

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

**IN THE MATTER OF APPLICATION OF)
BLACK HILLS NEBRASKA GAS, LLC,)
D/B/A BLACK HILLS ENERGY, RAPID)
CITY, SOUTH DAKOTA SEEKING)
APPROVAL OF A GENERAL RATE)
INCREASE)**

Application No. NG-124

DIRECT TESTIMONY AND EXHIBITS OF

WILLIAM W. DUNKEL

ON BEHALF OF

THE NEBRASKA PUBLIC ADVOCATE

August 15, 2025

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, OCCUPATION, AND BUSINESS ADDRESS.

A. My name is William W. Dunkel. I am the principal of William Dunkel and Associates (WDA). My business address is 8625 Farmington Cemetery Road, Pleasant Plains, Illinois, 62677.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of the Nebraska Public Advocate (PA).

II. STATEMENT OF QUALIFICATIONS

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION?

A. Yes. I developed the Black Hills Nebraska Gas, LLC d/b/a Black Hills Energy ("BH Natural Gas," BHN, or "Company") depreciation rates which are currently in effect.

In 2020 I testified before the Nebraska Public Service Commission ("Commission") pertaining to the BH Nebraska Gas depreciation rates. I was the depreciation expert that testified on behalf of the Nebraska Public Advocate in Docket No. NG-109. The depreciation rates I proposed were adopted in the Commission Order.¹

¹ In Application No. NG-109, the Joint Stipulation and Agreement of Settlement Between Black Hills Nebraska Gas, LLC. D/B/A Black Hills Energy and the Public Advocate of Nebraska, dated October 28, 2020, states the following:

"47. Depreciation Rates.

The Parties agree that (1) the Public Advocate's adjustment to depreciation rates is appropriate and (2) the correct depreciation expense to reflect in the revenue requirement model is \$24,089,585 (Statement J, Line 25) after correcting the financial impact related to depreciation for vehicles."

That Joint Stipulation and Agreement of Settlement was approved by the Commission in the "Order Approving Stipulation and Settlement Agreement", entered: January 26, 2021.

1 In addition, in 2014, I filed testimony before the Commission in a Source Gas
2 Nebraska depreciation case, Docket No. NG-0079. Source Gas is one of the two
3 predecessor companies of BH Nebraska Gas. The Commission Order in that case adopted
4 my recommendation.²

5 **Q. PLEASE SUMMARIZE YOUR PROFESSIONAL QUALIFICATIONS.**

6 A. I am the principal of William Dunkel and Associates, which was established in 1980. For
7 over 40 years since that time, I have regularly provided expert consulting services in utility
8 regulatory proceedings throughout the country. I have participated in over 300 state
9 regulatory proceedings before over one-half of the state commissions in the United States.
10 I provide, or have provided, services in utility regulatory proceedings to the following
11 clients:

12 The Public Utility Commissions or their Staffs in these States:

13	Arkansas	Maryland
14	Arizona	Mississippi
15	Delaware	Missouri
16	District of Columbia	New Mexico
17	Georgia	North Carolina
18	Guam	Utah
19	Illinois	Virginia
20	Kansas	Washington
21	Maine	U.S. Virgin Islands

² The case was not settled. The Commission, in Order Denying Application, entered October 28, 2014, states the following:

“William Dunkel, testifying on behalf of the Public Advocate, recommends that the new depreciation rates be booked when new rates are approved for SourceGas in the next general rate case. Mr. Dunkel contends that if permitted to reduce its depreciation rates, SourceGas would be booking less depreciation expense than that being recovered from ratepayers through current rates. Additionally, he states that the Company's accumulated depreciation reserve would be less than that actually recovered from ratepayers resulting in future net rate base being overstated in a future general rate case.”

The Order later states the following:

“Therefore, for the reasons set forth herein, the Commission finds that SourceGas' request to adjust its depreciation rates outside of a general rate case should be denied.”

The Office of the Public Advocate, or its equivalent, in these States:

Alaska	Maryland
California	Massachusetts
Colorado	Michigan
Connecticut	Missouri
District of Columbia	Nebraska
Florida	New Jersey
Georgia	New Mexico
Hawaii	Ohio
Illinois	Oklahoma
Indiana	Pennsylvania
Iowa	Utah
Maine	Washington

The Department of Administration in these States:

Illinois	South Dakota
Minnesota	Wisconsin

I graduated from the University of Illinois in February 1970 with a Bachelor of Science Degree in Engineering Physics, with an emphasis on economics and other business-related subjects. Earlier in my career, I worked as a design engineer for Sangamo Electric Company, designing electric watt-hour meters used in the electric utility industry. I was granted U.S. Patent No. 3,822,400 for a solid-state meter pulse initiator used in metering applications.

I am a member of the Society of Depreciation Professionals and have delivered presentations in the 2018 and 2011 annual meetings of the Society of Depreciation Professionals.

Q. HAVE YOU INCLUDED A MORE DETAILED DESCRIPTION OF YOUR QUALIFICATIONS?

A. Yes. A description of my qualifications is included as Exhibit WWD-1.

1 **III. SCOPE AND SUMMARY OF TESTIMONY**

2 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?**

3 A. The purpose of my testimony is to address depreciation rates. I reviewed the Direct
4 Testimony of John J. Spanos, and the BHN Depreciation Study proposed by Mr. Spanos
5 (Direct Exhibit JJS-2), and the associated exhibits, workpapers and documents. I prepared
6 several rounds of discovery requests pertaining to depreciation and analyzed the
7 Company's responses. Based on this information—as well as my professional experience
8 and judgment—I have prepared and now present the appropriate depreciation rates for BH
9 Nebraska Gas.

10 **Q. PLEASE SUMMARIZE YOUR RECOMMENDS.**

11 A. 1. Account 381.00—Meters—Small Volume and Other:

12 Mr. Spanos proposed reducing the service life for this account from the current 26 years
13 to 21 years. However, I discovered that life data for over \$9 million in investment was
14 omitted from his analysis. Specifically, this account contains \$24.6 million in total
15 investment, but Mr. Spanos's life analysis included data for only \$15.3 million. The
16 omitted \$9.3 million represents assets with a longer average service life than those
17 included.³

18 The PA filed discovery pertaining to the discrepancy based on my findings. In
19 response, Mr. Spanos revised his recommended life from the 21-S0.5 (as filed in his

³ When the \$15.3 million was analyzed, Mr. Spanos recommended a 21-year average service life. When all the data was apparently analyzed, Mr. Spanos recommended a 24-year average service life. This proves the \$9.3 million omitted from the original analysis has a longer average service life than does the \$15.3 million. See PA-23-338. This response is included in Exhibit WWD-2.

1 direct testimony) to 24-S0.5.⁴ That change, because of the discrepancy I found, is an
2 annual increase of \$434,081 over the depreciation expense Mr. Spanos originally filed.
3 In other words, \$434,081 of the depreciation expense increase Mr. Spanos filed is
4 because millions of dollars of longer-life investments were omitted from Mr. Spanos's
5 life analysis in this account.⁵ Other significant remaining problems in Mr. Spanos's
6 depreciation study are addressed in this testimony.

7 2. Inflation in Net Salvage Estimates:

8 The major depreciation issue in this proceeding is Mr. Spanos's proposal to charge
9 current ratepayers for **future** inflation. In response to discovery, Mr. Spanos admitted
10 that his position is "that net salvage costs **calculated in this case** should **include future**
11 **inflation out to the future time when the investment is expected to retire.**"⁶

12 (Empasis Added.)

13 3. Improper Inclusion of Future Inflation:

14 Charging current ratepayers for **future** inflation constitutes an improper depreciation
15 practice. As stated in NARUC *Public Utility Depreciation Practices*, depreciation
16 should **not** be influenced by "what costs may be at some future date."⁷

17 4. Excessive Net Salvage Charge to Ratepayers:

18 In the largest account, Mr. Spanos proposes an annual depreciation expense for net
19 salvage that is **five times** the average net salvage costs incurred by BHN. His net salvage
20 proposal is also excessive in the second largest account.

⁴ PA-23-338. This response is included in Exhibit WWD-2.

⁵ I assume this was an inadvertent omission. I am not claiming nor implying that Mr. Spanos intentionally omitted this data.

⁶ PA-151 (f), attached as Exhibit WWD-3.

⁷ NARUC *Public Utility Depreciation Practices*, August 1996, page 22. See Exhibit WWD-4.

5. More Accurate Life and Curve Selections:

For several accounts, I recommend lives and curves that more closely align with actual BHN data, than those proposed by Mr. Spanos.

I recommend the depreciation rates shown on Exhibit WWD-5. A summary of the annual depreciation expenses resulting from the Public Advocate's recommended rates—compared to both the current rates and the Company's proposed rates—is provided below:⁸

Figure 1: Annual Depreciation Expenses

BLACK HILLS NEBRASKA SUMMARY OF ANNUAL ACCRUAL AMOUNTS (DEPRECIATION EXPENSE) AS OF SEPTEMBER 30, 2024						
PLANT CATEGORY	CURRENT CALCULATED	COMPANY PROPOSED		PUBLIC ADVOCATE PROPOSED		
	ANNUAL ACCRUAL AMOUNT	ANNUAL ACCRUAL AMOUNT	INCREASE FROM CURRENT	ANNUAL ACCRUAL AMOUNT	INCREASE FROM COMPANY	INCREASE FROM CURRENT
INTANGIBLE PLANT	75,057	227,520	152,463	227,520	0	152,463
TRANSMISSION PLANT	42,673	55,084	12,411	55,084	0	12,411
DISTRIBUTION PLANT	21,406,844	30,447,836	9,040,992	25,242,997	(5,204,839)	3,836,153
GENERAL PLANT	5,279,405	5,630,323	350,918	5,630,323	0	350,918
UNRECOVERED RESERVE	212,172	444,957	232,784	444,957	0	232,784
TOTAL PLANT	27,016,151	36,805,720	9,789,569	31,600,881	(5,204,839)	4,584,730

Q. ARE YOU PRESENTING ANY EXHIBITS IN CONNECTION WITH YOUR DIRECT TESTIMONY IN THIS PROCEEDING?

⁸ Exhibit WWD-5 shows the annual accruals based on the September 30, 2024 investment levels. However, in the future as the investments change, the depreciation rates will be applied to the then current investments, which will produce a different accrual amount (generally a larger accrual in the future because the investments generally grow over time).

1 A. Yes. Besides my resume included as Exhibit WWD-1, Exhibits WWD-2 through WWD-
2 19 are copies of selected documents that are referenced in my testimony.

3 **IV. OVERVIEW OF DEPRECIATION IN A UTILITY RATE CASE**

4 **Q. PLEASE PROVIDE AN OVERVIEW OF THE IMPACT OF DEPRECIATION**
5 **RATES ON THE REVENUE REQUIREMENT.**

6 A. The depreciation rate that the Commission adopts for an account is multiplied by the
7 investment in that account, which produces a calculated annual depreciation expense for
8 that account. The calculated depreciation expenses for all accounts are included in the
9 revenue requirement that is to be recovered from the ratepayers.

10 **Q. LATER WE WILL DISCUSS “NET SALVAGE.” WHAT IMPACT DOES NET**
11 **SALVAGE HAVE IN THE CALCULATION OF A DEPRECIATION RATE?**

12 A. The higher the negative Net Salvage factor used, the higher the calculated depreciation rate
13 and depreciation expense, everything else being the same. For example, a -60% net salvage
14 will produce a higher depreciation rate than a -20% net salvage, everything else being the
15 same. Net Salvage = Gross Salvage – Cost of Removal.

