

August 16, 2018

Daniel P. Wolf  
Executive Secretary  
Minnesota Public Utilities Commission  
121 7th Place East, Suite 350  
St. Paul, Minnesota 55101

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

Dear Mr. Wolf:

Attached are the comments of the Minnesota Department of Commerce, Division of Energy Resources (Department) in the following matter:

Great Plains Natural Gas Co.'s (Great Plains, GPNG, or Company), a Division of MDU Resources Group, Inc., Annual Depreciation Study.

The petition was filed on June 1, 2018 by:

Tamie A. Aberle  
Director of Regulatory Affairs  
Great Plains Natural Gas Company  
705 West Fir Avenue  
P.O. Box 176  
Fergus Falls, MN 56538-0176

The Department withholds final recommendation pending review of requested additional information in Great Plains' subsequent Reply Comments. The Department is available to respond to any questions the Minnesota Public Utilities Commission may have on this matter.

Sincerely,

/s/ DOROTHY MORRISSEY  
Financial Analyst

DM/ja  
Attachments



## Before the Minnesota Public Utilities Commission

---

### Comments of the Minnesota Department of Commerce Division of Energy Resources

Docket No. G004/D-18-369

#### I. SUMMARY OF GREAT PLAINS' PROPOSAL

On June 1, 2018, Great Plains Natural Gas Company, a Division of MDU Resources Group, Inc. (Great Plains, GPNG or the Company) filed a petition (Petition) with the Minnesota Public Utilities Commission (Commission) requesting approval of depreciation parameters and rates determined in its annual depreciation study (2018 Depreciation Study). The 2018 Depreciation Study is the first update to the Company's most recent comprehensive five-year depreciation study, filed in Docket No. G004/D-17-450 ([2017 Depreciation Docket](#)).

The Company stated that the application of the proposed lives and salvage rates to the December 31, 2017 plant and reserve balances results in an estimated 2018 depreciation expense of \$2,277,670, or \$2,942 more than the 2018 depreciation expense would be when calculated using the functional group level composite depreciation rate derived in its prior depreciation study, as shown below:<sup>1</sup>

Plant Group	Original Cost	Annual Accrual	Annual Accrual Updated		
Transmission Plant	\$2,555,239	1.75%	\$44,717	1.23%	\$31,512
Distribution Plant	\$43,806,948	4.57%	\$2,001,978	4.56%	\$1,998,034
General Plant	\$6,334,250	3.60%	\$228,033	3.92%	\$248,124
<b>TOTAL</b>	<b>\$52,696,437</b>	<b>4.31%</b>	<b>\$2,274,728</b>	<b>4.32%</b>	<b>\$2,277,670</b>

The current proposed depreciation parameters yield an overall, composite depreciation rate of 4.32 percent for 2018, or 0.01 percentage point higher than the 4.31 percent overall, composite depreciation rate yielded and reported in the prior study (Docket No. G004/D-17-450).<sup>2</sup>

---

<sup>1</sup> Initial Petition, p. 1-1.

<sup>2</sup> Note that technically these functional group level composite rates are not approved rates, rather they are a summarized result. In fact, this overall, high-level comparison outcome would differ if the comparison was conducted by analyzing the currently-approved account-level depreciation rates applied to the December 31, 2017 account-level plant balances. The prior study 4.31 percent reported was result of applying the 2017 approved account-level depreciation rates to the 2016 year-end plant balances. If the current 2017 approved account level

## **II. DEPARTMENT ANALYSIS**

### **A. COMPLIANCE WITH FILING REQUIREMENTS AND PRIOR COMMISSION ORDERS**

Minnesota Statutes Section 216B.11 and Minnesota Rules, parts 7825.0500-7825.0900 require public utilities to seek Commission certification of their depreciation rates and methods. Utilities must use straight-line depreciation unless a different method can be justified. Additionally, utilities must file depreciation studies at least once every five years, and must review their depreciation rates annually to determine if they are generally appropriate. When utilities use the average service life technique as its basis to depreciate group property accounts, the life and salvage factors, as well as the resulting depreciation rates, remain unchanged between studies. When companies choose the remaining-life technique as its basis for depreciating group property accounts, as Great Plains does, although the underlying life and salvage factors may not change, the depreciation rates are adjusted annually to reflect the passage of time effect on remaining lives, as well as the impact of plant additions and retirements. Annual depreciation study updates are required when the remaining-life technique is employed to allow the Commission the opportunity to approve changes in depreciation rates. Once certified by order, depreciation rates remain in effect until the next certification.

Great Plains employs a straight-line depreciation method and files annual depreciation studies with the Commission. Per Great Plains' 2017 Jurisdictional Annual Report, the Company used the depreciation rates approved in Docket No. G004/D-17-450 to calculate depreciation expense in 2017. Thus, the Minnesota Department of Commerce, Division of Energy Resources (Department or DOC) concludes that Great Plains met its requirement to use its most-recently approved depreciation rates to calculate depreciation expense in 2017.

The Department concludes that Great Plains' 2018 Depreciation Study, supplemented with the inclusion of the data provided by the Company in its response to DOC Information Request No. 14,<sup>3</sup> meets all relevant filing requirements. Per Minn. Rule 7825.0700, the Department recommends that in future depreciation petitions, Great Plains provide in its initial filing schedules showing the additions, retirements, adjustments and transfer activity of the plant-in-service and respective accumulated depreciation accounts during the most recent fiscal year.

The Company has also complied with the requirement to propose depreciation rates that are effective January 1, 2018. The Commission's Order dated March 21, 2007 in Docket No. G004/D-06-700 required that all future remaining life depreciation and amortization studies be

---

depreciation rates were applied to the 2017 year-end plant balances, the resulting depreciation amount would calculate to an overall composite rate of 4.20 percent under existing rates.

<sup>3</sup> Response to DOC IR No. 14 is included in DOC Attachment A to these comments.

effective on January 1 of the year for which the study is performed starting with the depreciation study performed for year-end 2007. Great Plains' 2018 Depreciation Study appropriately proposed depreciation rates to be effective January 1, 2018 based upon December 31, 2017 plant and reserve balances.

