3,516	2.5
2017	47,032.71	868	766	0.0163	48,619	27.51	1,767	0.5
<b>TOTAL</b>	<b>484,883.13</b>	<b>129,199</b>	<b>113,979</b>		<b>395,148</b>		<b>19,539</b>	

COMPOSITE ANNUAL ACCRUAL RATE 4.03%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.24

COMPOSITE AVERAGE AGE (YEARS) 7.88

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 20.89



# GREAT PLAINS NATURAL GAS CO.

Account #: 380 - SERVICES

## CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R3

ASL: 39

Net Salvage: -75%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1966	138,264.98	219,585	241,964	1.7500	0	3.61	0	51.5
1967	338,196.07	533,151	591,843	1.7500	0	3.87	0	50.5
1968	41,822.01	65,426	73,189	1.7500	0	4.14	0	49.5
1969	47,990.01	74,482	83,983	1.7500	0	4.41	0	48.5
1970	71,071.32	109,388	124,375	1.7500	0	4.70	0	47.5
1971	53,128.55	81,055	92,975	1.7500	0	5.00	0	46.5
1972	60,299.03	91,139	105,523	1.7500	0	5.32	0	45.5
1973	63,387.12	94,855	109,865	1.7332	1,062	5.65	188	44.5
1974	41,452.80	61,374	71,086	1.7149	1,457	6.00	243	43.5
1975	36,660.26	53,661	62,153	1.6954	2,003	6.38	314	42.5
1976	32,695.44	47,275	54,755	1.6747	2,462	6.78	363	41.5
1977	17,794.28	25,393	29,411	1.6528	1,729	7.20	240	40.5
1978	67,818.95	95,426	110,526	1.6297	8,157	7.64	1,067	39.5
1979	132,477.67	183,616	212,671	1.6053	19,165	8.11	2,363	38.5
1980	138,476.04	188,862	218,748	1.5797	23,585	8.61	2,741	37.5
1981	147,865.77	198,230	229,598	1.5527	29,168	9.12	3,197	36.5
1982	95,071.58	125,143	144,945	1.5246	21,430	9.67	2,217	35.5
1983	89,682.53	115,771	134,090	1.4952	22,854	10.23	2,234	34.5
1984	106,484.05	134,649	155,956	1.4646	30,391	10.82	2,809	33.5
1985	324,887.36	401,917	465,517	1.4329	103,036	11.43	9,014	32.5
1986	191,698.33	231,718	268,385	1.4000	67,087	12.06	5,562	31.5
1987	181,448.85	214,023	247,890	1.3662	69,646	12.71	5,478	30.5
1988	173,496.82	199,419	230,975	1.3313	72,644	13.38	5,427	29.5
1989	179,043.90	200,261	231,950	1.2955	81,377	14.07	5,782	28.5
1990	189,153.84	205,568	238,098	1.2588	92,922	14.78	6,287	27.5
1991	202,106.86	213,090	246,810	1.2212	106,877	15.50	6,894	26.5
1992	204,934.57	209,272	242,387	1.1828	116,248	16.24	7,157	25.5
1993	234,962.80	231,984	268,693	1.1436	142,492	17.00	8,383	24.5