16 **Q. LATER WE WILL DISCUSS THE “LIFE” OR “AVERAGE SERVICE LIFE” OR**
17 **“REMAINING LIFE.” WHAT IMPACT DOES THE “LIFE” SELECTED FOR**
18 **USE IN THE CALCULATIONS HAVE IN THE CALCULATION OF A**
19 **DEPRECIATION RATE?**

20 A. The shorter the life selected, the higher the calculated depreciation rate and depreciation
21 expense will be, everything else being the same.

1 **Q. COULD YOU PLEASE PROVIDE THE DEFINITION OF DEPRECIATION?**

2 A. Yes. The Federal Energy Regulatory Commission (FERC) defines “depreciation” in the
3 FERC Uniform System of Accounts (USOA), 18 CFR part 201:

4 *Depreciation*, as applied to depreciable gas plant, means the loss in service
5 value not restored by current maintenance, incurred in connection with the
6 consumption or prospective retirement of gas plant in the course of service
7 from causes which are known to be in current operation and against which
8 the utility is not protected by insurance. Among the causes to be given
9 consideration are wear and tear, decay, action of the elements, inadequacy,
10 obsolescence, changes in the art, changes in demand and requirements of
11 public authorities, and, in the case of natural gas companies, the exhaustion
12 of natural resources.⁹

13 The FERC USOA definition specifically states depreciation is a “loss in service
14 value.” FERC defines service value as “the difference between original cost and net salvage
15 value of gas plant.”¹⁰ Since this is a utility regulatory proceeding, I rely on the USOA
16 definition of depreciation, which focuses on the “loss of service value.”

17 **Q. DO YOU PRESENT DEPRECIATION RATES THAT ARE FAIR TO ALL**
18 **PARTIES, INCLUDING INVESTORS, CURRENT RATEPAYERS, AND FUTURE**
19 **RATEPAYERS?**

20 A. Yes. I present depreciation rates that are fair to all parties, including investors, current
21 ratepayers and future ratepayers. My firm (WDA) frequently addresses depreciation from
22 the commission staff or commission perspective. Nationwide, in the past ten years,
23 approximately half of WDA’s cases have been on behalf of state utility regulatory

⁹ FERC Uniform System of Accounts Prescribed for Natural Gas Companies Subject to the Provision of the Natural Gas Act (18 CFR part 201).

¹⁰ FERC USOA Definition 37 (18 CFR part 201).

1 commissions or the commissions' staffs. For comparison, Mr. Spanos virtually always
2 testifies on behalf of the utility.¹¹

3 I am familiar with and follow the Uniform System of Accounts (USOA)
4 requirements pertaining to depreciation.¹² In making my recommendations, I follow the
5 accepted depreciation practices contained in the *Public Utilities Depreciation Practices*
6 published by the National Association of Regulatory Utility Commissioners (NARUC). I
7 also relied upon judgment and experience accumulated during decades of addressing utility
8 depreciation rates nationwide.

9 **Q. MR. SPANOS STATES THAT HIS DEPRECIATION RATES WERE BASED ON**
10 **"THE BROAD GROUP PROCEDURE, THE REMAINING LIFE TECHNIQUE**
11 **AND STRAIGHT LINE METHOD." WHAT DID YOU USE?**

12 A. I also used the broad group procedure, the remaining life technique, and straight-line
13 method.

14 **V. MR. SPANOS PROPOSES TO CHARGE CURRENT RATEPAYERS FOR**
15 **FUTURE INFLATION**

16 **Q. WHAT IS THE MAJOR DEPRECIATION ISSUE IN THIS PROCEEDING?**

17 A. The major depreciation issue in this proceeding is that Mr. Spanos proposes to charge
18 current ratepayers for **future** inflation. Charging current ratepayers for **future** inflation is
19 improper depreciation, as I will demonstrate later.

20 **Q. CAN YOU PROVE THAT MR. SPANOS PROPOSES CHARGING CURRENT**
21 **RATEPAYERS FOR FUTURE INFLATION?**

¹¹ See pages 8 to 23 of Direct Exhibit JJS-1.

¹² 18 CFR part 201.

1 A. Yes. Discovery request PA-151 (f) asked the following:

2 (f) Is it Mr. Spanos's position that net salvage costs calculated in this case
3 should **include future inflation out to the future time when the**
4 **investment is expected to retire**? Please begin the response with "yes" or
5 "no." If the response is "no," how far out should future inflation be included
6 in the determination of net salvage? Explain the response. (Emphasis
7 added.)

8 Mr. Spanos's response is as follows:

9 (f) Please refer to part (c) of this response. However, the question implies
10 additional future inflation is added and that is not accurate.¹³

11 Mr. Spanos's response to the "part (c)" he referenced begins with "yes."

12 It is Mr. Spanos's position that net salvage costs calculated **in this case** should
13 include **future inflation out to the future time when the investment is expected to**
14 **retire**.

15 Q. CAN YOU FURTHER PROVE THAT MR. SPANOS PROPOSES TO CHARGE
16 CURRENT RATEPAYERS FOR FUTURE INFLATION?

17 A. Yes. He admits this in response to discovery PA-151 (d).

18 Discovery request PA-151 (d) asked the following:

19 (d) Is it Mr. Spanos's position that the "accrual for net salvage must be based
20 **on estimates of the future cost that will be incurred, not the removal**
21 **cost at today's price level**?" Please begin the response with "yes" or "no."
22 (Emphasis added.)

23 Mr. Spanos's complete response is as follows:

24 (d) Yes.¹⁴

¹³ This request PA-151 and Mr. Spanos's response are included in Direct Exhibit WWD-3.

¹⁴ PA-151 (d), included in Exhibit WWD-3.

1 **Q. CAN YOU FURTHER PROVE THAT MR. SPANOS PROPOSES CHARGING**
2 **CURRENT RATEPAYERS FOR FUTURE INFLATION.**

3 A. Yes. Discovery request PA-151 (c) asked the following:

4 (c) Is it Mr. Spanos's position that "it is appropriate to ask current
5 customers to pay for future costs of removal at inflated price levels"?
6 Please begin the response with "yes" or "no." (Emphasis added.)

7 Mr. Spanos's response begins as follows:

8 (c) Yes, although the citations in parts (a) and (b) of this question are
9 provided without context. . . .¹⁵ (Emphasis added.)

10 Mr. Spanos added additional comments, but the admission is there. Mr. Spanos's
11 position is that "it is appropriate to ask current customers to pay for future costs of
12 removal at inflated price levels." (Emphasis added.)

13 **Q. IS THERE ANOTHER RESPONSE IN WHICH MR. SPANOS ADMITS THIS IS**
14 **HIS POSITION?**

15 A. Yes. On page 10, lines 7–11, Mr. Spanos makes this statement in his testimony:

16 For example, the full recovery of the service value of a \$20,000 regulator
17 includes not only the \$20,000 of original cost, but also, on average, \$4,200
18 to remove the regulator at the end of its life and \$200 in salvage value.

19 In Request PA-155 (b), we asked the following:

20 (b) Assume the cost to remove that type of regulator is currently \$1,000, but
21 it is expected that because of inflation, 40 years in the future the cost to
22 remove that type of regulator would be \$4,200. (The \$4,200 amount is stated
23 in the future dollars.) Is it Mr. Spanos's position that \$4,200 amount stated
24 in the future dollars is the amount that should be used in calculating the
25 current depreciation rate? Please begin the response with "yes" or "no" and
26 explain the response.

¹⁵ This request PA-151 and Mr. Spanos's response are included in Direct Exhibit WWD-3.

1 Mr. Spanos's response begins in this way: "(b) Yes, because the \$4,200 is the cost
2 to remove the regulator at the time it is retired. . . ."¹⁶

3 **Q. WHAT HAVE YOU PROVEN?**

4 A. Mr. Spanos's position is that net salvage costs calculated in this case should include
5 future inflation out to the future time when the investment is expected to retire. He
6 admits this in response to several discovery requests.

7 **VI. THE NARUC PUBLIC UTILITY DEPRECIATION PRACTICES CLEARLY**
8 **STATES THAT DEPRECIATION SHOULD NOT BE INFLUENCED BY**
9 **"WHAT COSTS MAY BE AT SOME FUTURE DATE"**

10 **Q. DOES THE RESPECTED NARUC PUBLIC UTILITIES DEPRECIATION**
11 **PRACTICES ALLOW INCLUDING FUTURE INFLATION IN DEPRECIATION?**

12 Absolutely not. The 332-page *Public Utility Depreciation Practices* published by the Staff
13 Subcommittee on Depreciation of the National Association of Regulatory Utility
14 Commissioners (NARUC) specifically prohibits including future inflation in depreciation.

15 The NARUC *Public Utility Depreciation Practices* clearly states that depreciation
16 should not be influenced by "what costs may be at some future date," stating:

17 5. A cost depreciation base conforms to the accepted accounting principle
18 that operating expenses should be based on cost and not be influenced by
19 fair value estimates nor by what costs may be at some future date.¹⁷
20 (Emphasis added.)

¹⁶ PA-155 is attached as Exhibit WWD-6.

¹⁷ NARUC *Public Utility Depreciation Practices*, August 1996, page 22. The pages from the NARUC Public Utility Depreciation Practices, which contains this statement, are attached as Exhibit WWD-4.

1 Mr. Spanos's proposal to charge current ratepayers for future inflation **is the exact**
2 **opposite** of what the respected NARUC *Public Utility Depreciation Practices* states is
3 proper depreciation.

4 **VII. REQUIRING CURRENT CUSTOMERS TO PAY FOR COSTS AT FUTURE**
5 **INFLATED PRICE LEVELS IS AN ABUSE OF MONOPOLY POWER**

6 **Q. ABSENT MONOPOLY POWER, WOULD IT BE POSSIBLE TO REQUIRE**
7 **CURRENT CUSTOMERS TO PAY FOR COSTS AT FUTURE INFLATED PRICE**
8 **LEVELS?**

9 A. No. Assume an item which sells for around \$10 in other area grocery stores is priced at \$50
10 in one particular grocery store. The store manager explains that because of future inflation,
11 it is reasonable to expect that 40 years from now, a dollar will have one fifth the purchasing
12 power of today's dollar, so four decades in the future, prices generally will be around five
13 times what they are in today's dollars. Therefore, in future dollars, \$50 is the appropriate
14 price for this item.

15 Of course, in a competitive market, current customers would not pay at the future
16 inflated price levels of \$50 from decades in the future. Instead, they would buy from a
17 different store that charges \$10.

18 Mr. Spanos's position that net salvage costs calculated in this case should include
19 future inflation out to the future time when the investment is expected to retire¹⁸ can be
20 done only where there is monopoly power. Mr. Spanos is proposing an abuse of monopoly
21 power.

¹⁸ See PA-151 (f), which is included in Direct Exhibit WWD-3.

Mr. Spanos's position is improper and must be rejected, to avoid overcharging ratepayers and to avoid an abuse of monopoly power.

Q. WHAT IS AN ADDITIONAL ERROR IN MR. SPANOS'S POSITION?

A. If something costs \$10 in today's dollars but will cost \$50 in the lower-value future dollars, the current customers—or ratepayers—are paying in today's dollars, not in the lower-value future dollars.

