MONTANA-DAKOTA UTILITIES CO.

BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

DOCKET NO. NG23-___

PREPARED DIRECT TESTIMONY OF

LARRY E. KENNEDY

Q1. Please state your name and business address.

A1. My name is Larry E. Kennedy. My business address is 200 Rivercrest Drive SE, Suite 277, Calgary, Alberta, T2C 2X5.

Q2. By whom are you employed?

A2. I am employed by Concentric Advisors, ULC

Q3. What is your position with Concentric Advisors, ULC. ("Concentric")?

A3. I am employed by Concentric as a Senior Vice President.

Q4. On whose behalf are you submitting this Direct Testimony?

A4. I am submitting this Direct Testimony before the South Dakota Public Utilities Commission ("Commission") on behalf of Montana-Dakota Utilities Co. ("Montana-Dakota" or the "Company").

Q5. Please describe your education and experience.

A5. I am a Certified Depreciation Professional, with over 40 years of regulatory plant accounting and depreciation experience, and 22 years of depreciation and plant accounting consulting to the regulated utility industry. I have advised numerous energy and utility clients on a wide range of accounting, property tax and utility depreciation matters. Many of these assignments have included the determination of the cost of appropriate annual depreciation accrual rates. I have included my resume and a summary of testimony that I have filed in other proceedings as Exhibit No. (LEK-2), Schedule 1.

Q6. Please describe Concentric's activities in energy and utility engagements.

A6. Concentric provides financial and economic advisory services to many and various energy and utility clients across North America. Our regulatory, economic, and market analysis services include utility ratemaking and regulatory advisory services; energy market assessments; market entry and exit analysis; corporate and business unit strategy development; demand forecasting; resource planning; and energy contract negotiations. Our financial advisory activities include buy and sell-side merger, acquisition and divestiture assignments; due diligence and valuation assignments; project and corporate finance services; and transaction support services. In addition, we provide litigation support services on a wide range of financial and economic issues on behalf of clients throughout North America.

Q7. Have you testified before any regulatory authorities?

A7. Yes. A list of proceedings in which I have provided testimony is provided in Exhibit No. (LEK-2).

I. PURPOSE AND OVERVIEW OF DIRECT TESTIMONY

Q8. What is the purpose of your Direct Testimony?

A8. The purpose of my Direct Testimony is to set forth the results of my full and comprehensive depreciation study of the plant in service of the Montana-Dakota Utilities Co. – Gas Division ("MDU" or the "Company"), as of December 31, 2021. My detailed report, including my analyses and recommendations, is provided in Exhibit No. (LEK-3), titled "Calculated Annual Depreciation Rates Applicable to Gas Plant in Service as of December 31, 2021". My detailed common report, including my analyses and recommendations, is provided in Exhibit No. (LEK-4), titled "Calculated Annual Depreciation Rates Applicable to Common Plant in Service as of December 31, 2021". The detailed depreciation study reports were prepared by me or under my direction**.**

Q9. Please provide a brief overview of the analyses that led to your depreciation recommendations.

A9. In preparing the depreciation study report, I analyzed the historic plant account data of MDU to prepare an analysis of the Company's past retirement experience. As a result of COVID protocols, I met (virtually) with the Company's management and operations representatives to determine the extent to which the historic indications would be reflective of the future retirement patterns. Lastly, I also reviewed the average service life and net salvage indications of many North American based gas utilities to test the results of my analysis against the electric industry peers.

Q10. How is the remainder of your Direct Testimony organized?

A10. Section II provides the scope of my study and a summary of my analyses and conclusions. This section also includes a discussion of the major causes of changes in the depreciation accrual rate and amounts as compared to the last study. Section III provides a background on utility depreciation, depreciation methods and procedures. Section IV provides concluding comments.

II. SCOPE OF THE DEPRECIATION STUDY

Q11. Please outline the Scope of the Depreciation Study.

A11. My depreciation study reports set forth the results of the depreciation study for the gas distribution, and general plant assets of the MDU Gas Division, to determine the annual depreciation accrual rates and amounts for book purposes applicable to the original cost of investment, as of December 31, 2021. The rates and amounts are based on the Straight-Line Method, incorporating the Average Life Group Procedure applied on a Remaining Life Basis. This study also describes the concepts, methods and judgments which underlie the recommended annual depreciation accrual rates related to the MDU gas assets in service, as of December 31, 2021.

Q12. Please outline the information included in your depreciation study report.

A12. The depreciation study report is presented in nine (9) sections outlined as follows:

Section 1 Study Highlights, presents a summary of the depreciation study and results.