# GREAT PLAINS NATURAL GAS CO.

Account #: 380 - SERVICES

## CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R3

ASL: 39

Net Salvage: -75%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1994	229,748.33	218,907	253,547	1.1036	148,513	17.77	8,359	23.5
1995	217,609.26	199,692	231,292	1.0629	149,524	18.55	8,061	22.5
1996	224,485.11	197,976	229,303	1.0215	163,546	19.35	8,454	21.5
1997	281,682.75	238,174	275,862	0.9793	217,082	20.16	10,770	20.5
1998	349,785.53	282,840	327,596	0.9366	284,528	20.98	13,562	19.5
1999	290,678.35	224,137	259,604	0.8931	249,083	21.82	11,418	18.5
2000	96,273.00	70,571	81,738	0.8490	86,740	22.66	3,827	17.5
2001	186,952.55	129,825	150,368	0.8043	176,799	23.52	7,516	16.5
2002	205,317.51	134,548	155,839	0.7590	203,467	24.40	8,340	15.5
2003	191,072.72	117,645	136,261	0.7131	198,116	25.28	7,837	14.5
2004	183,123.98	105,410	122,090	0.6667	198,377	26.17	7,580	13.5
2005	207,217.89	110,879	128,425	0.6198	234,206	27.08	8,650	12.5
2006	175,552.07	86,741	100,467	0.5723	206,749	27.99	7,387	11.5
2007	167,021.31	75,616	87,581	0.5244	204,706	28.91	7,081	10.5
2008	263,266.90	108,192	125,313	0.4760	335,405	29.84	11,240	9.5
2009	175,893.71	64,877	75,143	0.4272	232,671	30.78	7,559	8.5
2010	348,626.52	113,787	131,793	0.3780	478,304	31.73	15,076	7.5
2011	376,392.22	106,755	123,648	0.3285	535,038	32.68	16,372	6.5
2012	1,046,148.79	251,695	291,523	0.2787	1,539,237	33.64	45,759	5.5
2013	976,236.21	192,609	223,087	0.2285	1,485,326	34.60	42,925	4.5
2014	1,391,418.89	213,974	247,834	0.1781	2,187,149	35.57	61,484	3.5
2015	1,393,328.37	153,340	177,605	0.1275	2,260,720	36.55	61,857	2.5
2016	1,612,293.12	106,652	123,528	0.0766	2,697,984	37.53	71,897	1.5
2017	1,745,263.16	38,540	44,638	0.0256	3,009,572	38.51	78,155	0.5

**GREAT PLAINS NATURAL GAS CO.**

Account #: 380 - SERVICES

ALG - Remaining Life  
 Survivor Curve: R3  
 ASL: 39  
 Net Salvage: -75%  
 Truncation Year:

**CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION  
 BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017**

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
TOTAL	15,937,760.04	8,149,111	9,392,445		18,498,635		609,125	
COMPOSITE ANNUAL ACCRUAL RATE				3.82%				
THEORETICAL ACCUMULATED DEPRECIATION FACTOR				0.59				
COMPOSITE AVERAGE AGE (YEARS)				13.25				
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)				27.61				

# GREAT PLAINS NATURAL GAS CO.

Account #: 385 - INDUSTRIAL MEAS. & REG. STATION EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: S4

ASL: 40

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1985	4,977.47	3,815	3,696	0.7425	1,282	9.34	137	32.5
2000	110.66	48	47	0.4238	64	22.50	3	17.5
2014	21,162.64	1,852	1,794	0.0848	19,369	36.50	531	3.5
2015	136,533.64	8,533	8,267	0.0606	128,266	37.50	3,420	2.5
<b>TOTAL</b>	<b>162,784.41</b>	<b>14,248</b>	<b>13,804</b>		<b>148,980</b>		<b>4,091</b>	

COMPOSITE ANNUAL ACCRUAL RATE 2.51%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.08

COMPOSITE AVERAGE AGE (YEARS) 3.56

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 36.50

# GREAT PLAINS NATURAL GAS CO.

Account #: 387.1 - CATHODIC PROTECTION EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R3

ASL: 25

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2000	5,307.90	3,277	2,908	0.5479	2,400	9.57	251	17.5
2015	3,927.21	384	341	0.0868	3,586	22.55	159	2.5
<b>TOTAL</b>	<b>9,235.11</b>	<b>3,661</b>	<b>3,249</b>		<b>5,986</b>		<b>410</b>	

COMPOSITE ANNUAL ACCRUAL RATE 4.44%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.35