1. MR. SPANOS DIVIDES APPLES BY ORANGES

Q. ON PAGE 140 OF MR. SPANOS'S DIRECT EXHIBIT JJS-2, HE PERFORMS A CALCULATION SHOWING AN INCREDIBLE NEGATIVE 244% NET SALVAGE AVERAGE FOR THE LAST FIVE YEARS FOR ACCOUNT 380, SERVICES. IN THAT CALCULATION, IS MR. SPANOS INCLUDING THE INFLATION WHICH OCCURS BETWEEN THE TIME OF INSTALLATION AND THE TIME OF RETIREMENT?

A. Yes. Mr. Spanos includes the inflation which occurs between the time of installation and the time of retirement in his calculation of those factors.

In discovery, we asked him about his calculation of the 173% Cost of Removal for the year 2023 on this page. In response to PA 152(d), Mr. Spanos answered as follows:

(d) The retirements are measured at original cost and the cost of removal and gross salvage are expressed as 2023 costs. The inflation that occurred between installation and retirement can impact the -173% net salvage.¹⁹ (Emphasis added.)

In this calculation, Mr. Spanos divides the Cost of Removal dollar amount, which dollar amount is recorded in year 2023 dollars (recorded when these investments retired),

¹⁹ This response to PA-152(d) is included in Exhibit WWD-7.

1 by the Original Cost dollar amounts, which dollar amounts were recorded back when these
2 investments went into service (decades ago, on average). Because of the inflation which
3 occurred between the time of installation and the time of retirement, the amounts Mr.
4 Spanos uses in his numerator are stated in dollars that are very different from the dollars in
5 the amounts he uses in his denominator. I refer to this calculation as “apples divided by
6 oranges.”²⁰

7 **2. MR. SPANOS IS APPLYING A NET SALVAGE METHOD IN A**
8 **CIRCUMSTANCE FOR WHICH IT WAS NOT DESIGNED**

9 **Q. WHAT IS MR. SPANOS DOING IN THAT CALCULATION?**

10 A. Mr. Spanos is applying a net salvage method in a circumstance for which it was not
11 developed. The net salvage statistical analyses Mr. Spanos shows was developed in the
12 early days of regulation when the net salvage was generally “positive” (the gross salvage
13 exceeded cost of removal).²¹ This meant no cost of removal would have to be collected
14 from the ratepayers, because the gross salvage covered the cost of removal. That method
15 was not developed to collect cost of removal from ratepayers, because at the time it was
16 developed there was no need to collect cost of removal from ratepayers. Regarding the
17 early days, the NARUC *Public Utility Depreciation Practices* states the following:

²⁰ The paragraph discussed his Cost of Removal calculation. The same problem exists in his Gross Salvage and Net Salvage calculations.

²¹ Even the industry’s own text *Introduction to Depreciation and Net Salvage of Public Utility Plant and Plant of Other Industries*, published by the industry groups Edison Electric Institute and American Gas Association, states the following:

“Prior to 1960, electric utilities were typically recording positive net salvage values (gross salvage exceeded cost of removal). With the onset of increasing inflation, labor costs rose significantly resulting in increasingly high cost of removal. Gross salvage was not affected by these increasing labor costs, therefore, net salvage values became more and more negative.” (Emphasis added).

Page 78 of *Introduction to Depreciation and Net Salvage of Public Utility Plant and Plant of Other Industries* (2003), by the Edison Electric Institute (EEI) and the American Gas Association (AGA). My quoting this statement does not necessarily imply I support other things stated in this industry publication.

1 The theory behind this requirement is that, since most physical plant placed
2 in service **will have some residual value** at the time of its retirement, the
3 original cost recovered through depreciation **should be reduced** by that
4 amount.²² (Emphasis added.)

5 **Q. DID MR. SPANOS ADMIT THAT NARUC *PUBLIC UTILITY DEPRECIATION***
6 ***PRACTICES* NEVER SHOWS THE NET SALVAGE METHOD HE IS USING**
7 **BEING APPLIED TO NEGATIVE NET SALVAGE?**

8 A. Yes. In discovery we pointed out the two calculations in the NARUC *Public Utility*
9 *Depreciation Practices* which applied to **positive** net salvage, the method in which net
10 salvage cost is divided by the original cost.²³ Applying this calculation to **positive** net
11 salvage means the method is **not** collecting any cost of removal or net salvage **from**
12 **ratepayers**, because the gross salvage fully covers the cost of removal. PA-154(d) asked
13 the following:

14 (d) Please admit or deny that nowhere in NARUC's "Public Utility
15 Depreciation Practices" does NARUC show any example in which the
16 method that includes dividing the dollars of net salvage by the dollars of
17 original cost of plant retired is applied when the net salvage is **negative**,
18 (where the Cost of Removal is larger than the Gross Salvage). If the
19 response is "deny," please cite the page in NARUC's "Public Utility
20 Depreciation Practices" that includes this example.

21 Mr. Spanos response is as follows:

22 (d) Mr. Spanos **would agree that there is not a specific example showing**
23 **negative net salvage**. However, the plain text of NARUC, discussed in part
24 (a), makes clear that the same analysis and approach applies to cost of
25 removal as gross salvage.²⁴ (Emphasis added.)

26 Mr. Spanos is applying a net salvage method in a circumstance (negative net
27 salvage) for which it was not developed. That net salvage method was not designed to

²² Pages 157 *Public Utility Depreciation Practices*, published by the National Association of Regulatory Utility Commissioners (NARUC). August 1996. Exhibit WWD-4

²³ Request PA-154(b) and (c). Attached as Exhibit WWD-8.

²⁴ Request and response to PA-154 (d). Attached as Exhibit WWD-8.

1 properly recover future net salvage from ratepayers, because when it was designed it was
2 not necessary to collect future net salvage from ratepayers.

3 **Q. IS THE LAST SENTENCE OF MR. SPANOS'S RESPONSE QUOTED ABOVE**
4 **INACCURATE?**

5 A. Yes. After his admission, the last sentence of Mr. Spanos's response is false. In the last
6 sentence, Mr. Spanos's answer says the "plain text of NARUC, discussed in part (a)"
7 supports his position. Nowhere, including in the "plain text of NARUC, discussed in part
8 (a)" does NARUC *Public Utility Depreciation Practices* say that current ratepayers should
9 be charged for future inflation, nor does it say that the net salvage method Mr. Spanos uses
10 can be applied to **negative** net salvage. Mr. Spanos is claiming that NARUC *Public Utility*
11 *Depreciation Practices* says things which it does not actually say.

**3. SUPERIOR COURT OF PENNSYLVANIA REJECTED APPLYING THE NET
SALVAGE METHOD MR. SPANOS PROPOSES TO NEGATIVE NET SALVAGE**

12 **Q. DID THE SUPERIOR COURT OF PENNSYLVANIA STATE THAT, WHEN**
13 **DEALING WITH "NEGATIVE SALVAGE," THE NET SALVAGE METHOD MR.**
14 **SPANOS PROPOSES IN THIS CASE "REPRESENTS THE RECOVERY OF**
15 **SOMETHING IN THE NATURE OF A FUTURE REPRODUCTION COST"?**

16 A. Yes. When the net salvage method Mr. Spanos advocates is applied to negative net salvage,
17 which it was not designed for, it produces improper results.

18 The proposed net salvage method addressed in Sheraton Hotel versus the
19 Pennsylvania Public Utility Commission is the same net method Mr. Spanos is proposing

1 in the current case.²⁵ In that Pennsylvania court case, the proposal was to apply the net
2 salvage method in a case in which the net salvage was negative. The Superior Court of
3 Pennsylvania stated: “We note also that we are dealing with prospective negative
4 salvage.”²⁶ The Superior Court of Pennsylvania also stated that this method “in our opinion,
5 represents the recovery of something in the nature of a future reproduction cost.”²⁷

6 The net salvage requirements established in that case are still in effect in
7 Pennsylvania. One reason the outdated net salvage method Mr. Spanos proposes is an
8 improper “future reproduction cost” calculation (that does not properly collect future net
9 Cost of Removal from current ratepayers) is that it was not developed for situations in
10 which net salvage is negative. Mr. Spanos proposes to apply a method in a circumstance
11 for which it was not developed and is not theoretically appropriate.

12 **Q. IS THE NET SALVAGE METHOD MR. SPANOS USES THE ONLY NET**
13 **SALVAGE TREATMENTS DISCUSSED IN NARUC PUBLIC UTILITY**
14 **DEPRECIATION PRACTICES (“DEPRECIATION PRACTICES”)?**

15 A. No. *Depreciation Practices* discusses at least four different net salvage treatments,²⁸
16 including the net salvage treatment I am using, which is as follows:

²⁵ *Penn Sheraton Hotel v. Pennsylvania Public Utility Commission*, 198 Pa. Super. 618, 623-624 (1962) “Allegheny submitted a study showing that for the 5 1/2-year period ending July 31, 1960, it had retired distribution mains costing \$91,236 originally, and that the net cost of removing these mains from the tunnels and streets was \$54,585, or about 60 per cent of their original cost. Allegheny estimated that for every segment of its distribution system which is retired it would incur a net removal cost equal to 50 per cent of the original cost. The record shows that steam mains entered into the rate base at an original cost in excess of \$4,000,000, and that the ultimate removal cost of 50 per cent would be more than \$2,000,000.”

²⁶ *Penn Sheraton Hotel v. Pennsylvania Public Utility Commission*, p. 623.

²⁷ *Penn Sheraton Hotel v. Pennsylvania Public Utility Commission*, p. 627.

²⁸ (1) Page 157 of *Depreciation Practices* states: “In some jurisdictions gross salvage and cost of removal are accounted for as income and expense, respectively, when they are realized.” (2) Page 157 of *Depreciation Practices* states: “Other jurisdictions consider only gross salvage in depreciation rates, with the cost of removal

1 Normally, the process should start by analyzing past salvage and cost of
2 removal data and by using the results of this analysis to project future
3 gross salvage and cost of removal.²⁹

4 **VIII. IN THE LARGEST ACCOUNT, MR. SPANOS IS CHARGING RATEPAYERS**
5 **FIVE TIMES THE NET SALVAGE COSTS BHN INCURS.**

6 **Q. WHAT IS THE LARGEST ACCOUNT IN THIS CASE?**

7 A. By far, the largest account is Account 376, Mains, which comprises 47% of the total
8 depreciable plant investment.³⁰ In this account, the net salvage annual depreciation expense
9 Mr. Spanos proposes to charge ratepayers is **five times** the average annual net salvage cost
10 BHN incurs.

11 **Q. WHAT NET SALVAGE DOES MR. SPANOS PROPOSE FOR THIS ACCOUNT?**

12 A. The average annual net salvage cost BHN incurs is \$409,887 per year in the Mains account.
13 In this account, Mr. Spanos proposes charging ratepayers \$2,025,345 annual depreciation
14 expense just for net salvage. Mr. Spanos proposes charging ratepayers **FIVE TIMES** as
15 much for net salvage as the annual cost BHN incurs for net salvage.³¹

16 **Q. WHAT NET COSTS DOES BHN INCUR TO RETIRE THE MAINS?**

being expensed in the year incurred.” (3) Page 157-158 of *Depreciation Practices* states: “Normally, the process should start by analyzing past salvage and cost of removal data and by using the results of this analysis to project future gross salvage and cost of removal.” (4) *Depreciation Practices* also discusses the net salvage treatment Mr. Spanos proposes, but *Depreciation Practices* only shows this last treatment being use when net salvage is positive. In this testimony I recommend treatment (3). I am not recommending treatments (1), (2) or (4). These pages of *Depreciation Practices* are included in Exhibit WWD-4.