Section 2 Introduction, contains statements with respect to the plan and the basis of the study.

Section 3 Development of Depreciation Parameters, presents descriptions of the methods used and factors considered in the service life study.

Section 4 Calculation of Annual and Accrued Depreciation, presents the methods and procedures used in the calculation of depreciation.

Section 5 Result of Study, presents summaries by depreciable group of annual and accrued depreciation in Tables 1, 2, 3, 4, 5, and 6.

Section 6 Retirement Rate Analysis

Section 7 Net Salvage Calculations

Section 8 Detailed Depreciation Calculations

Section 9 Estimation of Survivor Curves, is an overview of Iowa curves and the Retirement Rate Analysis.

Q13. Was the depreciation study prepared using generally accepted standard methods and practices?

A13. Yes. Previous depreciation studies completed for MDU utilized a widely accepted method for the study of the Company's historic data, known as the Retirement Rate Analysis Method. The Retirement Rate Analysis Method is generally accepted as the correct method to use when aged data is available for review. The aged data used in the last study, through December 31, 2015, was available to be incorporated into our database. Additional reliable aged data, for the period January 1, 2016 through to December 31, 2021, was provided by the Company and incorporated in our database. Given the availability of reliable aged data, I prepared the historic study of mortality history using the retirement rate method. A detailed discussion of the retirement rate analysis is presented in Section 9 of my depreciation study report.

Additionally, the service life study included:

- **a review of MDU company practice and outlook, as they relate to plant operation and retirement;**
- **consideration of current practice in the gas system industry, including knowledge of service life estimates used for other gas system companies; and**
- **informed professional judgment which incorporated analyses of all of the above factors.**

My study of the net salvage percentages was based on detailed study prepared under the standard approach, which has commonly become known as the "Traditional method". Within this method, the net salvage transactions (gross salvage proceeds, re-use salvage and costs of removal or retirement) are compared to the original cost of the item being retired. The analysis is prepared on an actual transaction year basis, for as many years as reliable data is available. The analysis then includes a series of 3-year rolling average bands, 5-year rolling average bands, and life to date bands covering all years of transactional data.

As described in later sections of this evidence, the depreciation accrual rates presented herein are based on generally-accepted methods and procedures for calculating depreciation.

The methods described above are generally accepted for use in the development of depreciation rates for regulated utilities.

Q14. Please provide a summary of the results of the depreciation study.

A14. The study results in an annual depreciation expense accrual related to the recovery of original cost (i.e. excluding net salvage requirement) of $22.6 million, when applied to depreciable plant balances, as of December 31, 2021.

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

Summary of Original Cost, Accrual Percentages and Amounts

Plant Group	Original Cost	Annual Accrual	
Distribution Plant	$548,934,689	3.21%	$17,637,857
General Plant	$49,954,953	9.87%	$4,931,463
Total Plant in Service	$598,889,642	3.77%	$22,569,320

Q15. How do the above depreciation rates compare to the currently approved depreciation rates?

A15. The following chart summarizes the proposed composite depreciation rates as compared to the currently applied for composite depreciation rates.

Plant Group	Proposed Depreciation Rate	Currently Applied Depreciation Rate
Distribution Plant	3.21%	4.15%
General Plant	9.87%	5.08%
Total Plant in Service	3.77%	4.23%

Q16. Please outline the reasons for the decreased composite depreciation rate for the gas distribution assets.

A16. In the circumstances of the distribution assets, the need for more negative net salvage percentages has had a depreciation rate increase impact that was lesser than the decline caused by the influence of the decreases due to the life extensions in many accounts. The following is a summary of the proposed average service life estimates compared to the currently used estimates, demonstrating the lengthening of the average service lives in three accounts.

Account	**Description**	**Proposed Iowa Curves**	**Current Iowa Curves**
374.2	Rights of Way	65-R3	65-R3
375.0	Distr. Meas & Reg Station Structures	55-R3	60-R3
376.0	Mains	55-R3	40-R3 to 62-R3
378.0	Meas & Reg Station Equip-General	50-R2	50-R2
379.0	Meas & Reg Station Equip-General	45-R2.5	45-R2.5
380.0	Services	50-R2.5	38-R0.5 to 47-R4
381.0	Meter & Meter Installations	31-R3	31-R3
383.0	House Regulators	58-R2.5	60-R3
385.0	Industrial Meas. & Reg. Station Equip	40-R2	40-R4
386.1	Misc. Property on Customer Premises	15-R3	15-R3
387.2	Other Equipment	30-R3	25-R3

The specific reasons for the average service life extensions for each of the large distribution accounts are discussed in Section 3.6 of my report. Additionally, the results of the statistical mortality study are presented for each account, in Section 6 of my report.