COMPOSITE AVERAGE AGE (YEARS) 11.12

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 15.09

# GREAT PLAINS NATURAL GAS CO.

Account #: 387.2 - OTHER EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION  
 BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life  
 Survivor Curve: R3  
 ASL: 30  
 Net Salvage: 0%  
 Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1972	51.96	50	52	1.0000	0	1.30	0	45.5
1985	11,446.52	9,544	11,446	1.0000	0	4.99	0	32.5
<b>TOTAL</b>	<b>11,498.48</b>	<b>9,594</b>	<b>11,498</b>		<b>0</b>		<b>0</b>	

COMPOSITE ANNUAL ACCRUAL RATE	0.00%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	1.00
COMPOSITE AVERAGE AGE (YEARS)	32.56
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	4.97

# GREAT PLAINS NATURAL GAS CO.

Account #: 390 - GENERAL STRUCTURES & IMPROVEMENTS

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R4

ASL: 45

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1966	162.04	147	162	1.0000	0	4.18	0	51.5
1967	63,684.77	57,327	63,685	1.0000	0	4.49	0	50.5
1971	1,043.27	906	1,043	1.0000	0	5.93	0	46.5
1972	3,961.15	3,401	3,961	1.0000	0	6.36	0	45.5
1973	5,277.90	4,477	5,278	1.0000	0	6.83	0	44.5
1974	15,038.59	12,589	15,039	1.0000	0	7.33	0	43.5
1975	1,406.22	1,160	1,406	1.0000	0	7.87	0	42.5
1978	450.00	353	450	1.0000	0	9.68	0	39.5
1980	394.59	298	395	1.0000	0	11.01	0	37.5
1982	3,395.31	2,459	3,395	1.0000	0	12.41	0	35.5
1983	1,470.36	1,041	1,470	1.0000	0	13.13	0	34.5
1985	71,695.66	48,401	71,696	1.0000	0	14.62	0	32.5
1989	71,935.28	43,471	67,602	0.9398	4,334	17.81	243	28.5
1990	97,496.83	57,105	88,804	0.9108	8,692	18.64	466	27.5
1991	5,549.42	3,145	4,891	0.8814	658	19.50	34	26.5
1993	3,055.00	1,613	2,508	0.8210	547	21.24	26	24.5
1995	2,965.78	1,447	2,251	0.7589	715	23.04	31	22.5
1996	8,137.66	3,805	5,917	0.7272	2,220	23.96	93	21.5
2000	226,436.98	86,947	135,212	0.5971	91,225	27.72	3,291	17.5
2001	17,578.74	6,375	9,913	0.5639	7,665	28.68	267	16.5
2002	9,172.24	3,129	4,866	0.5306	4,306	29.65	145	15.5
2003	1,099.87	351	547	0.4970	553	30.62	18	14.5
2004	6,757.20	2,013	3,130	0.4632	3,627	31.60	115	13.5
2006	236,722.27	60,183	93,591	0.3954	143,131	33.56	4,265	11.5
2008	954,062.70	200,659	312,046	0.3271	642,017	35.54	18,067	9.5
2010	76,867.95	12,777	19,869	0.2585	56,999	37.52	1,519	7.5
2012	218,292.29	26,628	41,410	0.1897	176,883	39.51	4,477	5.5
2014	38,164.50	2,964	4,610	0.1208	33,555	41.50	808	3.5

# GREAT PLAINS NATURAL GAS CO.

Account #: 390 - GENERAL STRUCTURES & IMPROVEMENTS

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R4

ASL: 45

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2015	18,348.29	1,018	1,583	0.0863	16,765	42.50	394	2.5
2016	4,336.44	144	225	0.0518	4,112	43.50	95	1.5
2017	363,738.11	4,036	6,277	0.0173	357,461	44.50	8,033	0.5
<b>TOTAL</b>	<b>2,528,697.41</b>	<b>650,371</b>	<b>973,232</b>		<b>1,555,465</b>		<b>42,387</b>	

COMPOSITE ANNUAL ACCRUAL RATE 1.68%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.38

COMPOSITE AVERAGE AGE (YEARS) 12.09

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 33.43



# GREAT PLAINS NATURAL GAS CO.

Account #: 391.1 - OFFICE FURNITURE & EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: SQ