**B. NEED FOR ADDITIONAL SUPPORT AND INFORMATION**

**1. Vintage Group Basis – Accounts 367, 376 and 380**

As part of its review, the Department compares Great Plains' annual update with the Company's prior years' depreciation studies. Although the outside firms that prepared GPNG's current and prior reports differ, the Petition indicated that "the depreciation rates in this update have been calculated using the same depreciation methods, procedures and techniques employed in the last GPNG depreciation study."<sup>4</sup> However, through discovery Great Plains' clarified it had changed the basis for its remaining life calculations from the *Broad Group* basis to a *Vintage Group* approach in this annual update.<sup>5</sup> Despite that the *Broad Group* approach is widely used and accepted, Great Plains' stated that computer technology allows for the more precise and accurate *Vintage Group* calculations to be made with no additional effort.

The Department believes a change in the basis Great Plains used for its remaining life calculations is an important change that should have been highlighted within the Petition. Therefore, the Department recommends that Great Plains transparently disclose alterations to its depreciation-study approach in future depreciation filings. Further, for several reasons, the Department finds that the Great Plains' Petition lacks sufficient support for the depreciation study change to the *Vintage Group* approach in the annual update, and is especially concerned with the timing of its introduction subsequent to conducting a comprehensive five-year depreciation study.

The Department does not disagree that the *Vintage Group* approach *may* allow for more precise or accurate depreciation rate, however, GPNG did not reasonably demonstrate this to be true in its Petition. Further, even if the Department were to concede that GPNG's proposed methodology is "more accurate," improved accuracy alone would not necessarily persuade the Department to recommend approval of these updated rates for the following reasons.

- First, GPNG has not indicated that its plant records and retirement practices, or its accounting systems, precisely reflect the vintages of existing plant in place and removed from service. The quality and accuracy of data used in the *Vintage Group* approach directly impacts the quality and precision of its results. The Department has noted inconsistency between GPNG's current and last year's study as to the value of plant

---

<sup>4</sup> Initial Petition, Section 1, p. 1-1.

<sup>5</sup> Response to DOC IR No. 18, included as DOC Attachment B.

among vintage years, and that in last year's study, GPNG had reasoned record keeping errors were behind certain year-to-year changes noted in its prior depreciation study.<sup>6</sup>

- Second, in preparing this annual update, Great Plains chose to roll-up several subaccounts (used to record pipeline infrastructure investment by material type) under certain plant categories (Account 367 – *Transmission Mains*, 376 – *Distributions Mains* and 380 – *Services*) into one primary account, per group, when developing a depreciation rate, rather than continuing its past practice to analyze each subaccount separately (as different materials may have different service lives).<sup>7</sup> The act of rolling up material-based subaccounts that have different life characteristics to form an average, in spite of the calculation ease computer technology offers in enabling increased precision, appears counter-productive and, in doing so, may compromise the precision or accuracy benefits that the *Vintage Group* approach's reasoned-use has to offer. In fact, these three plant account groups that GPNG decided to roll-up make up the majority (70 percent) of GPNG's total plant investment.
- Third, GPNG's petition did not commit that the Company will continue use *Vintage Group* approach in future years, regardless of the vendor they may choose to prepare future studies. The Department's concern here is that switching approaches year-to-year, or every few years, may provide a company the opportunity to manipulate operating results;
- Fourth, GPNG does not employ use of the *Vintage Group* approach for all plant accounts (Account 375). The Petition has not sufficiently explained the reasoning for its selective use.
- Fifth, other utility subsidiaries of MDU Resources Group, Inc. appear to be using the *Broad Group* approach,<sup>8</sup> and not the *Vintage Group* approach.
- Sixth, from the Department's rough calculations to estimate depreciation results using a *Broad Group* approach (summarized in DOC Table 1 below), it appears that had GPNG applied the *Broad Group* approach in this annual update, its overall depreciation expense would be higher than what is currently proposed under the *Vintage Group* method.

---

<sup>6</sup> For example, Accounts 365.2, 367 and 391.1 asset value by year found in the Petition, Section 5, as compared to Docket No. G004/17-450, Section 6 for same accounts.

<sup>7</sup> Response to DOC IR No. 2B and DOC IR No. 8, included as DOC Attachment C and DOC Attachment D, respectively.

<sup>8</sup> [Montana-Dakota Utilities Co. 2017 general rate case testimony of Earl Robinson](#)

DOC Table 1									
Comparison of proposed <i>Vintage Group</i> results with estimated <i>Broad Life</i> results									
		GPNG Proposed Update			DOC Calculated				
					Estimated Update		Estimated Update		
					If <i>Broad Life</i> was used		If <i>Broad Life</i> was used		
Plant Groups		Original Cost as of 12/31/2017			Using 18-369 ARL		Using 17-450 ARL		
		Annual Accrual			Annual Accrual		Annual Accrual		
Transmission	\$	2,555,239	1.23%	\$ 31,512	1.76%	\$ 44,858	1.71%	\$ 43,676	
Distribution	\$	43,806,948	4.56%	\$ 1,998,034	4.77%	\$ 2,089,141	5.02%	\$2,199,939	
General	\$	6,334,250	3.92%	\$ 248,124	4.12%	\$ 261,136	3.97%	\$ 251,537	
<b>Total</b>	<b>\$</b>	<b>52,696,437</b>	<b>4.32%</b>	<b>\$2,277,670</b>	<b>4.55%</b>	<b>\$ 2,395,135</b>	<b>4.73%</b>	<b>\$2,495,152</b>	
<b>Increase (Decrease) over Petition</b>				<b>\$ -</b>		<b>\$ 117,465</b>		<b>\$ 217,482</b>	

Overall, the Department recognizes that the calculated differences between the two approaches may not universally be considered material, yet because the introduction of a new approach can impact various future filings, the Department is not able to recommend approval at this time without a more complete record and support. Therefore, the Department requests that the Company's Reply Comments provide additional information relevant to each of the above-listed concerns.

## 2. Significant Change in Depreciation Rate - Accounts 396.1 and 396.2 – Power Operated Equipment

In Great Plains' prior year depreciation study, the Company adjusted its salvage rate for the single, generalized *Power Operated Equipment* account (Account 396) due to favorable resale experience for this type of plant. In doing so, the accumulated depreciation balance for this account was excessive and a negative depreciation rate was established (a negative 2.89 percent). In this filing, use of a general account was discontinued, and the property booked to this account was divided into two sub-accounts, 396.1 – *Power Operated Equipment – Trailers*, and 396.2 - *Power Operated Equipment*. GPNG analyzed the two sub-accounts separately, and proposed separate depreciation rates. Both of the proposed depreciation rates, positive 2.20 percent and 1.23 percent for Accounts 396.1 and 396.2, respectively, are significantly different from the rate approved in GPNG's prior depreciation petition, negative 2.89 percent. The Department requested the Company to explain this notable depreciation rate change in DOC IR No. 2.G,<sup>9</sup> but GPNG's response did not appear to address this inquiry. Therefore, the

<sup>9</sup> Included in DOC Attachment C.