²⁹ Page 157-158 of *Depreciation Practices*. These pages are included in Exhibit WWD-4.

³⁰ This was determined from the Original Costs on pages 51-53 of Direct Exhibit No. JJS-2 [the Black Hills Nebraska depreciation study]. \$ 542,138,340 for Mains, Account 376 / \$1,163,637,345 Total Depreciable Plant = 47%.

³¹ \$2,025,345/\$409,887 = 4.9 times.

A. Page 137 of Mr. Spanos's Direct Exhibit JJS-2 shows the costs that BHN has incurred to retire Mains each year. These negative net salvage costs incurred are listed below for the years 2015 through 2024:

Figure 2: BHN Account 376, Mains

Account 376, Mains, BHN	
Year	Negative Net Salvage Incurred, Per Mr. Spanos
2015	\$53,040
2016	\$411,197
2017	\$438,910
2018	\$1,076,794
2019	\$491,393
2020	\$1,077,711
2021	\$107,932
2022	\$160,908
2023	\$402,108
2024	\$300,777
Average Last 5 Years:	\$409,887
Average Last 10 Years:	\$452,077

That the Five-Year Average Net Salvage Amount in the years 2020–2024 averaged negative \$409,887 is also directly shown on the bottom of page 137 in witness Spanos's Direct Exhibit JJS-2.

Q. WHAT IS THE ANNUAL AMOUNT MR. SPANOS PROPOSES COLLECTING FROM THE RATEPAYERS FOR NET SALVAGE IN THIS SAME ACCOUNT 376, MAINS?

A. In response to PA-149, BHN admitted that Mr. Spanos proposes an annual accrual of \$2,025,345 just for net salvage, in Account 376, Mains.³² This \$2,025,345 is the proposed annual depreciation expense that would be recovered from the ratepayers, just for net salvage in Account 376. For Account 376, Mains, the \$2,025,345 Mr. Spanos proposes charging ratepayers for net salvage annually, compared to the \$409,887 average annual net salvage costs BHN incurs, is shown in the following figure:

Figure 3: Net Salvage Incurred

Net Salvage Incurred, Compared to Mr. Spanos's Proposed Net Salvage Depreciation Expense.				
		INCURRED NET SALVAGE COST (Negative Net Salvage)	MR SPANOS'S PROPOSED NET SALVAGE DEPRECIATION EXPENSE	
		(Annual Average 2020-2024)*	Net Salvage Annual Accrual (From PA-149)	Accrual, Divided by Incurred (Times)
376.00	MAINS	\$ 409,887	\$ 2,025,345	5

Q. FOR THIS LARGEST ACCOUNT, SHOULD THE COMMISSION ACCEPT MR. SPANOS'S RECOMMENDATION OF A NET SALVAGE ANNUAL DEPRECIATION EXPENSE CHARGED TO RATEPAYERS, WHICH IS FIVE TIMES THE AVERAGE ANNUAL NET SALVAGE COST BHN INCURS?

³² See response to PA-149, attached as Exhibit WWD-9.

1 A. Of course not. For this largest account, Mr. Spanos is proposing to charge ratepayers five
2 times as much for net salvage as the net salvage costs BHN incurs.

3 In Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591 (1944), the
4 U. S. Supreme Court stated:

5 The rate-making process . . . i.e., the fixing of ‘just and reasonable’ rates,
6 involves a balancing of the investor and the consumer interests. Id., 603

7 In my opinion, charging ratepayers five times as much as the costs the Company incurs is
8 not a reasonable balancing of the investor and the consumer interests. That is what Mr.
9 Spanos is proposing for the account which contains 47% of the total depreciable
10 investment.

11 To be sure the net salvage costs incurred in the last five years were not abnormally
12 low, I also calculated the average net salvage cost incurred over the last 10 years, which is
13 \$452,077. Mr. Spanos’s proposal to charge ratepayers \$2,025,345 per year for net salvage
14 in Account 376, Mains is absurdly high in any reasonable comparison to the actual net
15 salvage costs.

16 **Q. WHAT IS EXHIBIT WWD-9?**

17 A. Exhibit WWD-9 is the discovery response to PA-2-149 in which BHN admits “the Annual
18 Accrual Amount for Net Salvage” in Mr. Spanos’s proposed depreciation accruals is
19 \$2,025,345 for Account 376, Mains.

20 **Q. WHAT DO YOU RECOMMEND ON THIS ISSUE?**

21 A. The Commission should reject Mr. Spanos's proposal to charge current ratepayers for
22 future inflation. Charging current ratepayers for future inflation is a direct violation of
23 proper depreciation. NARUC *Public Utility Depreciation Practices* clearly states that

1 depreciation should **not** be influenced by “what costs may be at some future date.”

2 Charging current ratepayers for future inflation is also an abuse of monopoly power.

3 **Q. WHAT WERE THE RESULTS OF YOUR SIMILAR ANALYSIS OF ACCOUNT**
4 **380, SERVICES?**

5 A. The results of my similar analysis of Account 380, Services are included in Figure 4 below.

6 **Q. IS IT REASONABLE TO EXPECT THE COST OF REMOVAL ACTIVITIES IN**
7 **RECENT YEARS ARE UNUSUALLY LOW AND THEREFORE NOT**
8 **REPRESENTATIVE?**

9 No. BHN had several replacement programs in effect in recent years, including the
10 Bare Steel Program, the Obsolete Pipe Program, the Top of Ground Program and the
11 Shallow Main Program. The response to PA-153, which discussed these replacement
12 programs, is attached as Exhibit WWD-10.

13 In addition, the At Risk Meter Replacement Program caused large Cost of Removal
14 amounts to be recorded in the Services account in recent years. In response to discovery
15 BHN stated the following regarding Cost of Removal in the Services account in 2022:

16 (a) A bulk of the dollars (\$2,924,427.18) relate to the unitization of 10 work
17 orders relating to At Risk Meter Replacement (“ARMR”) projects that were
18 placed into service in 2021. The remainder belonged to smaller replacement
19 projects.³³

³³ PA-218, attached as Exhibit WWD-11. In addition, the meter replacement programs, including the At Risk Meter Replacement Program caused unusually large Cost of Removals to be recorded in recent years in other accounts, including in Account 381-Meters, Account 382.01-Meter Installations, Account 383.01-House Regulators, and Account 384.01 House Regulator Installations. See PA-332, PA-333, PA-334, and PA-335. Which are also included in Exhibit WWD-11.

1 The BHN response to PA-220 also indicates large cost of removal amounts of Service
2 recorded in the years 2022 and 2023 are related to the At Risk Meter Replacement program.

3 It also states the following:

4 The service line typically needs to be relocated when the meter is moved up
5 to the structure. To reduce future potential leaks, a solid or continuous
6 service line is installed from the main to the new meter which is more
7 efficient than fusing pieces of pipe onto existing older service lines.³⁴

8 To be clear, I did not exclude from my calculations any of the Cost of Removal/Net
9 Salvage/Gross Salvage amounts that resulted from the many replacement programs BHN
10 had in effect in recent years. But it is not reasonable to expect the Cost of Removal activities
11 in recent years are unusually low and therefore not representative.

12 **IX. REASONABLE NET SALVAGE**

13 **Q. HAVE YOU PREPARED MORE REASONABLE NET SALVAGES?**

14 A. Yes. For the accounts at issue, Figure 4 below shows the average annual net salvage cost
15 dollar amounts actually incurred by BHN compared to the annual depreciation expense
16 (depreciation accrual) for net salvage under Mr. Spanos's proposed depreciation rates. This
17 is the annual depreciation expense that ratepayers would pay for net salvage.

18 The PA columns also show the annual depreciation expenses (accrual) for net
19 salvage produced by the net salvage depreciation rates I recommend. This is the annual
20 depreciation expense that ratepayers would pay for net salvage.

³⁴ From BHN response to part (a) of PA-220. PA-220 is attached as Exhibit WWD-12. To be clear, I have included all recorded Cost of Removals in by analysis, include those which resulted from the At Risk Meter Replacement program. It is useful to understand what is behind the data.

1

Figure 4: Net Salvage Incurred

Net Salvage Incurred, Compared to BHN and PA Proposed Net Salvage Depreciation Expense.						
		INCURRED NET SALVAGE COST (Negative Net Salvage) Annual Average 2020-2024 ³⁷	COMPANY PROPOSED		PA PROPOSED	
			Net Salvage Annual Accrual³⁵	Accrual Divided by Incurred (Times)	Net Salvage Annual Accrual³⁶	Accrual Divided by Incurred
376	MAINS	\$409,887	\$2,025,345	4.9	\$1,312,315	3.2
380	SERVICES	\$1,760,022	\$4,370,909	2.5	\$2,857,543	1.6
TOTAL		\$2,169,909	\$6,396,254		\$4,169,858	

2

It is appropriate to charge ratepayers for net salvage costs.³⁸ It is not appropriate to

3

overcharge ratepayers for net salvage costs.

4

Q. IS ANALYZING THE PAST INCURRED NET SALVAGE COSTS (SALVAGE

5

LESS COST OF REMOVAL) SUPPORTED BY NARUC *PUBLIC UTILITY*

6

DEPRECIATION PRACTICES?

7

A. Yes.

³⁵ Source pages 137 and 140 of Direct Exhibit JJS-2. On investment as of September 30, 2024.

³⁶ On investment as of September 30, 2024.

³⁷ From PA-149, Exhibit WWD-9.

³⁸ As a further check of the reasonableness of my proposal, for all depreciable accounts in total, the annual accruals (depreciation expense) just for net salvage in my proposed depreciation rates are over \$1.4 million in excess of the total Average Annual net salvage incurred for all depreciable accounts (sum of all the Five – Year Average Net Salvage Amounts on pages 135 through 154 of Mr. Spanos’s Direct Exhibit JJS-2).

1 A. The respected *Public Utility Depreciation Practices* published by the National Association
2 of Regulatory Utility Commissioners (NARUC), in the chapter titled “Estimating Salvage
3 and Cost of Removal,” states:

4 Normally, the process should start by analyzing past salvage and cost of
5 removal data and by using the results of this analysis to project future gross
6 salvage and cost of removal.

7 The NARUC *Public Utilities Depreciation Practices* also states the following:

8 Knowing what happened yesterday may help one to better understand what
9 is happening today and what may happen tomorrow.³⁹

10 **Q. WILL YOUR PROPOSED NET SALVAGE RATES CREATE A DEFICIENCY**
11 **WHICH WOULD HAVE TO BE RECOVERED FROM FUTURE RATEPAYERS?**

12 A. Absolutely not. As shown on the prior Figure 4, under my recommendation an annual
13 amount of \$4,370,909 will be collected from the current ratepayers for net salvage in these
14 accounts. However, the annual net salvage costs BHN incurs for net salvage averages
15 \$2,169,909 in these accounts. My proposal would collect from current ratepayers
16 approximately \$2 million per year more for net salvage than the net salvage costs. My
17 proposal does not create a deficiency. This additional collection of approximately \$2
18 million per year from current ratepayers would be accumulated and available to provide
19 funds for future net salvage costs when facilities retire in the future.

20 Under my recommendation, current ratepayers will pay a depreciation expense
21 sufficient to grow the amount in the depreciation reserve to provide funds for future net
22 salvage costs when facilities retire in the future. My proposal does not create a deficiency
23 which would have to be recovered from future ratepayers.