ASL: 16

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2002	7,641.54	7,403	7,368	0.9643	273	0.50	273	15.5
2003	8,738.97	7,920	7,883	0.9020	856	1.50	571	14.5
2004	548.36	463	461	0.8398	88	2.50	35	13.5
2005	8,405.76	6,567	6,537	0.7776	1,869	3.50	534	12.5
2006	1,020.83	734	730	0.7154	291	4.50	65	11.5
2007	29,164.21	19,139	19,050	0.6532	10,114	5.50	1,839	10.5
2008	15,785.78	9,373	9,329	0.5910	6,456	6.50	993	9.5
2009	1,449.56	770	767	0.5288	683	7.50	91	8.5
2010	2,389.63	1,120	1,115	0.4666	1,275	8.50	150	7.5
2011	5,149.75	2,092	2,082	0.4044	3,067	9.50	323	6.5
2012	5,179.29	1,780	1,772	0.3422	3,407	10.50	324	5.5
2014	8,457.23	1,850	1,841	0.2177	6,616	12.50	529	3.5
2017	1,386.39	43	43	0.0311	1,343	15.50	87	0.5
<b>TOTAL</b>	<b>95,317.30</b>	<b>59,254</b>	<b>58,979</b>		<b>36,338</b>		<b>5,814</b>	

COMPOSITE ANNUAL ACCRUAL RATE 6.10%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.62

COMPOSITE AVERAGE AGE (YEARS) 9.95

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 6.05

# GREAT PLAINS NATURAL GAS CO.

Account #: 391.3 - COMPUTER & ELECTRONIC EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: SQ

ASL: 4

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2015	61,616.92	38,511	26,529	0.4305	35,088	1.50	23,392	2.5
<b>TOTAL</b>	61,616.92	38,511	26,529		35,088		23,392	

COMPOSITE ANNUAL ACCRUAL RATE 37.96%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.43

COMPOSITE AVERAGE AGE (YEARS) 2.50

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 1.50

# GREAT PLAINS NATURAL GAS CO.

Account #: 392.1 - TRANSPORTATION EQUIPMENT - TRAILERS

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: R1

ASL: 12

Net Salvage: 10%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1991	8,118.60	7,307	7,307	0.9000	0	0.00	0	27.5
1992	700.00	630	630	0.9000	0	0.00	0	26.5
1999	7,625.30	5,826	6,863	0.9000	0	1.81	0	18.5
2008	6,263.88	2,951	5,637	0.9000	0	5.72	0	9.5
2011	8,459.68	2,846	5,510	0.6513	2,104	7.51	280	6.5
<b>TOTAL</b>	<b>31,167.46</b>	<b>19,560</b>	<b>25,947</b>		<b>2,104</b>		<b>280</b>	

COMPOSITE ANNUAL ACCRUAL RATE 0.90%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.83

COMPOSITE AVERAGE AGE (YEARS) 15.96

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 3.63

# GREAT PLAINS NATURAL GAS CO.

Account #: 392.2 - TRANSPORTATION EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: L2

ASL: 7

Net Salvage: 20%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2001	4,102.12	2,944	3,282	0.8000	0	0.72	0	16.5
2002	4,633.79	3,241	3,707	0.8000	0	0.88	0	15.5
2004	2,548.66	1,677	2,039	0.8000	0	1.24	0	13.5
2006	2,792.17	1,704	2,234	0.8000	0	1.66	0	11.5
2007	8,225.76	4,800	6,364	0.7736	217	1.89	115	10.5
2008	6,139.41	3,411	4,522	0.7365	390	2.14	182	9.5
2009	134,582.74	70,958	94,064	0.6989	13,602	2.39	5,699	8.5
2010	148,421.83	74,148	98,293	0.6623	20,445	2.63	7,778	7.5
2011	107,654.57	50,842	67,398	0.6261	18,726	2.87	6,530	6.5
2012	168,795.26	74,596	98,887	0.5858	36,150	3.13	11,538	5.5
2013	160,107.38	64,340	85,291	0.5327	42,795	3.48	12,284	4.5
2014	40,184.30	13,806	18,302	0.4555	13,845	3.99	3,467	3.5
2015	343,742.27	90,084	119,418	0.3474	155,576	4.71	33,053	2.5
2016	183,897.73	30,295	40,161	0.2184	106,957	5.56	19,242	1.5
2017	65,065.12	3,696	4,899	0.0753	47,153	6.50	7,251	0.5
<b>TOTAL</b>	<b>1,380,893.11</b>	<b>490,542</b>	<b>648,860</b>		<b>455,854</b>		<b>107,138</b>	