Department requests that the Company explain and support the notable change in rate for Accounts 396.1 and 396.2.

3. *New Survivor Curve Designation*

Survivor curves reflect statistical analysis of the plant's estimated useful life; therefore, survivor curves are an integral part in setting depreciation rates. In Great Plains' prior study, no survivor curve was designated for the following general plant accounts,

391.1 - *Office Furniture,*  
391.3 - *Computer & Electronic Equipment,*  
394.0 - *Tools, Shop & Garage Equipment,*  
397.0 - *Communication Equipment,* and  
398.0 - *Miscellaneous Equipment;*

Rather, in prior studies, the depreciation amortization rates were established based on a predetermined time period (life) for each plant category which did not take into account the accumulated depreciation position.

In this annual depreciation study update, Great Plains did assign a survivor curve to each of these plant accounts, though appeared to apply the use of the curve to only four of the five above-listed accounts. Unlike prior studies' approach, here GPNG's application of a square curve does take into account the actual accumulated depreciation position; in the application of a square curve, the vintage plants' net book value and their remaining life figures are used to determine composite annual accrual rates. The Petition did not transparently highlight and discuss this changed approach in Great Plains' depreciation rate development.

From its review of this changed approach for these accounts, the Department understands that the plant's vintage and the predetermined amortization period are program inputs used to produce a systematic calculated accumulated depreciation. This systematic calculated sum is compared to the actual booked accumulated amount. If the actual booked amount is found to be in a deficit position, that is, is a lower sum total than what would be expected, given the vintage of and predetermined amortization period for the plant, then the depreciation rate is effectively stepped up to compensate for prior years' lower-than-expected accruals. If the actual booked amount is found to be in a surplus position, that is, a higher sum total than what would be expected given the vintage of and preset amortization period for the plant, then the depreciation rate is effectively stepped down to compensate for prior years' more-than-expected accruals. This approach appears to mitigate the potential for over- or under-depreciating existing plant and the Department concludes that this approach is reasonable.

However, the Department noted that the Petition did not explain or support why the square curve was assigned but its technique was not applied to Account 391.3 *Computer & Electronic Equipment*. For purposes of full record development, the Department requests that Great Plains in Reply Comments explain (1) the change to square curve approach, (2) how its use affects the remaining life assigned to vintage plant as compared to the remaining life assigned through the prior study's method, and (3) why the technique was not applied to Account 391.3.<sup>10</sup>

Further, because of the Department's questioning of Account 391.1 vintage net book value data, GPNG discovered that some miscommunications occurred with its transition to the new depreciation consultant and that the Company is currently looking into it. Therefore, the Department requests that in its Reply Comments, GPNG submit any revised summary depreciation schedules and account detail schedules that may occur as a result of any revisions, explicitly identifying any changes from its initial filing. Although such updates may not result in material changes to the current year's expense amounts for this plant, it is important to ensure when changing a study's approach that the study's foundation going forward is sound, in order to avoid perpetuating errors which may have the potential of becoming material in future filings.

#### 4. *Proposed Use of Prior Year Approved Rate*

For the following distribution plant accounts,

378.0 – *Measuring and Regulating Station Equipment General*,  
381.0 – *Meters & Meter Installations*, and  
383.0 – *House Regulators*,

the annual update retained the depreciation rate approved in Great Plains' prior depreciation study (Docket No. G004/D-17-450). As explained in the prior study,<sup>11</sup> in 2011<sup>12</sup> Great Plains initiated a 15-year PVC Replacement program that in part includes customer site visits to replace meter bars, house regulators and older meters not able to be refurbished. Therefore, the depreciation rate developed for these accounts reflects the planned PVC Replacement program's impact on the existing asset retirement. The current Petition did not provide a status update on the PVC Replacement Program to justify continued use of the prior year's approved rate. The Department concludes that use of the prior approved rate for these

---

<sup>10</sup> Given the available information in Docket No. G004/D-17-450, the Department anticipates that had the square curve approach been applied to Account 391.3, the annual depreciation expense would be higher since it appears the surviving 2015 vintage plant accumulated depreciation reserve is in a deficit position. [Docket No. G004/D-17-450, Initial petition, Table 5, page 2-18.](#)

<sup>11</sup> See pp. 4-5 of the [Department's October 2, 2017 comments](#) in Docket No. G004/D-17-450

<sup>12</sup> [Docket No. G004/GR-15-879, Exhibit 10, Direct Testimony of Patrick Darras, p. 10.](#)



accounts is reasonable in the event the Company is still in the early years (completion) of Great Plains' PVC replacement plan; however, as the PVC Replacement program matures, the Department would expect the depreciation rate to be adjusted to reflect the changed complement of assets placed in service. Therefore, the Department requests that the Company provide in Reply Comments the status and progression of its PVC Replacement program and to justify continuation of the currently approved rate.

### III. DEPARTMENT RECOMMENDATIONS

After review, the Department concludes that additional information and support is needed in order to fully evaluate Great Plains' proposed 2018 Depreciation Study rates. Therefore, the Department recommends that Great Plains include in Reply Comments, the following:

- Regarding the newly introduced use of the *Vintage Group* approach as the basis for calculating remaining life and depreciation rates, provide additional information relevant to each of the above-listed concerns raised by the Department, including in particular, a discussion of Great Plains' decision to roll-up the accounts that had previously been analyzed at the sub-account level;
- Explain and support the notable change in depreciation rate since the prior study (Docket No. G004/D-17-450) for Accounts 396.1 and 396.2;
- For the accounts with predetermined amortization periods, explain (1) the switch to square curve approach, (2) how use of the square curve approach affects the remaining life value assigned to vintage plant as compared to the remaining life determined through the prior study's method, and (3) why the technique was not applied to Account 391.3;
- Submit any revised summary depreciation schedules and detailed account schedules and explicitly identify and explain the changes; and
- Provide the status and progression of its PVC Replacement program and provide justification for continued use of the currently approved rate for the affected accounts (378.0, 381.0 and 383.0).