³⁹The first quotation is from pages 157-158, and the second quotation is from page 111, *Public Utility Depreciation Practices* published by the National Association of Regulatory Utility Commissioners (NARUC) August 1996. These page's are included in Exhibit WWD-4.

***1. IN THE FUTURE THE DEPRECIATION ACCRUALS WILL
AUTOMATICALLY ADJUST AS THE PLANT IN SERVICE CHANGES***

**Q. USING ACCOUNT 380, SERVICES AS THE EXAMPLE, IN FIGURE 4 YOU
SHOW \$2,857,543 AS THE NET SALVAGE ANNUAL ACCRUAL UNDER YOUR
RECOMMENDATION (BASED ON SEPTEMBER 30, 2024, INVESTMENTS).
WILL THIS NET SALVAGE ACCRUAL STAY \$2,857,543 IN FUTURE YEARS?**

A. No. This net salvage accrual is not a fixed dollar amount.

What is adopted is a depreciation rate, not a fixed dollar amount. As is the existing practice, in the future BHN will calculate the depreciation expense by multiplying the depreciation rate approved in this case times the then-current Plant in Service amount on the BHN books for that account. As a result, the amount of depreciation expense changes over time in proportion to the change in the Plant in Service, without any change in the approved depreciation rate.

The \$2,857,543 net salvage accrual is based on investments as of September 30, 2024. For example, if some time in the future the Plant in Service in the BHN Account 380 is 30% higher than it was on September 30, 2024, the annual accrual (depreciation expense) for net salvage will be 30% higher than \$2,857,543, which would be a \$3,714,806 annual accrual for net salvage,⁴⁰ without any change in the approved depreciation rate.

X. LIFE

**Q. WHAT IMPACT DOES LIFE SELECTED FOR USE IN THE DEPRECIATION
RATE CALCULATION HAVE?**

⁴⁰ 1.3 * \$2,857,543 = \$3,714,806.

1 A. The shorter the life selected, the higher the calculated depreciation rate and depreciation
2 expense will be, everything else being the same.

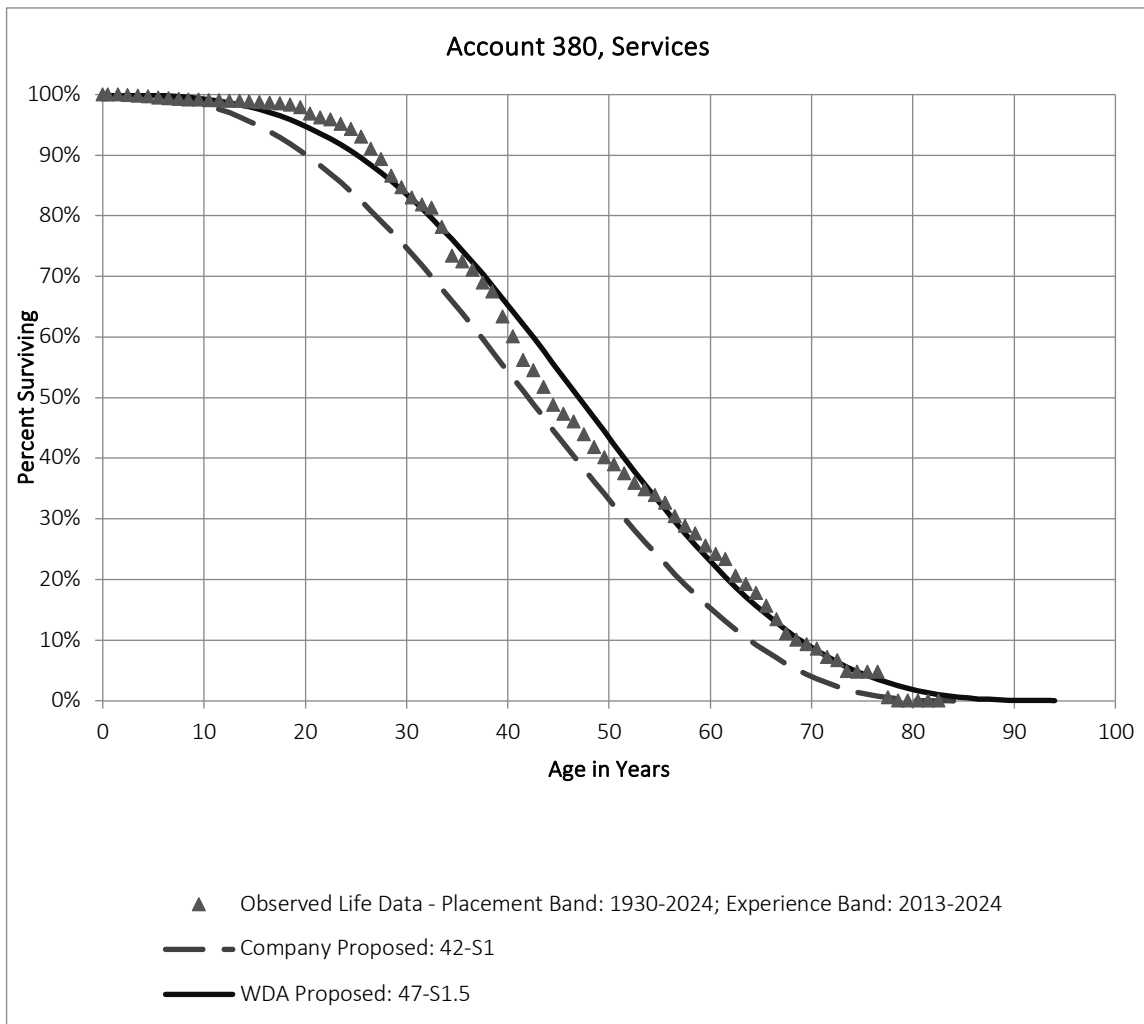
3 ***1. ACCOUNT 380, SERVICES LIFE***

4 **Q. FOR ACCOUNT 380, SERVICES, PLEASE COMPARE THE SURVIVOR CURVE**
5 **YOU RECOMMEND AND THE SURVIVOR CURVE MR. SPANOS**
6 **RECOMMENDS TO THE ACTUAL BHN OBSERVED LIFE DATA.**

7 A. This comparison is shown below:

1

Figure 5: Account 380, Services Survivor Curves



2

It is obvious from a visual inspection of Figure 5 that the Survivor Curve I

3

recommended is more consistent with the observed BHN actual life data.

4

In addition, I have also performed the standard mathematical analysis which proves

5

that the Life-Iowa Curve I recommend is a better mathematical fit to the actual data than is

6

Mr. Spanos's proposal.⁴¹

⁴¹ Page 125 of the NARUC *Public Utility Depreciation Practices* states the following: "The curves with the least sum of squared deviations are considered the best fits. The intent is not to select the one *best* curve but to consider the indicated patterns." This page is included in Exhibit WWD-4.

Figure 6: Account 380, Services SSD Comparison

Sum of Square Difference ("SSD") Comparison
Account 380, Services

	Company Proposed: 42-S1	WDA Proposed: 47-S1.5
Observed Life Data - Placement Band: 1930-2024; Experience Band: 2013-2024	3,780	499

Note: A lower number indicates a better fit to the actual data (Observed Life Data)

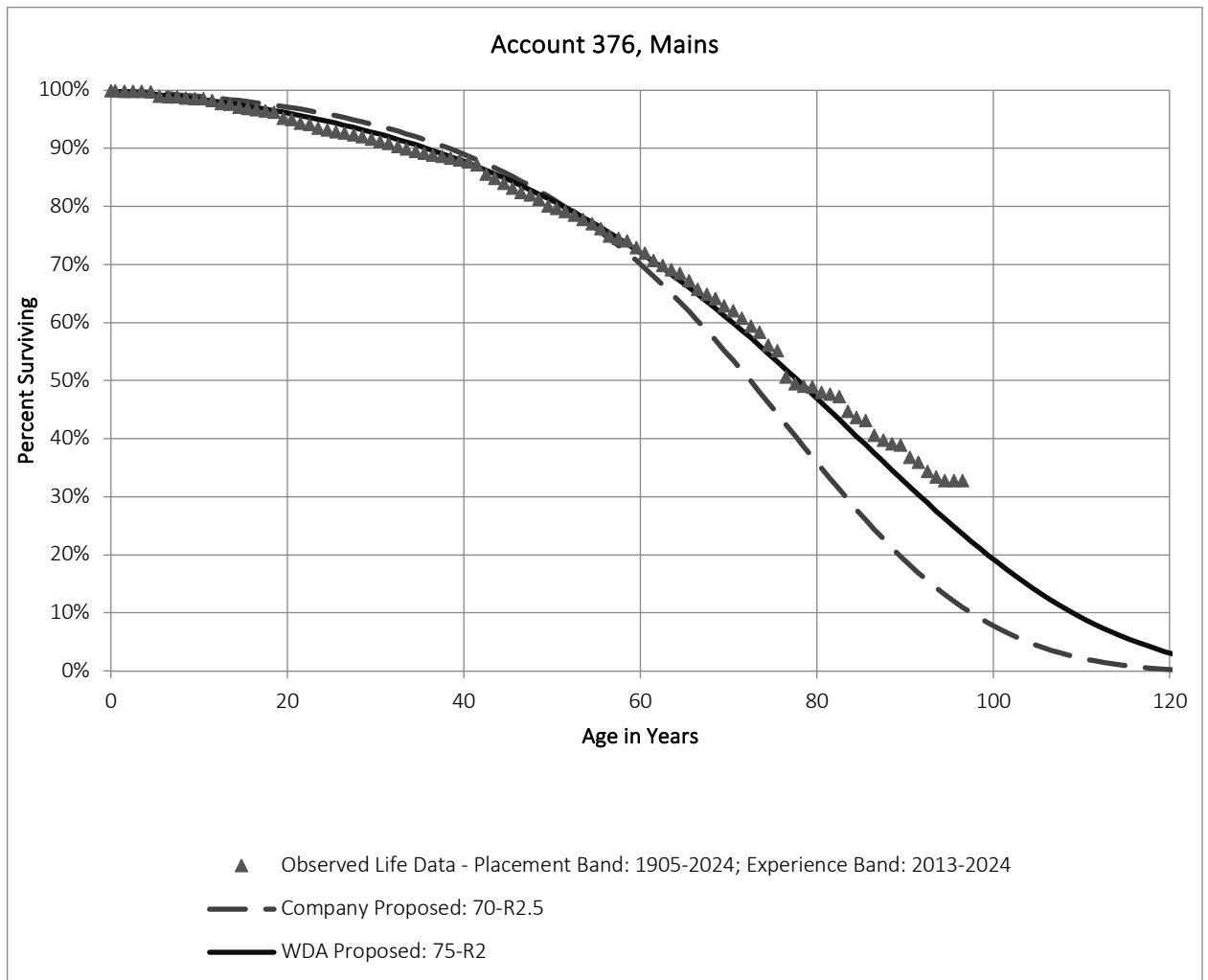
I recommend a 47-Year ASL with a S1.5 Iowa Curve for Account 380, Services. Information pertaining to this account and the other accounts for which my life recommendation differs from Mr. Spanos's recommendation is shown on Exhibit WWD-13.