COMPOSITE ANNUAL ACCRUAL RATE 7.76%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.47

COMPOSITE AVERAGE AGE (YEARS) 4.54

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 3.89

# GREAT PLAINS NATURAL GAS CO.

Account #: 394.0 - TOOLS, SHOP, & GARAGE EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: SQ

ASL: 20

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2000	53,370.43	46,699	45,575	0.8539	7,795	2.50	3,118	17.5
2001	19,329.73	15,947	15,563	0.8051	3,766	3.50	1,076	16.5
2002	22,549.99	17,476	17,056	0.7564	5,494	4.50	1,221	15.5
2003	43,960.29	31,871	31,104	0.7076	12,856	5.50	2,337	14.5
2004	16,735.02	11,296	11,024	0.6588	5,711	6.50	879	13.5
2005	33,532.87	20,958	20,454	0.6100	13,079	7.50	1,744	12.5
2006	17,480.80	10,051	9,810	0.5612	7,671	8.50	902	11.5
2007	13,031.67	6,842	6,677	0.5124	6,355	9.50	669	10.5
2008	13,260.15	6,299	6,147	0.4636	7,113	10.50	677	9.5
2009	10,100.22	4,293	4,189	0.4148	5,911	11.50	514	8.5
2010	17,250.11	6,469	6,313	0.3660	10,937	12.50	875	7.5
2011	33,124.55	10,765	10,506	0.3172	22,618	13.50	1,675	6.5
2012	61,302.98	16,858	16,453	0.2684	44,850	14.50	3,093	5.5
2013	12,834.35	2,888	2,818	0.2196	10,016	15.50	646	4.5
2014	51,798.37	9,065	8,847	0.1708	42,952	16.50	2,603	3.5
2015	20,004.03	2,501	2,440	0.1220	17,564	17.50	1,004	2.5
2016	56,019.22	4,201	4,100	0.0732	51,919	18.50	2,806	1.5
2017	132,584.87	3,315	3,235	0.0244	129,350	19.50	6,633	0.5
<b>TOTAL</b>	<b>628,269.65</b>	<b>227,794</b>	<b>222,312</b>		<b>405,958</b>		<b>32,474</b>	

COMPOSITE ANNUAL ACCRUAL RATE 5.17%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.35

COMPOSITE AVERAGE AGE (YEARS) 7.25

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 12.75

# GREAT PLAINS NATURAL GAS CO.

Account #: 396.1 - POWER OPERATED EQUIPMENT - TRAILERS

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: L0

ASL: 6

Net Salvage: 65%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1997	6,331.01	1,918	2,216	0.3500	0	0.81	0	20.5
2000	7,412.60	2,088	2,594	0.3500	0	1.17	0	17.5
2004	9,301.37	2,290	3,255	0.3500	0	1.78	0	13.5
2007	7,804.77	1,663	2,732	0.3500	0	2.35	0	10.5
2014	37,278.87	3,742	10,392	0.2788	2,655	4.28	620	3.5
2015	34,284.94	2,682	7,451	0.2173	4,549	4.66	976	2.5
2016	19,241.60	1,019	2,829	0.1471	3,905	5.09	767	1.5
2017	29,786.93	632	1,754	0.0589	8,671	5.64	1,538	0.5
<b>TOTAL</b>	<b>151,442.09</b>	<b>16,034</b>	<b>33,224</b>		<b>19,781</b>		<b>3,902</b>	