The Department also recommends that the Commission require Great Plains to:

- Transparently disclose changes to its depreciation-study approach in future depreciation filings; and

- Provide schedules in the initial filing of future depreciation petitions, showing the additions, retirements, adjustments and transfer activity for each plant-in-service and respective accumulated depreciation accounts, per Minn. Rule 7825.0700.

The Department will provide its final recommendations after reviewing Great Plains' Reply Comments.

/ja

**Minnesota Department of Commerce  
Division of Energy Resources  
Information Request**

Docket Number: G004/D-18-369 ☐ Nonpublic ☒ Public  
Requested From: Great Plains Natural Gas Date of Request: 7/20/2018  
Type of Inquiry: Financial Response Due: 7/30/2018  
  
Requested by: Dorothy Morrissey  
Email Address(es): dorothea.morrissey@state.mn.us  
Phone Number(s): 651.539.1797

---

**Request Number:** 14  
Topic: Depreciation Tables and Schedules  
Reference(s): MN Rule 7825.0700

---

**Request:**

Please provide schedules showing the additions, retirements, adjustments and transfers activity of the plant-in-service and their respective depreciation reserve accounts during 2017.

**Response:**

Please see Response No. 14 Attachment A.

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855

Great Plains Natural Gas  
Docket No. G004/D-18-369 - Response No. 14

	Beginning Balance	Adds	Retire	Transfer	Ending Balance
Gas Distribution					
374-G-Land	\$2,978	\$0	\$0	\$0	\$2,978
374-G-Land Rights	17,654	-	-	-	17,654
375-G-Structures & Improvements	32,251	-	-	-	32,251
376-G-Mains	17,516,061	2,015,917	(105,362)	-	19,426,616
378-G-Measure/Regulation Distributi	501,026	20,304	(10,024)	-	511,305
379-G-Measure/Regulation City Gate	442,661	42,222	-	-	484,883
380-G-Services	14,485,016	1,661,896	(209,151)	-	15,937,760
381-G-Meters	6,324,475	253,168	(189,616)	49,994	6,438,021
382-G-Meter Set Installation	-	-	-	-	-
383-G-Service Regulators	780,578	59,432	(67,184)	2,113	774,939
385-G-Industrial Meas. & Reg Stn Eq	162,784	-	-	-	162,784
387-G-Catholic Protection Equipment	9,235	-	-	-	9,235
387-G-Other Distribution Equipment	11,498	-	-	-	11,498
Gas Distribution Total	40,286,217	4,052,938	(581,337)	52,107	43,809,926
Gas General					
389-G-Land & Land Rights	48,659	-	-	-	48,659
390-G-Structures & Improvements	2,167,307	363,738	(2,348)	-	2,528,697
391-G-Comp Equip-Server & Workstati	66,919	-	(5,302)	-	61,617
391-G-Office Furn & Equip	96,848	1,386	(2,918)	-	95,317
392-G-Trailers	39,760	-	-	(8,593)	31,167
392-G-Transportation Equipment	1,386,193	67,303	(94,938)	22,335	1,380,893
393-G-Stores Equipment	-	-	-	-	-
394-G-Tools,Shop,Garage Equip	565,185	63,085	-	-	628,270
395-G-Laboratory Equipment	-	-	-	-	-
396-G-Power Operated Equipment	840,195	567,535	(305,806)	-	1,101,925

Great Plains Natural Gas  
Docket No. G004/D-18-369 - Response No. 14

	Beginning Balance	Adds	Retire	Transfer	Ending Balance
396-G-Trailers-Work Equipment	121,655	29,787	-	-	151,442
397-G-Communication Equipment	303,583	-	-	-	303,583
398-G-Miscellaneous Equipment	51,339	-	-	-	51,339
Gas General Total	5,687,643	1,092,835	(411,311)	13,742	6,382,909
Gas Intangible					
301-G-Organization	5,006	-	-	-	5,006
302-G-Franchises	73,680	-	-	-	73,680
303-G-Misc. Intangible Plant	2,419,099	364,684	-	-	2,783,783
Gas Intangible Total	2,497,785	364,684	-	-	2,862,469
Gas Manuf. Production					
304-G-Gas-Land and Land Rights	-	-	-	-	-
305-G-Structures And Improvements	-	-	-	-	-
311-G-Liquified Petro. Propane	-	-	-	-	-
320-G-Other Gas Production	-	-	-	-	-
Gas Manuf. Production Total	-	-	-	-	-
Gas Transmission					
365-G-Land	5,585	-	-	-	5,585
365-G-Land Rights	158,152	-	-	-	158,152
367-G-Mains	1,541,446	-	(267)	-	1,541,179
369-G-Measuring/Regulating Equipmen	820,970	34,938	-	-	855,908
Gas Transmission Total	2,526,152	34,938	(267)	-	2,560,823
Non-Utility					
394-N-Tools,Shop,Garage Equip	-	-	-	-	-
Non-Utility Total	-	-	-	-	-
Grand Total	\$50,997,798	\$5,545,395	(\$992,915)	\$65,849	\$55,616,128

GREAT PLAINS NATURAL GAS  
SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION-GAS  
FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2017  
Docket No. G004/D-18-369 - Response No. 14