2. ACCOUNT 376, MAINS

Q. FOR ACCOUNT 376, MAINS, PLEASE COMPARE THE SURVIVOR CURVE YOU RECOMMEND AND THE SURVIVOR CURVE MR. SPANOS RECOMMENDS TO THE ACTUAL BHN OBSERVED LIFE DATA.

A. This comparison is shown below:

Figure 7: Account 376, Mains Survivor Curves



It is obvious from a visual inspection of Figure 7 that the Survivor Curve I recommended is more consistent with the observed BHN actual life data.

In addition, I have also performed the standard mathematical analysis which proves that the Life/Iowa Curve I recommended is a better mathematical fit to the actual data than is Mr. Spanos's proposal.⁴²

⁴² Page 125 of the NARUC *Public Utility Depreciation Practices* states the following: "The curves with the least sum of squared deviations are considered the best fits. The intent is not to select the one *best* curve but to consider the indicated patterns." This page is included in Exhibit WWD-4.

Figure 8: Account 376, Mains SSD Comparison

Sum of Square Difference ("SSD") Comparison Account 376, Mains		
	Company Proposed: 70-R2.5	WDA Proposed: 75-R2
Observed Life Data - Placement Band: 1905-2024; Experience Band: 2013-2024	6,786	527
Note: A lower number indicates a better fit to the actual data (Observed Life Data)		

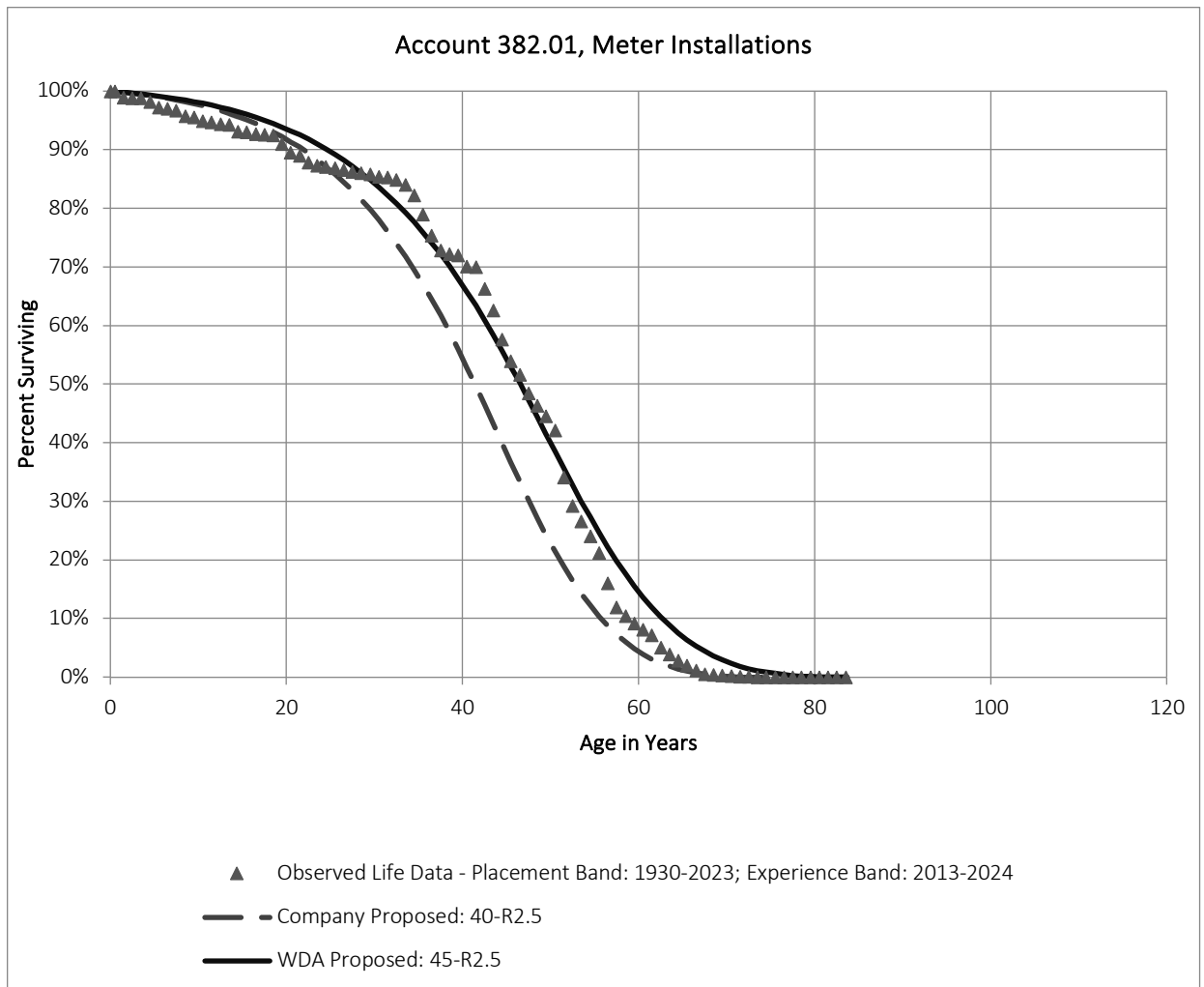
I recommend a 75-R2 for Account 376, Mains. Information pertaining to this account and the other accounts for which my life recommendation differs from Mr. Spanos's recommendations is shown on Exhibit WWD-13.

3. ACCOUNT 382.01, METER INSTALLATIONS

Q. FOR ACCOUNT 382.01, METER INSTALLATIONS, PLEASE COMPARE THE SURVIVOR CURVE YOU RECOMMEND AND THE SURVIVOR CURVE MR. SPANOS RECOMMENDS TO THE ACTUAL BHN OBSERVED LIFE DATA.

A. This comparison is shown below:

Figure 9: Account 382.01, Meter Installations Survivor Curves



It is obvious from a visual inspection of Figure 9 that the Survivor Curve I recommended is more consistent with the observed BHN actual life data.

In addition, I have also performed the standard mathematical analysis which proves that the Life/Iowa Curve I recommend is a better mathematical fit to the actual data than is Mr. Spanos's proposal.⁴³

⁴³ Page 125 of the NARUC *Public Utility Depreciation Practices* states the following: "The curves with the least sum of squared deviations are considered the best fits. The intent is not to select the one *best* curve but to consider the indicated patterns." This page is included in Exhibit WWD-4.

Figure 10: Account 382.01, Meter Installations SSD Comparison

Sum of Square Difference ("SSD") Comparison Account 382.01, Meter Installations		
	Company Proposed: 40-R2.5	WDA Proposed: 45-R2.5
Observed Life Data - Placement Band: 1930-2023; Experience Band: 2013-2024	6,485	876
Note: A lower number indicates a better fit to the actual data (Observed Life Data)		

I recommend a 45-R2.5 for. Account 382.01-Meter Installations.⁴⁴

4. THERE ARE ISSUES WITH SOME OF THE LIFE DATA MR. SPANOS INCLUDED IN HIS STUDY

Q. ON PAGES 86–89 OF DIRECT EXHIBIT JJS-2, MR. SPANOS SHOWS WHAT HE SAYS IS THE 1998–2024 EXPERIENCE ORIGINAL CURVE. WHAT EXPERIENCE YEARS DID HE ACTUALLY INCLUDE?

A. Mr. Spanos actually included the “experience” years of the former Source Gas for the years 2013–2024, but the “experience” years of the former Aquila for the years 1998-2024. The “experience” year is the year in which a transaction, such as the retirement, occurred.⁴⁵ BHN is a combination of Black Hills/Nebraska Gas Utility Company, LLC (formerly Aquila) and Black Hills Gas Distribution, LLC (formerly Source Gas). BHN does not have the transactional data for the years 1998–2012 for the former Source Gas.⁴⁶

For the former Source Gas, Mr. Spanos’s life analyses include the data on retirements which occurred in the years 2013–2024. However, for the former Aquila, Mr.

⁴⁴ Information pertaining to this account and the other accounts for which my life recommendation differs from Mr. Spanos’s recommendation is shown on Exhibit WWD-13.

⁴⁵ In addition to retirements, other transactions, such as transfers, could also be included in the data used in the experience year. The year the investment was installed is the Installation Year.

⁴⁶ PA-313 and 314, attached as Exhibit WWD-14.

Spanos's life analyses include the data on retirements which occurred in the years 1998-2024. His life analysis for an account is not consistent and not representative of the current BH Nebraska Gas.

Q. IS THERE ANOTHER PROBLEM WITH THE OLDER FORMER AQUILA EXPERIENCE DATA?

A. Yes. Regarding the former Aquila data, in response to discovery, BHN admitted the following:

Some older services were booked in the mains account due to accounting practices of the predecessor companies. (Emphasis added.)

and

(g) The predecessor company that had booked some "older services" in the mains account was Aquila.⁴⁷

Mr. Spanos's analysis of the data in the Services account omitted data for "[S]ome older services." Omitting the data for some of the older services resulted in understating the true average service life of services.

The former Aquila failing to book some older services in the Services account had the greatest impact on the 1998–2012 experience years in Mr. Spanos's analysis, since these years in Mr. Spanos's analysis includes only former Aquila experience data.

Q. IS THERE AN ADDITIONAL PROBLEM WITH THE RETIRMENT DATA PRIOR TO 2013?

⁴⁷ BHN response to PA-19-315, especially "There are no changes to the responses in part (a) through (e) in this proceeding" and parts (f) and (g). to PA-19-315 is included in WWD-15.

1 A. Yes. The former Aquila sold the Elkhorn system to the Metropolitan Utilities District of
2 Omaha. Retirements caused by the Elkhorn system sale were recorded in the former Aquila
3 books primarily in 2010. However, in response to discovery, BHN admitted the following:

4 (c) The retirements related to the sale of the Elkhorn system listed in the
5 attachment PA 1-75-Summary of Outlier Retirements were excluded in the
6 service life analysis in this case. **However, they were erroneously not**
7 **presented in the original service life file presented in the workpapers.**
8 The attached file sets forth the proper service life file in the case that sets
9 forth the code 2s that are related to the Elkhorn system sale.⁴⁸ (Emphasis
10 added.)

11 Since my life analysis is based on the 2013–2024 experience years, these problems in the
12 retirements record in 2010 do significantly impact my analysis.

13 **Q. WHAT DATA DID YOU USE?**

14 A. As I did in developing the depreciation rates which are currently in effect for BHN, I have
15 treated all parts of BHN the same. I have included the “experience years” for which we
16 have data for all the BHN investments. (The years in which we have experience data for
17 both the former Aquila and the former Source Gas.) In this case, the years 2013–2024 are
18 the years for which we have experience data for both the former Aquila and the former
19 Source Gas.

20 **5. METER LIFE**

21 **Q. WHAT DOES MR. SPANOS SAY IS ONE OF THE MAJOR FACTORS THAT**
22 **CAUSED HIS PROPOSED INCREASES IN DEPRECIATION RATES?**

23 A. On page 3 of his testimony he specifies “one of the major factors” is as follows:

24 Another factor for the increase relates to the various types of meters in
25 Account 381.00. There has been considerable amounts of replacements and

⁴⁸ BHN response to PA-19-318, attached as Exhibit WWD-16

1 capital additions that are causing an increase in annual depreciation as well
2 as a change in life parameters.