COMPOSITE ANNUAL ACCRUAL RATE 2.58%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.22

COMPOSITE AVERAGE AGE (YEARS) 4.80

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 4.18

# GREAT PLAINS NATURAL GAS CO.

Account #: 396.2 - POWER OPERATED EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: L0

ASL: 6

Net Salvage: 65%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2000	21,036.03	5,927	7,363	0.3500	0	1.17	0	17.5
2002	63,703.74	16,886	22,296	0.3500	0	1.46	0	15.5
2003	31,682.86	8,109	11,089	0.3500	0	1.61	0	14.5
2005	4,220.74	996	1,477	0.3500	0	1.96	0	12.5
2006	73,305.50	16,486	25,657	0.3500	0	2.14	0	11.5
2008	1,288.66	258	451	0.3500	0	2.56	0	9.5
2010	94,653.37	16,301	33,129	0.3500	0	3.05	0	7.5
2013	40,246.50	4,855	14,086	0.3500	0	3.93	0	4.5
2014	116,998.71	11,743	40,950	0.3500	0	4.28	0	3.5
2015	5,530.18	433	1,936	0.3500	0	4.66	0	2.5
2016	82,156.30	4,350	28,755	0.3500	0	5.09	0	1.5
2017	567,102.51	12,024	113,557	0.2002	84,929	5.64	15,068	0.5
<b>TOTAL</b>	<b>1,101,925.10</b>	<b>98,366</b>	<b>300,745</b>		<b>84,929</b>		<b>15,068</b>	

COMPOSITE ANNUAL ACCRUAL RATE 1.37%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.27

COMPOSITE AVERAGE AGE (YEARS) 4.03

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 4.47

# GREAT PLAINS NATURAL GAS CO.

Account #: 397 - COMMUNICATIONS EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life

Survivor Curve: SQ

ASL: 18

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2000	5,175.22	5,031	4,991	0.9645	184	0.50	184	17.5
2001	7,624.07	6,989	6,933	0.9094	691	1.50	461	16.5
2002	11,369.56	9,790	9,712	0.8542	1,657	2.50	663	15.5
2003	5,701.24	4,593	4,556	0.7991	1,145	3.50	327	14.5
2004	183,273.60	137,455	136,359	0.7440	46,915	4.50	10,426	13.5
2008	15,081.38	7,960	7,896	0.5236	7,185	8.50	845	9.5
2010	9,894.78	4,123	4,090	0.4133	5,805	10.50	553	7.5
2012	65,462.99	20,003	19,843	0.3031	45,620	12.50	3,650	5.5
<b>TOTAL</b>	<b>303,582.84</b>	<b>195,944</b>	<b>194,381</b>		<b>109,202</b>		<b>17,108</b>	

COMPOSITE ANNUAL ACCRUAL RATE 5.64%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.64

COMPOSITE AVERAGE AGE (YEARS) 11.62

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 6.38



# GREAT PLAINS NATURAL GAS CO.

Account #: 398 - MISCELLANEOUS EQUIPMENT

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION  
 BASED ON ORIGINAL COST AS OF DECEMBER 31, 2017

ALG - Remaining Life  
 Survivor Curve: SQ  
 ASL: 25  
 Net Salvage: 0%  
 Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2006	8,332.68	3,833	3,485	0.4182	4,848	13.50	359	11.5
2008	43,005.89	16,342	14,856	0.3455	28,149	15.50	1,816	9.5
<b>TOTAL</b>	<b>51,338.57</b>	<b>20,175</b>	<b>18,341</b>		<b>32,998</b>		<b>2,175</b>	

COMPOSITE ANNUAL ACCRUAL RATE	4.24%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	0.36
COMPOSITE AVERAGE AGE (YEARS)	9.82
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	15.18