FERC Account	Account Description	Beg Reserve Balance	Reclass/ Transfers	Original Cost of Retirements	Cost of Removal Cap Ex	Salvage Cap Ex	Cost of Removal Closes	Salvage Closes	Deprec. Provision	Gain/ Loss	Transf. to Reg. Asset/Liab.	Ending Reserve Balance
305 Structures & Improvements		-	-	-	-	-	-	-	-	-	-	-
3111 Liquefied Petro. Propane		-	-	-	-	-	-	-	-	-	-	-
320 Other Gas Production		-	-	-	-	-	-	-	-	-	-	-
TOTAL GAS PRODUCTION		-	-	-	-	-	-	-	-	-	-	-
3652 Land Rights		(122,071.44)	-	-	-	-	-	-	(1,929.46)	-	-	(124,000.90)
3671 Mains		(1,441,308.74)	-	266.87	-	-	-	-	(20,549.60)	-	-	(1,461,591.47)
3691 Meas. & Reg. Station Equip.		(183,946.42)	-	-	-	-	-	-	(22,187.36)	-	-	(206,133.78)
TOTAL GAS TRANSMISSION		(1,747,326.60)	-	266.87	-	-	-	-	(44,666.42)	-	-	(1,791,726.15)
3742 Land Rights		(8,417.11)	-	-	-	-	-	-	(373.96)	-	-	(8,791.07)
375 Structures & Improvements		(26,168.90)	-	-	-	-	-	-	(915.94)	-	-	(27,084.84)
376 Mains		(9,509,084.81)	-	105,361.90	-	-	69,212.55	-	(532,980.19)	-	-	(9,867,470.55)
378 Meas. & Reg. Station Equip.-General		(311,879.48)	-	10,024.14	-	-	4,376.65	-	(53,800.47)	-	-	(351,279.16)
379 Meas. & Reg. Station Equip.-City Gate		(102,354.36)	-	-	-	-	5,511.43	-	(17,135.67)	-	-	(113,978.60)
380 Services		(9,161,562.13)	-	209,151.14	-	-	110,222.83	-	(550,256.36)	-	-	(9,392,444.52)
381 Meters		(3,510,046.16)	(6,364.94)	189,616.11	-	-	34,356.92	(1,167.97)	(611,471.02)	-	-	(3,905,077.06)
383 Service Regulators		(456,786.21)	(64.50)	67,183.55	-	-	2,022.00	-	(51,861.94)	-	-	(439,509.10)
385 Industrial Meas. & Reg. Station Equipment		(9,772.32)	-	-	-	-	-	-	(4,031.62)	-	-	(13,803.94)
3871 Cathodic Protection Equipment		(2,844.67)	-	-	-	-	-	-	(404.68)	-	-	(3,249.35)
3872 Other Distribution Equipment		(11,498.48)	-	-	-	-	-	-	-	-	-	(11,498.48)
388 ARO Distribution Plant		(1,388,693.13)	-	138,558.33	-	-	-	-	-	-	(140,700.06)	(1,390,834.86)
TOTAL GAS DISTRIBUTION		(24,499,109.76)	(6,429.44)	719,895.17	-	-	225,702.38	(1,167.97)	(1,823,211.85)	-	(140,700.06)	(25,525,021.53)
390 Structures & Improvements		(935,628.58)	-	2,347.67	-	-	-	-	(39,950.80)	-	-	(973,231.71)
3911 Office Furniture & Equipment		(55,965.28)	-	2,917.57	-	-	-	-	(5,931.52)	-	-	(58,979.23)
391 Computer Equipment		(14,972.95)	-	5,301.77	-	-	112.35	-	(16,094.78)	-	-	(25,653.61)
3921 Transportation Equipment- Trailers		(33,897.59)	8,592.63	-	-	-	-	-	(641.80)	-	-	(25,946.76)
3922 Transportation Equipment- Vehicles		(584,371.80)	(18,132.44)	94,938.27	-	-	-	(26,855.00)	(114,438.64)	-	-	(648,859.61)
3941 Miscellaneous Tools		(193,912.79)	-	-	-	-	-	-	(28,399.09)	-	-	(222,311.88)
3961 Work Equipment Trailers		(35,311.11)	-	-	-	-	-	-	2,086.97	-	-	(33,224.14)
3962 Power Operated Equipment		(417,658.71)	40,660.00	305,805.55	-	-	-	(242,179.01)	12,627.21	-	-	(300,744.96)
397 Communication Equipment		(177,503.05)	-	-	-	-	-	-	(16,877.64)	-	-	(194,380.69)
398 Miscellaneous Equipment		(16,287.45)	-	-	-	-	-	-	(2,053.56)	-	-	(18,341.01)
TOTAL GAS GENERAL		(2,465,509.31)	31,120.19	411,310.83	-	-	112.35	(269,034.01)	(209,673.65)	-	-	(2,501,673.60)
SUBTOTAL (1082 & 1087)		(28,711,945.67)	24,690.75	1,131,472.87	-	-	225,814.73	(270,201.98)	(2,077,551.92)	-	(140,700.06)	(29,818,421.28)



GREAT PLAINS NATURAL GAS  
SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION-GAS  
FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2017  
Docket No. G004/D-18-369 - Response No. 14

Response DOC IR 14  
Attachment A  
Page 4 of 4

FERC Account	Account Description	Beg Reserve Balance	Reclass/Transfers	Original Cost of Retirements	Cost of Removal Cap Ex	Salvage Cap Ex	Cost of Removal Closes	Salvage Closes	Deprec. Provision	Gain/Loss	Transf. to Reg. Asset/Liab.	Ending Reserve Balance
301	Organization Intangible Plant	(5,006.20)										(5,006.20)
302	Franchises and Consents Intangible Plant	(73,680.11)										(73,680.11)
303	Miscellaneous Intangible Plant	(360,835.13)							(167,450.65)			(528,285.78)
	TOTAL GAS INTANGIBLE	(439,521.44)	-	-	-	-	-	-	(167,450.65)	-	-	(606,972.09)
	SUBTOTAL (1082, 1087 & 1112)	(29,151,467.11)	24,690.75	1,131,472.87	-	-	225,814.73	(270,201.98)	(2,245,002.57)	-	(140,700.06)	(30,425,393.37)
	RWIP-Production	-										-
	RWIP-Transmission	1,702.58			10,446.73	-	-	-				12,149.31
	RWIP-Distribution	29,278.85			270,991.48	(1,167.97)	(225,702.38)	1,167.97				74,567.95
	RWIP-General	(172,136.36)			23,822.10	(254,238.73)	(112.35)	269,034.01				(133,631.33)
	RWIP-Intangible	-			-	-	-	-				-
	TOTAL RWIP	(141,154.93)	-	-	305,260.31	(255,406.70)	(225,814.73)	270,201.98		-	-	(46,914.07)
	TOTAL GAS RESERVE INCL RWIP	(29,292,622.04)	24,690.75	1,131,472.87	305,260.31	(255,406.70)	-	-	(2,245,002.57)	-	(140,700.06)	(30,472,307.44)
<b>Total Reserve Including RWIP By Function</b>												
	Production	-	-	-	-	-	-	-	-	-	-	-
	Transmission	(1,745,624.02)	-	266.87	10,446.73	-	-	-	(44,666.42)	-	-	(1,779,576.84)
	Distribution Excluding ARO	(23,081,137.78)	(6,429.44)	581,336.84	270,991.48	(1,167.97)	-	-	(1,823,211.85)	-	-	(24,059,618.72)
	Distribution-ARO	(1,388,693.13)	-	138,558.33	-	-	-	-	-	-	(140,700.06)	(1,390,834.86)
	General	(2,637,645.67)	31,120.19	411,310.83	23,822.10	(254,238.73)	-	-	(209,673.65)	-	-	(2,635,304.93)
	Intangible	(439,521.44)	-	-	-	-	-	-	(167,450.65)	-	-	(606,972.09)
	TOTAL GAS RESERVE INCL RWIP	(29,292,622.04)	24,690.75	1,131,472.87	305,260.31	(255,406.70)	-	-	(2,245,002.57)	-	(140,700.06)	(30,472,307.44)