Q17. Are the average service life extensions, as noted above, typical for gas distribution assets?

A17. Yes. In a number of recent depreciation studies that I have completed, I have noted that the average service life of gas distribution assets is lengthening throughout North America. While there are a number of factors causing this lengthening of life estimates, the most prevalent reason is the increased focus of utilities in maintaining and life extending the distribution infrastructure. For example, in recent years gas distribution utilities have been pro-active in services structure management and adding enhanced pipeline quality in the type of product used for services.

Likewise, I have noted that the life of distribution assets has also benefited from enhanced technology and the pro-active maintenance programs undertaken by gas distribution utilities. As such, the average service life extensions as observed in this study are consistent with my observations in a number of other gas utilities.

Q23. Please provide a summary of the current and proposed net salvage percentages for distribution plant.

The following is a summary of the proposed net salvage percentages used in the depreciation rate calculations. I note that the current rates differ in many accounts from those proposed in the 2015 depreciation study. It is my understanding that the currently approved depreciation rates related to cost of removal were ultimately negotiated. Therefore, the net salvage percentage comparisons as noted below are based on the percentages as recommended in the 2015 depreciation study.

Account	**Description**	**Proposed**		**Last Depn Study (*)**	
		Net Salvage %	**Depn Rate**	**Net Salvage %**	**Depn Rate**
374.2	Rights of Way	0%	-0.02%	0%	0.00% 0.02%
375.0	Distr. Meas & Reg Station Structures	0%	-0.56%	(50)%	1.09% 0.28%
376.0	Mains	(55)%	1.19%	(50)%	1.17% 0.82%

Account	Description	Proposed		Last Depn Study (*)	
		Net Salvage %	Depn Rate	Net Salvage %	Depn Rate
378.0	Meas & Reg Station Equip-General	(30)%	0.60%	(30)%	0.66% 0.74%
379.0	Meas & Reg Station Equip-General	(5)%	0.07%	(15)%	0.37% 0.37%
380.0	Services	(100)%	1.18%	(200)%	4.83% 4.97%
381.0	Meter & Meter Installations	(20)%	1.74%	(20)%	0.96% 2.14%
383.0	House Regulators	(5)%	0.13%	0%	0.00% 0%
385.0	Industrial Meas. & Reg. Station Equip	(10)%	0.21%	(15)%	0.66% 0.94%
386.1	Misc. Property on Customer Premises	0%	0%	0%	0.00%
387.2	Other Equipment	0%	0%	0%	0.01% 0.00%

(*)Rates identified in yellow represent the depreciation rate after negotiated settlement.

As noted above, the depreciation rates related to cost of removal and salvage currently used were changed significantly from the depreciation rates as proposed in the 2015 depreciation study. The current study has noted the continued trend to increased levels of recovery for cost of removal.

The detailed analysis of the net salvage estimates is provided in Section 7 of my MDU report.

Q18. Is the trend for more negative net salvage percentage, as noted above, typical for gas distribution assets?

A18. Yes. The increased amount of cost of removal expenditures is a common trend throughout North American utilities. In fact, this trend has been the most significant change noted in depreciation studies over the past five years. Accordingly, it has become the most debated topic of depreciation studies filed throughout North America, as well as being a significant topic of discussion at depreciation conferences. At the 2018 Society of Depreciation Professionals conference held in September, there were four presentations regarding the large increase in cost of removal expenditures. This trend has been witnessed over virtually all electric, gas and pipeline utilities. As such, the trend witnessed in my MDU study is consistent with depreciation studies conducted across North America.

Q19. What is causing this trend to increased cost of removal of utility assets?

A19. It is generally accepted that there exist three main causes of increases.

Firstly, as the average age of utility assets continue to be extended, the impact of inflation becomes more pronounced. As the average service life has increased, the length of time between the original installation of the assets in some accounts and the estimated average time of retirement of the assets is getting longer. The net salvage percentage is calculated by dividing the costs to remove the asset in dollars of the time when the asset is removed by the original cost dollar of the time of installation. Given that the major component of cost of removal is labor, this increase in the life expectation, also results in an increased length of time that the labor associated with the removal is longer. To the extent that the average service lives for distribution assets have extended, the impact as described applies to a number of the MDU gas distribution accounts.