3 **Q. WHAT CHANGE IN LIFE DOES MR. SPANOS'S TESTIMONY RECOMMEND**
4 **FOR THE LARGEST METER ACCOUNT?**

5 A. For the largest meter account—"Small Volume and Other"—the currently approved
6 Average Service Life is 26 years. In his direct testimony, Mr. Spanos proposed drastically
7 reducing that to 21 years.⁴⁹

8 In support of that proposed drastic shortening of life, Mr. Spanos presents a graph
9 and supporting numbers on pages 90–92 of Direct Exhibit JJS-2.

10 **Q. IN THAT GRAPH AND NUMBERS, DID MR. SPANOS INCLUDE THE DATA**
11 **FOR ALL THE INVESTMENT IN THAT ACCOUNT?**

12 A. No. In the depreciation study, the investment in that account is \$24,605,389.⁵⁰ The data
13 Mr. Spanos used to calculate the life graph and numbers on pages 90–92 of his Direct
14 Exhibit JJS-2 included only the data for \$15,271,590 of that investment.⁵¹ Mr. Spanos's
15 life analysis omitted the life data for almost 40% of the investment.⁵²

16 **Q. SHOULD THE LIFE ANALYSIS INCLUDE ALL THE INVESTMENT IN THE**
17 **ACCOUNT?**

⁴⁹ Direct Exhibit JJS-2, page 51.

⁵⁰ Direct Exhibit JJS-2, page 51.

⁵¹ The file provided by BHN which supports the life analyses is "JJS WP-2 - BH Nebraska Gas Service Life." That file includes an ending balance of \$15,271,590.11 in this account (Acct. 38197).

⁵² \$24,605,389 - \$15,271,590 = \$9,333,7998 omitted. \$9,333,7998 omitted / \$24,605,389 = 38% omitted.

1 A. Yes. For comparison, in the other meter account, “ERT, AMR, AND AMI,” the investment
2 shown in the depreciation study is 15,039,183,⁵³ and the investment included in the life
3 data file is \$15,271,509.⁵⁴

4 **Q. WHAT DO YOU RECOMMEND FOR THE METER ACCOUNT, “SMALL**
5 **VOLUME AND OTHER”?**

6 It is not possible to make a reasonable analysis of the life characteristics of an
7 account based upon data which excludes the life data for almost 40% of the investment in
8 the account. Mr. Spanos’s proposed drastic change from the approved life is not supported
9 by valid data.

10 I recommend the currently approved 26 R1.5 continue to be used for the “Small
11 Volume and Other” account.

12 **Q. IS THERE A RECENT DEVELOPMENT REGARDING THE “SMALL VOLUME**
13 **AND OTHER” ACCOUNT?**

14 A. Yes. On August 4, 2025, BHN indicated that Mr. Spanos will be changing his life
15 recommendation for this account, and they will make this change in the Company filing
16 “at a future point in this proceeding”.⁵⁵

17 I will fully evaluate this new BHN life proposal, and make appropriate revisions, if
18 any, at a future point in this proceeding.

⁵³ Direct Exhibit JJS-2, page 51.

⁵⁴ The ending balance for the “ERT, AMR, AND AMI” account (Acct. 38197) “JJS WP-2 - BH Nebraska Gas Service Life.”

⁵⁵BHE response to PA-2-338, attached as Exhibit WWD-2.

1 **Q. WHAT EVENT RESULTED IN THE RESPONSE IN WHICH BHN STATED MR.**
2 **SPANOS IS CHANGING HIS LIFE RECOMMENDATION?**

3 A. This change was provided in response to request PA-23-338. In that request the PA pointed
4 out the discrepancy I had discovered between the \$24,605,389 balance in some of Mr.
5 Spanos's documents and the \$15,271,590 balance in the same account in the life data used
6 in Mr. Spanos's life analysis.

7 In response, BHN admitted this discrepancy exists in Mr. Spanos's data. The
8 response states the following:

9 The data referenced in part (a) does not support the original life table for
10 Account 381.00 Meters – Small Volume and Other shown on pages 91–92
11 of Direct Exhibit JJS-2.⁵⁶

12 Over \$9 million of investment was omitted from Mr. Spanos's analysis which
13 produced his 21-year life. This Account contains \$24.6 million investment, but the life data
14 for only \$15.3 million investment was included in Mr. Spanos's analysis which produced
15 a 21-year life. The \$9.3 million which was omitted from Mr. Spanos's life analysis has a
16 longer average service life than the \$15.3 million investment that was included in Mr.
17 Spanos's life analysis.⁵⁷ In response to the PA discovery pertaining to this discrepancy
18 which I had found, Mr. Spanos changed his recommended life from the 21-year S0.5, filed
19 in Mr. Spanos's direct testimony, to 24-S0.5.⁵⁸ That change, because of the discrepancy I
20 found, is an annual increase of \$434,081 over the depreciation expense Mr. Spanos
21 originally filed. In other words, \$434,081 of the depreciation expense increase Mr. Spanos

⁵⁶ BHN response to PA-23-338. This response is included in Exhibit WWD-2.

⁵⁷ When the \$15.3 million was analyzed, Mr. Spanos recommended a 21-year average service life. When all the data was apparently analyzed, Mr. Spanos recommended a 24-year average service life. This proves the \$9.3 million omitted from the original analysis has a longer average service life than does the \$15.3 million. See PA-23-338. This response is included in Exhibit WWD-2.

⁵⁸ PA-23-338. This response is included in Exhibit WWD-2.

1 filed is because millions of dollars of longer-life investments were omitted from Mr.
2 Spanos's life analysis in this account.⁵⁹

3 **XI. THE OKLAHOMA COMMISSION COMPLETELY "REJECTED" MR.**
4 **SPANOS'S DEPRECIATION STUDY**

5 **Q. ABOVE, YOU HAVE DEMONSTRATED THAT THE LIFE DATA MR. SPANOS**
6 **USED OMITTED THE LIFE DATA FOR ALMOST 40% OF THE INVESTMENT**
7 **IN THE "SMALL VOLUME AND OTHER" ACCOUNT. HAS ANOTHER**
8 **COMMISSION COMPLETELY REJECTED MR. SPANOS'S DEPRECIATION**
9 **STUDY?**

10 **A.** Yes. The Corporation Commission of Oklahoma "rejected" Mr. Spanos's entire
11 depreciation study, finding Mr. Spanos had been "altering the data" and "did not disclose
12 these unusual changes." The Order in that case further states: "Additionally, there were
13 irregularities in Mr. Spanos's cited rates approved in prior proceedings as well as the
14 industry range of lives used."

15 The Order included the following:

16 105. THE COMMISSION FURTHER FINDS that it is clear that PSO's witness
17 Mr. Spanos made changes to the historic data in Account 367 and did not
18 disclose these unusual changes. It is also clear that Mr. Spanos did not disclose
19 that he had altered the data until the Attorney General had discovered the
20 alteration and asked about it in discovery. The record shows that the difference
21 between a 65 year average service life, which is what Mr. Spanos
22 recommended in the prior case before altering the data, and the 45 year average
23 service life Mr. Spanos recommends in this case after altering the data, is in
24 excess of \$4 million per year. Additionally, there were irregularities in Mr.
25 Spanos's cited rates approved in prior proceedings as well as the industry range
26 of lives used.

⁵⁹ I assume this was an inadvertent omission. I am not claiming nor implying that Mr. Spanos intentionally omitted this data.

1 106. THE COMMISSION FURTHER FINDS that the depreciation study
2 proposed by PSO is rejected. Furthermore, the Commission adopts the
3 Attorney General's life and Iowa curve combination recommendations.⁶⁰

4 ***1. INDUSTRY RANGE***

5 **Q. THE OKLAHOMA COMMISSION SAID “ADDITIONALLY, THERE WERE**
6 **IRREGULARITIES IN MR. SPANOS'S CITED RATES APPROVED IN PRIOR**
7 **PROCEEDINGS AS WELL AS THE INDUSTRY RANGE OF LIVES USED.” IS**
8 **MR. SPANOS’S TESTIMONY IN THIS CURRENT BHN CASE ALSO**
9 **MISLEADING PERTAINING TO THE “INDUSTRY RANGE”?**

10 **A.** Yes. In his depreciation study Mr. Spanos states:

11 The estimated survivor curves for most of the mass property accounts are
12 based on statistical analyses of plant accounting data and the range of lives
13 and type curves used for other companies in the gas industry.⁶¹

14 **Q. WHAT IS THE “RANGE” “FOR OTHER COMPANIES IN THE GAS**
15 **INDUSTRY” MR. SPANOS USED?**

16 **A.** The “range of lives and type curves used for other companies in the gas industry” are not
17 the parameters that were approved by the commissions which had jurisdiction.⁶² The
18 parameters in the range data Mr. Spanos relied upon were the parameters Mr. Spanos, or
19 other Gannett Fleming witnesses, had proposed in those proceedings, regardless of what
20 the commissions adopted.

21 When asked about the data Mr. Spanos provided in support of his testimony about
22 the industry ranges, Mr. Spanos stated the following:

⁶⁰ Citations omitted. Paragraphs 105 and 106, of the Report and Order of the Administrative Law Judge, which paragraphs were adopted by the Final Order No. 672864 of the Corporation Commission of Oklahoma dated January 31, 2018, in Cause No. PUD 201700151.

⁶¹ Direct Exhibit JJS-2, page 35.

⁶² Unless the commission approved a parameter the same as proposed by Gannett Fleming.

1 **“All parameters listed** in the attachment represent the **proposed**
2 parameters and in most cases are the accepted parameters.” (Emphasis
3 added).⁶³

4 **Q. FOR THOSE CASES IN WHICH THE COMMISSION HAVING JURISDICTION**
5 **ADOPTED A PARAMETER WHICH IS DIFFERENT FROM WHAT GANNETT**
6 **FLEMING HAD RECOMMENDED, WHAT DOES MR. SPANOS INCLUDE IN**
7 **HIS DATA?**

8 A. **“All parameters listed”** are showing the parameter Gannett Fleming “proposed.” Even in
9 those cases in which the commission order in a contested case (not a settled case) adopted
10 a different parameter from what Gannett Fleming had proposed, Mr. Spanos still shows the
11 parameter Gannett Fleming had “proposed,” not the parameter the commission adopted.

12 Mr. Spanos's position in this BHN case is that this Commission should **adopt** the
13 lives or net salvages he proposes, because they are what he, or other members of Gannett
14 Fleming, have **proposed** in other proceedings. That is circular logic.

15 **2. MR. SPANOS’ S “AVERAGE AGE OF” NUMBERS ARE NOT**
16 **WHAT YOU THINK THEY ARE**

17 **Q. MR. SPANOS CALCULATES THE “AVERAGE AGE OF” RETIREMENTS OR**
18 **INVESTMENTS.⁶⁴ HOW DOES MR. SPANOS CALCULATE HIS “AVERAGE**
19 **AGE OF” NUMBERS?**

20 A. In his “average age” calculations, Mr. Spanos gives a higher weighting to the newer
21 facilities than he gives to the older facilities. To demonstrate this, in discovery, the PA
22 asked about the average age of retirement of (1) an investment that retired at the age of 76
23 years and (2) an investment that retired at the age of one year. You might calculate this

⁶³ PA-79(c). See Exhibit WWD-17 which is PA-79.

⁶⁴ For example, in response to PA-2-152, which is attached as Exhibit WWD-7, Mr. Spanos provided what he said was the “average age of retirements.”