**Minnesota Department of Commerce  
Division of Energy Resources  
Information Request**

DOC Attachment B  
Page 1 of 1

Docket Number: G004/D-18-369 ☐ Nonpublic ☒ Public  
Requested From: Great Plains Natural Gas Date of Request: 7/20/2018  
Type of Inquiry: Financial Response Due: 7/30/2018

Requested by: Dorothy Morrissey  
Email Address(es): dorothea.morrissey@state.mn.us  
Phone Number(s): 651.539.1797

---

**Request Number:** 18  
**Topic:** Depreciation Tables and Schedules  
**Reference(s):** Section 5, Omitted Accounts

---

**Request:**

Please identify the changes in the depreciation procedure, method, techniques, etc. applied in this petition's depreciation study as compared to those used in Docket 17-450 depreciation study.

**Response:**

The depreciation rates calculated in this technical update were calculated in the same manner as used in the prior full depreciation study – i.e. using the Straight-Line Method, the Average Life Group Procedure applied on a Remaining Life Basis. However, Concentric Advisors does note that in the application of the Remaining Life Basis, the prior study calculated the remaining life on a Broad Group Basis, whereas Concentric Advisors incorporate a refinement into the Remaining Life calculations based on a Vintage Group approach.

As detailed in Response No. 2 response, Concentric has detailed its usual practice and interpretation of the applicable procedures, methods, and techniques that were used in this update as compared to those used in the previous depreciation study. Concentric Advisors views that it's interpretations and calculations are the most correct and appropriate.

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855



Minnesota Department of Commerce  
Division of Energy Resources  
Information Request

Docket Number: G004/D-18-369 ☐ Nonpublic ☒ Public  
Requested From: Great Plains Natural Gas Date of Request: 7/17/2018  
Type of Inquiry: Financial Response Due: 7/27/2018

Requested by: Dorothy Morrissey  
Email Address(es): dorothea.morrissey@state.mn.us  
Phone Number(s): 651.539.1797

---

**Request Number:** 2  
**Topic:** Depreciation Tables and Schedules  
**Reference(s):** Initial Filing, Section 4, Table 1 and prior study in Docket 17-450, Table 1

---

**Request:**

- A. For Account 365.2, *Rights of Way*, please explain and support the reason for the annual accrual rate change to 0.75% from previous study rate of 1.21% (Docket 17-450, Table 1).
- B. For Account 367, *Transmission Mains*, please explain and support the reason for the annual accrual rate change to 0.57% from previous study rate of 1.34% (Docket 17-450, Table 1).
- C. For Account 391.1, *Office Furniture & Equipment*, please explain and support the reason for the annual accrual rate change to 3.23% from previous study rate of 6.25% (Docket 17-450, Table 1).
- D. For Account 392.1, *Transportation Equipment - Trailers*, please explain and support the reason for the annual accrual rate change to 0.55% from previous study rate of 0.96% (Docket 17-450, Table 1).
- E. For Account 392.2, *Transportation Equipment*, the reason for the annual accrual rate change to 7.67% from previous study rate of 8.84% (Docket 17-450, Table 1).
- F. For Account 394, *Tools, Shop & Garage Equipment*, please explain and support the reason for the annual accrual rate change to 6.83% from previous study rate of 5.00% (Docket 17-450, Table 1).;
- G. For Account 396.1 and 396.2, *Power Operated Equipment*, please explain and support the reason for the annual accrual rate change to 2.20% and 1.23%, respectively, from previous study rate of negative 2.89% for the combined account (Docket 17-450, Table 1).
- H. For Account 397.0, *Communication Equipment*, please explain and support the reason for the annual accrual rate change to 6.31% from previous study rate of 5.56% (Docket 17-450, Table 1).

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855

**Minnesota Department of Commerce  
Division of Energy Resources  
Information Request**

DOC Attachment C  
Page 2 of 7

Docket Number:	G004/D-18-369	<input type="checkbox"/> Nonpublic	<input checked="" type="checkbox"/> Public
Requested From:	Great Plains Natural Gas	Date of Request: 7/17/2018	
Type of Inquiry:	Financial	Response Due: 7/27/2018	
Requested by:	Dorothy Morrissey		
Email Address(es):	dorothy.morrissey@state.mn.us		
Phone Number(s):	651.539.1797		

---

**Response:**

**General Response:** The depreciation rates calculated in this technical update were calculated on the same manner as used in the prior full depreciation study – i.e. using the Straight-Line Method, the Average Life Group Procedure applied on a Remaining Life Basis. However, Concentric Advisors does note that in the application of the Remaining Life Basis, the prior study calculated the remaining life on a Broad Group Basis, whereas Concentric Advisors incorporate a refinement into the Remaining Life calculations based on a Vintage Group approach. This Vintage group approach to Remaining Life was described in Concentric Advisors’ 2018 Technical Depreciation Update report, prepared May 2018 as follows:

*“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.*

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855

**Minnesota Department of Commerce  
Division of Energy Resources  
Information Request**

DOC Attachment C  
Page 3 of 7

Docket Number:	G004/D-18-369	<input type="checkbox"/> Nonpublic	<input checked="" type="checkbox"/> Public
Requested From:	Great Plains Natural Gas	Date of Request: 7/17/2018	
Type of Inquiry:	Financial	Response Due: 7/27/2018	
Requested by:	Dorothy Morrissey		
Email Address(es):	dorothy.morrissey@state.mn.us		
Phone Number(s):	651.539.1797		

---

- *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. (Emphasis added). (Concentric Energy Advisors – Technical Update date May 2018, Pages 2-3 and 2-3)*

This process results in each vintage's calculated net book value depreciated over an appropriate Remaining Life. As such, this vintage group approach to the remaining life calculations are widely considered to be the most accurate. Concentric Advisors agree and view this methodology as the correct and most appropriate calculation. The following details Concentric Advisors calculations and compares to the previous Depreciation Study's calculations. Using Account 365.2 – Right of way as an example.