Secondly, the costs associated with the removal (or retirement) of utility assets must deal with increased environmental and regulatory requirements. For example, the costs related to the safe removal of existing infrastructure have greatly increased since the assets were originally installed. Additionally, the utilities are required to deal with the increased level of regulations within areas that are much more densely populated at the time of removal of the assets as compared to when the assets were originally placed into service. As distribution assets are often removed in municipal areas, the need to effectively deal with urban growth and density within the areas adds a significant cost to the removal of the assets that did not exist at the time of the original installation of the assets. When the assets were originally installed, the distribution assets were largely within greenfield developments, whereas now, when the assets are removed, the utility must deal with (for example) applications for road closures and re-routing, noise bylaws, and performing work within and around developed and landscaped yards.

Lastly, as utilities have implemented new and enhanced accounting systems, the ability to better track capital projects has improved the processes to track capital project costs more accurately. This provides the ability for direct charging labor associated to costs of removal specifically to cost of removal. Likewise, in circumstances where the utility uses an allocation of the total project costs to recognize that a portion of the capital project relates to the removal of assets, the advancements in the work order and plant accounting systems provide better information to allow the utility to better develop proper allocation factors.

Q20. Was a Common depreciation study also completed?

A20. Yes, a depreciation study was also conducted on the MDU Common assets. My detailed report, including my analyses and recommendations, is provided in Exhibit No. (LEK-4), titled "Calculated Annual Depreciation Rates Applicable to Common Plant in Service as of December 31, 2021".

Q21. Please provide a summary of the results of the Common depreciation study.

A21. The study results in an annual depreciation expense accrual related to the recovery of original cost and net salvage requirement of $4.3 million, when applied to depreciable plant balances, as of December 31, 2021. The study results are summarized at an aggregate functional group level as follows:

SUMMARY OF ORIGINAL COST, ACCRUAL PERCENTAGES AND AMOUNTS

Plant Group / Accounts	**Original Cost**	**Previous Study Annual Accrual**		**Recommended Annual Accrual**	
General Plant	$81,481,558	4.30%	$2,924,572	5.31%	$4,327,970
TOTAL	$81,481,558	4.30%	$2,924,572	5.31%	$4,327,970

III. DEPRECIATION METHODS AND PROCEDURES

Q22. How is depreciation defined for a rate regulated utility?

A22. <u>Depreciation defined</u> – "Depreciation, as applied to depreciable gas plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of gas plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities”.[1] When considering the action of the elements, my average service life recommendations have considered large catastrophic events that have occurred and impacted the life estimates of utility assets across North America through our use of peer analysis. The average service life of utilities has been influenced by events including forest fires, earthquakes, tornadoes, ice storms, wind storms, large scale flooding, fires, actions of third parties and other natural forces of nature, and these forces of retirement should be included in the determination of the average service life.

Depreciation, as used in accounting, is a method of distributing fixed capital costs, less net salvage, over a period of time by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing electric system utility service. Normally, the period of time over which the fixed capital cost is allocated to the cost of service is equal to the period of 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, which was adopted for use in my study.

Q23. Please outline the depreciation methods and procedures used in your depreciation study.

1 Federal Energy Regulatory Commission, Part 201Defination 12.B (2020)

A23. The calculation of annual and accrued depreciation, based on the Straight-Line Method, requires the estimation of survivor curves and the selection of group depreciation procedures, as discussed below.

Depreciation Grouping Procedures - When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because normally all of the items within a group do not have identical service lives but have lives that are dispersed over a range of time. There are two primary group procedures, namely, the Average Life Group and Equal Life Group procedures.

In the Average Life Group Procedure, the rate of annual depreciation is based on the average service life of the group. This rate is applied to the surviving balances of the group's cost. A characteristic of this procedure is that the cost of plant retired prior to average life is not fully recouped at the time of retirement, whereas the cost of plant retired subsequent to the average life is more than fully recouped. Over the entire life cycle, the portion of cost not recouped prior to average life is balanced by the cost recouped subsequent to average life.

In the Equal Life Group Procedure, also known as the Unit Summation Procedure, the property group is subdivided according to service life. That is, each equal life group includes that portion of the property which experiences the life of that specific group. The relative size of each equal life group is determined from the property's life dispersion curve. The calculated depreciation for the property group is the summation of the calculated depreciation based on the service life of each equal life unit. In the determination of the depreciation rates in this study, the use of the Average Service Life Procedure has been continued.