**A. Account 365.20 – Rights of Way**

As shown in the rate development in Section 5 for account 365.20 – Rights of Way, the vintage (or Year) Calculated Accumulated Depreciation (CAD) is determined based on the approved Iowa R2.5-50. The actual total booked accumulated depreciation per the Company's accounting records is \$124,001.00. This

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855

**Minnesota Department of Commerce  
Division of Energy Resources  
Information Request**

DOC Attachment C  
Page 4 of 7

Docket Number:	G004/D-18-369	<input type="checkbox"/> Nonpublic	<input checked="" type="checkbox"/> Public
Requested From:	Great Plains Natural Gas	Date of Request: 7/17/2018	
Type of Inquiry:	Financial	Response Due: 7/27/2018	
Requested by:	Dorothy Morrissey		
Email Address(es):	dorothy.morrissey@state.mn.us		
Phone Number(s):	651.539.1797		

---

amount is ratably allocated to each vintage in direct proportion to the Calculated Accumulated Depreciation amounts specific to each vintage to produce vintage Allocated Actual Booked Amount (booked accumulated), which in total agrees to the company's financial records. Then a Net Book Value by vintage can be calculated as vintage original cost minus vintage booked accumulated. This vintage booked accumulated is then divided by each vintage's calculated ALG Remaining Life (based on the approved Iowa R2.5-50) to determine each vintage's Annual Accrual. The summation of the vintage Annual Accrual results in a Total Annual Accrual (i.e. \$1,181.55) which is then divided by the Total Original Cost of \$158,152.03 resulting in a Composite Annual Accrual Rate of 0.75%.

As noted above, this process results in each vintage's calculated net book value depreciated over an appropriate ALG Remaining Life specific to each installation vintage. As noted for this account, the 1965 vintage has determined a vintage remaining life of 10.86 years and increases proportionately to the 2003 vintage which has an associated vintage remaining life of 36.76 years. Concentric Advisors views this as appropriate, as it follows that the older the vintage will have a shorter the remaining life than younger vintages. Furthermore, Concentric Advisors views that each vintage's calculated net book value should be divided by the appropriate remaining life for each vintage.

In contrast the previous Depreciation Study's future annual accrual was based on dividing original cost for each vintage by the average service life estimate and then multiplying the annual requirement by the vintage specific average remaining life to determine a future accrual amount. The vintage specific future accrual amount ins then summed to determine a total future annual accrual amount, which can be divided by the sum of the annual accrual amount to determine a composite remaining life. Through to this point the calculations as completed in the current technical update are identical to the calculations completed in prior studies for Great Plains.

However, when remaining life is based on the Broad Group method as used in prior studies, the composite remaining life a determined above is applied to all vintages, by dividing the actual net book value per the Company's financial ledgers by the composite remaining life determined above. This developed annual accrual is then applied to the original cost resulting in a developed depreciation rate. For Account 365.20

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855

**Minnesota Department of Commerce  
Division of Energy Resources  
Information Request**

DOC Attachment C  
Page 5 of 7

Docket Number: G004/D-18-369 ☐ Nonpublic ☒ Public  
Requested From: Great Plains Natural Gas Date of Request: 7/17/2018  
Type of Inquiry: Financial Response Due: 7/27/2018

Requested by: Dorothy Morrissey  
Email Address(es): dorothea.morrissey@state.mn.us  
Phone Number(s): 651.539.1797

---

(shown on page 6-1 of the previous depreciation study and summarized on Table 2), the net book value was calculated as the original cost (\$158,152.03) minus the booked accumulated depreciation (\$122,071.44) for a net book value of \$36,080.59. This net book value has then been divided by the composite remaining life of 18.87 years. This results in a Total Annual Depreciation Accrual of \$1,916.06 which divided by the Original Cost of \$158,152.03 produces a depreciation rate of 1.21%. This calculation of dividing net book value by a composite remaining life in effect results in each vintage's net book value to have an effective 18.87-year remaining life.

The Broad Group approach as described above was widely used through the 1990's because of the simplicity of the calculation. However, the advent of computerized depreciation models allowed the more precise and accurate vintage group calculations to be made with no additional effort. Therefore, Concentric Advisors views the vintage group method as described in the Technical Update report to provide more accurate results as logically an older vintage should have attracted an increased amount of historic accumulated depreciation as compared to a younger vintage recently placed into service.

**B. Account 367 – Transmission Mains** - The previous depreciation study rate of 1.34% was derived as a composite of 5 Accounts 367.00 to 367.61 with Depreciation Parameters as follows:

Acct	Description	Original Cost	Parameters	Accrual
367.00	Transmission Mains	\$1,444,495.69	50-R3	20,945.19
367.40-42	Railroad, River Crossings	\$ 62,624.01	40-R2	137.77
367.45	Anodes and Cath. Protection	\$ 1,325.87	25-R3	11.14
367.50	Values	\$ 3,185.87	40-R4	(100.99)
367.60-61	Farm and Side Taps	\$ 29,814.38	30-R4	(289.20)
TOTAL	TRANSMISSION MAINS	\$1,541,445.63		20,703.91

Developed Rate = Total Accrual / Total Original Cost = 1.34%

Please refer to the General Response and the more detailed response to Account 365.20 above which details the previous studies calculation approaches which is applicable to the Transmission Mains accounts above. The change to the Vintage group remaining life calculation is the main reason for the

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855

**Minnesota Department of Commerce  
Division of Energy Resources  
Information Request**

DOC Attachment C  
Page 6 of 7

Docket Number:	G004/D-18-369	<input type="checkbox"/> Nonpublic	<input checked="" type="checkbox"/> Public
Requested From:	Great Plains Natural Gas	Date of Request: 7/17/2018	
Type of Inquiry:	Financial	Response Due: 7/27/2018	
Requested by:	Dorothy Morrissey		
Email Address(es):	dorothy.morrissey@state.mn.us		
Phone Number(s):	651.539.1797		

---

difference in rates between the previous study and Concentric's technical update. Concentric also notes that the previous study separated the accounts out to the above categories and then combines them to derive one rate of 1.34%. Concentric views that the method undertaken in this technical of combining the original cost of the five accounts and then using the parameters for the largest account (approximately 94% of the original cost) is a more efficient calculation.

**C. Account 391.1 – Office Furniture & Equipment** - The previous depreciation study rate of 6.25% was derived as the reciprocal of a 16-year average service life with no consideration of the accumulated depreciation (i.e. booked reserve) position. Concentric has derived its rate based on a Square Curve (i.e. SQ) with a 16-year average service life and then reducing the rate for the surplus booked reserve position of \$58,979. This then resulted in a net book value of \$58,979. As described in the General Response and the more detailed response to Account 365.20, Concentric then divided the vintage net book value by the associated vintage remaining lives which resulted in an annual accrual of \$3,080. This amount divided by the original cost of \$95,317 produced a depreciation rate of 3.23%. Concentric views that this rate, which considers the booked reserve position, more accurately reflects the true intention of an annual technical update and will properly recover the original cost over the prescribed average service life.

**D. Account 392.1 – Transportation Equipment - Trailers** - Please refer to the General Response and the more detailed response to Account 365.20 above which details the previous studies calculation approaches which is applicable to the Transportation Equipment Trailers account. The change to the Vintage group remaining life calculation is the main reason for the difference in rates between the previous study and Concentric's technical update.

**E. Account 392.2 – Transportation Equipment** - Please refer to the General Response and the more detailed response to Account 365.20 above which details the previous studies calculation approaches which is applicable to the Transportation Equipment Trailers account. The change to the Vintage group remaining life calculation is the main reason for the difference in rates between the previous study and Concentric's technical update.

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855



**Minnesota Department of Commerce  
Division of Energy Resources  
Information Request**

DOC Attachment C  
Page 7 of 7

Docket Number:	G004/D-18-369	<input type="checkbox"/> Nonpublic	<input checked="" type="checkbox"/> Public
Requested From:	Great Plains Natural Gas	Date of Request: 7/17/2018	
Type of Inquiry:	Financial	Response Due: 7/27/2018	
Requested by:	Dorothy Morrissey		
Email Address(es):	dorothy.morrissey@state.mn.us		
Phone Number(s):	651.539.1797		

---

**F. Account 394– Tools, Shop and Garage Equipment** – The previous depreciation study rate of 5.0% was derived as the reciprocal of a 20-year average service life with no consideration of the accumulated depreciation (i.e. booked reserve) position. Concentric has derived its rate based on a Square Curve (i.e. SQ) with a 20-year average service life and then increasing the rate for the deficit booked reserve position of \$222,312. This then resulted in a net book value of \$357,267. As described in the General Response and the more detailed response to Account 365.20, Concentric then divided the vintage net book value by the associated vintage remaining lives which resulted in an annual accrual of \$42,936.73. This amount divided by the original cost of \$628,269.65 produced a depreciation rate of 6.85%. Concentric views that this rate, which considers the booked reserve position, more accurately reflects the true intention of an annual technical update and will properly recover the original cost over the prescribed average service life.

**H. Account 397.0 – Communication Equipment** – The previous depreciation study rate of 5.56% was derived as the reciprocal of an 18-year average service life with no consideration of the accumulated depreciation (i.e. booked reserve) position. Concentric has derived its rate based on a Square Curve (i.e. SQ) with an 18 year average service life and then increasing the rate for the deficit booked reserve position of \$194,381. This then resulted in a net book value of \$104,785. As described the General Response and the more detailed response to Account 365.20, Concentric then divided the vintage net book value by the associated vintage remaining lives which resulted in an annual accrual of \$19,156.99. This amount divided by the original cost of \$303,582.84 produced a depreciation rate of 6.31%. Concentric views that this rate, which considers the booked reserve position, more accurately reflects the true intention of an annual technical update and will properly recover the original cost over the prescribed average service life.

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855

**Minnesota Department of Commerce  
Division of Energy Resources  
Information Request**

Docket Number: G004/D-18-369 ☐ Nonpublic ☒ Public  
Requested From: Great Plains Natural Gas Date of Request: 7/17/2018  
Type of Inquiry: Financial Response Due: 7/27/2018

Requested by: Dorothy Morrissey  
Email Address(es): dorothea.morrissey@state.mn.us  
Phone Number(s): 651.539.1797

---

**Request Number:** 8  
**Topic:** Depreciation Tables and Schedules  
**Reference(s):** Initial Filing, Table 1 and Docket 17-450, Table 2

---

**Request:**

For Accounts 376.0 *Mains* and 380.0 *Services*, please explain whether the survivor curve used for 2017 study differs from the survivor curves used in Docket 17-450. If so, explain why.

**Response:**

For Accounts 376.0 Mains and 380.0 Services, Concentric used a Weighted Life Calculation to determine the best curve of use to calculate the Annual Accrual.

Through consultation with Great Plains' staff, it was decided to roll up the various sub accounts of both 376.0 and 380.0 into one account each. In order to determine the best curve to use for each account, a weighted life calculation based on the Original Cost and Life span from Docket 17-450 of each sub-account was determined. The ending result was a Weighted Average life span representative of each account grouping for 376.0 and 380.0, respectively.

---

To be completed by responder

Response Date: July 27, 2018  
Response by: Travis Jacobson  
Email Address: [travis.jacobson@mdu.com](mailto:travis.jacobson@mdu.com)  
Phone Number: 701.222.7855



## **CERTIFICATE OF SERVICE**

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

**Minnesota Department of Commerce**  
**Comments**

**Docket No. G004/D-18-369**

**Dated this 16<sup>th</sup> day of August 2018**

**/s/Sharon Ferguson**

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Tamie A.	Aberle	tamie.aberle@mdu.com	Great Plains Natural Gas Co.	400 North Fourth Street Bismarck, ND 585014092	Electronic Service	No	OFF_SL_18-369_D-18-369
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1800  St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_18-369_D-18-369
Ian	Dobson	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_18-369_D-18-369
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280  Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_18-369_D-18-369
Brian	Meloy	brian.meloy@stinson.com	Stinson, Leonard, Street LLP	50 S 6th St Ste 2600  Minneapolis, MN 55402	Electronic Service	No	OFF_SL_18-369_D-18-369
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_18-369_D-18-369