Amortization accounting is used for certain general plant accounts because of the disproportionate plant accounting effort required in these accounts. Many regulated utilities in North America have received approval to adopt amortization accounting for these accounts. This study calculates the annual and accrued depreciation using the Straight-Line Method and Average Life Group Procedure for most accounts. For certain general plant accounts, the annual and accrued depreciation are based on amortization accounting. Both types of calculations were based on original cost, attained ages and estimates of service lives. Variances between the calculated accrued depreciation and the book accumulated depreciation are amortized over the composite remaining life of each account within the remaining life calculations. Amortization accounting has been continued in this study in a manner largely consistent with the prior study. The following is a summary of the proposed amortization periods compared to the currently used estimates, demonstrating the lengthening of the average service lives in two accounts.

Account	**Description**	**Proposed Amortization Period in Years**	**Current Amortization Period in Years***
391.1	Office Furniture & Equipment	15	15
391.3	Computer Equipment - PC	5	5
393.0	Stores Equipment	30	30
394.1	Tools, Shop, & Garage Equipment	20	18
394.3	Vehicle Maintenance Equipment	20	20
395.0	Laboratory Equipment	20	20

Account	Description	Proposed Amortization Period in Years	Current Amortization Period in Years*
397.1	Communication Equipment – Fixed Radios	15	15
397.2	Communication Equipment – Mobile Radios	15	15
397.3	General Telephone Communication Equipment	10	10
397.8	Network Equipment	5	5
398.0	Miscellaneous Equipment	25	20

***Year equivalent calculated based on rate after negotiated settlement.**

A detailed account by account analysis of the factors considered in the selection of my recommended average service life estimates is provided in Section 3.6 of my depreciation study report.

Q24. Please outline any changes that you made in the depreciation method, grouping procedures or remaining life calculations as compared to previous depreciation studies.

A24. The depreciation rates calculated in this study 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 was applied on a remaining life basis. However, I note that in the application of the remaining life basis, the prior study calculated the remaining life on a broad average basis, whereas Concentric incorporates a refinement into the remaining life calculations based on a weighted investment by vintage approach. The vintage approach weighs the calculations of remaining life on an allocation of the actual book accumulated depreciation account by the Calculated Accumulated Depreciation (CAD) factor determined for each vintage of plant in service. This method is described as a Calculated Accumulated Depreciation ("CAD") weighted calculation in the textbook Depreciation Systems, by Frank K. Wolf and W. Chester Fitch, published by the Iowa State University in 1994, under the title "Adjustments" within the Broad Group Model.

In contrast, the remaining life calculations in prior studies was based on a broad averaging of the composite remaining life. This method is also discussed as the Amortization Method in Depreciation Systems under the title "Adjustments" within the Broad Group Model.

In the manner in which I developed the remaining life calculations, 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. Specifically, my calculations are made for each vintage surviving investment as of the date of the study (December 31, 2021), and then composited into a calculation for the account or group as a whole as compared to applying one overall composite life to all vintages as done in prior studies. My calculation requires two estimates:

1. The actual booked accumulated depreciation for each vintage within each account. Consistent with the plant accounting systems of most utilities, MDU does not track the booked accumulated depreciation reserve by vintage within each account. Rather the depreciation expense is calculated at an account level and booked to accumulated depreciation at the same account level. As such, the accumulated depreciation by account is allocated within the account to each

vintage, on the basis of the calculated accumulated depreciation 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.

2. The estimated remaining life of each vintage within each account. The estimated remaining life of each vintage 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 December 31, 2021.

This process results in each vintage's calculated net book value to be depreciated over an appropriate remaining life. This vintage weighting on a CAD approach to the remaining life calculations is widely considered to be the most accurate. I agree and view this methodology as the correct and most appropriate calculation.

IV. CONCLUDING REMARKS

Q25. What is your conclusion with respect to Montana-Dakota's proposed Depreciation expense?

A25. My conclusion is that Montana-Dakota's requested depreciation rates, resulting in a composite depreciation rate of 3.77% for the Gas Division and 5.31% for the Common Plant, reasonably reflects the annual consumption of the undepreciated service value of the utility plant in service. Therefore, the use of the depreciation rates as presented in my report, by account, will provide for an appropriate amount of depreciation expense in the Company's revenue requirement. Therefore, I recommend that the proposed depreciation rates set forth in the depreciation studies, that I prepared for this proceeding, be adopted by the Commission for regulatory purposes as well as by the Company for financial reporting purposes.

Q26. Does this conclude your Direct Testimony?

A26. Yes, it does.