1 average age of retirement as 38.5 years as follows: $(76+1)/2 = 38.5$. However, Mr. Spanos
2 calculates the average age of retirement of a 76-year age of retirement and a one-year age
3 of retirement, as less than four years average age of retirement.⁶⁵

4 Mr. Spanos weighs the retirement age by the original cost. Because of inflation, a
5 newer facility has a higher dollar amount of recorded original cost than the recorded
6 original cost of a similar older facility. As result, Mr. Spanos's weighted average gives the
7 one-year age of retirement a much higher weight than it gives the 76-year age of retirement.

8 Be aware that Mr. Spanos's "average age" numbers are weighted by original cost
9 and may not be reflective of the true average age.

10 **3. MR. SPANOS USES THE STRAW MAN ARGUMENT**

11 **Q. HAS MR. SPANOS ALREADY USED THE STRAW MAN ARGUMENT IN THIS**
12 **PROCEEDING?**

13 **A.** Yes. Mr. Spanos has already used the straw man argument in this proceeding. PA-151(f)
14 requested the following:

15 Is it Mr. Spanos's position that net salvage costs calculated in this case
16 should include future inflation out to the future time when the investment is
17 expected to retire? Please begin the response with "yes" or "no." If the
18 response is "no," how far out should future inflation be included in the
19 determination of net salvage? Explain the response.⁶⁶

20 The first sentence of Mr. Spanos's response is "(f) Please refer to part (c) of this response."
21 His response to part (c) began with "Yes." So the statement in the PA-151(f) request was
22 correct.

⁶⁵ PA-2-157, attached as Exhibit WWD-18.

⁶⁶ PA-151 is attached as Exhibit WWD-3.

1 However, in the second sentence of his response, Mr. Spanos creates an imaginary
2 position, allegedly from the PA, which imaginary position he could easily refute. The
3 second sentence of Mr. Spanos's response is as follows:

4 However, the question **implies** additional future inflation is added and that
5 is not accurate. (Emphasis added.)

6 The PA request was correct. But Mr. Spanos created a fictional position that the PA
7 had not taken, then said there was something wrong with that fictional position which Mr.
8 Spanos pretended was from the PA, but which actually came from Mr. Spanos's
9 imagination.

10 What Mr. Spanos does is called the "straw man" argument.

11 **Q. WHAT IS THE "STRAW MAN" ARGUMENT?**

12 A. Webster defines "straw man" as follows:

13 A weak or imaginary opposition (such as an argument or adversary) set up
14 only to be easily confuted"⁶⁷

15 Please be warned that when Mr. Spanos says the other party has "implied" a
16 position, or uses any similar wording, or Mr. Spanos cannot site to a specified location in
17 the other witness's testimony where the other witness has clearly stated that alleged
18 position, Mr. Spanos is creating an imaginary position, allegedly from another party, which
19 imaginary position he has created so that he can easily refute it.

20 **Q. DO YOUR RECOMMENDATIONS IN THIS CASE FOLLOW THE**
21 **REQUIREMENTS OF THE *UNIFORM SYSTEM OF ACCOUNTS*⁶⁸ AND FOLLOW**

⁶⁷ "Straw man." *Merriam-Webster.com Dictionary*, Merriam-Webster, <https://www.merriam-webster.com/dictionary/straw%20man>. Accessed 30 Jun. 2025.

⁶⁸ 18 CFR part 201.

1 **THE PRACTICES PRESENTED IN THE NARUC PUBLIC UTILITY**
2 **DEPRECIATION PRACTICES?**

3 A. Yes. My recommendations follow the requirements of the *Uniform System of Accounts*⁶⁹
4 and follow the practices presented in the *NARUC Public Utility Depreciation Practices*. If
5 Mr. Spanos claims my position violates those requirements, he is discussing a position he
6 pretends I have taken, not a position I have actually taken.⁷⁰

7 By comparison, I have **proven through Mr. Spanos's discovery responses** that
8 Mr. Spanos proposes charging current ratepayers for **future** inflation, as you can see from
9 Exhibits WWD-3 and WWD-6. His position violates the *NARUC Public Utility*

⁶⁹ 18 CFR part 201.

⁷⁰ To be clear: (1) I am not proposing to "expense" net salvage. I follow the USoA requirements, which include crediting the depreciation expense amounts into Account 108.

(2) I am not proposing to set the depreciation expense for net salvage **equal** to the average net salvage amount incurred in recent years. To allow for growth, and to increase the amount in the depreciation reserve, I recommend the net salvage depreciation expense be a reasonable amount above the average net salvage incurred in the recent years. As shown on Figure 4 earlier in this testimony, for the accounts at issue, the net salvage costs incurred average \$2,169,909 per year, but I recommend an annual accrual for net salvage of \$4,169,858. I am growing the amount in the depreciation reserve, therefore any claim that I am creating a "deficiency" that future ratepayers would have to cover, is false.

(3) I am not recommending that net salvage be excluded from the depreciation rate calculation. I include net salvage in my depreciation rate calculations.

(4) I am following the treatment of net salvage as specified in the Uniform System of Accounts (USoA).

(5) As is true of most net salvage method, the net salvage method I present cannot be used when there is no historic net salvage data from decades from actual past retirements. In any hypothetical example which Mr. Spanos creates in which there is not decades of historic net salvage data from actual past retirement, I would not attempt to apply this method, because the needed historical data does not exist.

(6) I am not retroactively recovering net salvage. I do exactly what the *NARUC Public Utilities Depreciation Practices* on page 111 says I should do, as follows:

Knowing what happened yesterday may help one to better understand what is happening today and what may happen tomorrow. This is also true with depreciation studies. Historical life analysis is the study of past occurrences that may be used to indicate the future survivor characteristics of property. (Page 111 *Depreciation Practices* Exhibit WWD-4.)

(7) The historic net salvage data I used includes net salvage data from retirements which occurred at various ages. The historic net salvage data I used does not include just net salvage data from retirements which occurred at a young age or just from retirement from one vintage. This principle is demonstrated on Exhibit WWD-19.

1 *Depreciation Practices* which clearly states that depreciation should **not** be influenced by
2 “what costs may be at some future date.”⁷¹

3 **XII. CONCLUSION**

4 **Q. WHAT DEPRECIATION RATES DO YOU RECOMMEND FOR BH NEBRASKA**
5 **GAS?**

6 For the reasons discussed in this testimony, I recommend the depreciation rates
7 shown in the Public Advocate columns of Exhibit WWD-5. The annual depreciation
8 expenses resulting from the Public Advocate recommended depreciation rates, compared
9 to the current depreciation rates, and the Black Hills proposed depreciation rates, are
10 summarized below:⁷²

⁷¹ NARUC *Public Utility Depreciation Practices*, August 1996, page 22. This page from the *Depreciation Practices*, is included in Exhibit WWD-4.

⁷² Exhibit WWD-5 shows the annual accruals based on the September 30, 2024 investment levels. However, in the future as the investments change, the depreciation rates will be applied to the then current investments, which will produce a different accrual amount (generally a larger accrual in the future because the investments generally grow over time).

1

Figure 11: Annual Depreciation Expense

BLACK HILLS NEBRASKA						
SUMMARY OF ANNUAL ACCRUAL AMOUNTS (DEPRECIATION EXPENSE)						
AS OF SEPTEMBER 30, 2024						
PLANT CATEGORY	CURRENT CALCULATED	COMPANY PROPOSED		PUBLIC ADVOCATE PROPOSED		
	ANNUAL ACCRUAL AMOUNT	ANNUAL ACCRUAL AMOUNT	INCREASE FROM CURRENT	ANNUAL ACCRUAL AMOUNT	INCREASE FROM COMPANY	INCREASE FROM CURRENT
INTANGIBLE PLANT	75,057	227,520	152,463	227,520	0	152,463
TRANSMISSION PLANT	42,673	55,084	12,411	55,084	0	12,411
DISTRIBUTION PLANT	21,406,844	30,447,836	9,040,992	25,242,997	(5,204,839)	3,836,153
GENERAL PLANT	5,279,405	5,630,323	350,918	5,630,323	0	350,918
UNRECOVERED RESERVE	212,172	444,957	232,784	444,957	0	232,784
TOTAL PLANT	27,016,151	36,805,720	9,789,569	31,600,881	(5,204,839)	4,584,730

2 **Q. DOES THIS CONCLUDE YOUR PREFILED DIRECT TESTIMONY?**

3 **A. Yes.**

William Dunkel, Consultant
8625 Farmington Cemetery Road
Pleasant Plains, Illinois 62677

Qualifications

William Dunkel is a consultant in utility regulatory proceedings. He has participated in over 300 state regulatory proceedings as listed on the attached Relevant Work Experience. Mr. Dunkel is a member of the Society of Depreciation Professionals.

Mr. Dunkel has provided expert depreciation testimony and other services to state agencies throughout the country in numerous state regulatory proceedings.

Mr. Dunkel made a presentation pertaining to “The Largest Depreciation Issue that is Generally in Dispute in State Utility Depreciation Studies: Net Salvage” at the Society of Depreciation Professionals Conference held in September 2018 in Indianapolis, IN.

Mr. Dunkel made a presentation pertaining to Current Depreciation Issues in State Rate Case Proceedings at the Society of Depreciation Professionals 25th Annual Meeting held September 2011 in Atlanta, GA.

Mr. Dunkel made a presentation pertaining to Video Dial Tone at the NASUCA 1993 Mid-Year Meeting held in St. Louis.

Mr. Dunkel made a presentation to the NARUC Subcommittee on Economics and Finance at the NARUC Summer Meetings held in July 1992. That presentation was entitled “The Reason the Industry Wants to Eliminate Cost Based Regulation--Telecommunications is a Declining Cost Industry.”

Mr. Dunkel has testified before the Illinois House of Representatives Subcommittee on Communications, as well as participated in numerous other schools and conferences pertaining to the utility industry.

Mr. Dunkel provides services almost exclusively to public agencies, including the Public Utilities Commission, the Public Counsel, Office of Attorney General, or the State Department of Administration in various states.

William Dunkel currently provides, or in the past has provided, services in state utility regulatory proceedings to the following clients:

The Public Utility Commission or the Staffs in the States of:

Arkansas	Maryland
Arizona	Mississippi
Delaware	Missouri
District of Columbia	New Mexico
Georgia	North Carolina
Guam	Utah
Illinois	Virginia
Kansas	Washington
Maine	U.S. Virgin Islands

The Office of the Public Advocate, or its equivalent, in the States of:

Alaska	Maryland
California	Massachusetts
Colorado	Michigan
Connecticut	Missouri
District of Columbia	Nebraska
Florida	New Jersey
Georgia	New Mexico
Hawaii	Ohio
Illinois	Oklahoma
Indiana	Pennsylvania
Iowa	Utah
Maine	Washington

The Department of Administration in the States of:

Illinois	South Dakota
Minnesota	Wisconsin

Mr. Dunkel graduated from the University of Illinois in February 1970 with a Bachelor of Science Degree in Engineering Physics, with emphasis on economics and other business-related subjects. He has taken several post-graduate courses since graduation.

Mr. Dunkel has taken the AT&T separations school which is normally provided to AT&T personnel.

Mr. Dunkel has taken the General Telephone separations school which is normally provided for training of the General Telephone Company personnel in separations.

Mr. Dunkel has completed an advanced depreciation program entitled "Forecasting Life and Salvage" offered by Depreciation Programs, Inc.

From 1970 to 1974, Mr. Dunkel was a design engineer for Sangamo Electric Company (Sangamo was later purchased by Schlumberger) designing electric watt-hour meters used in the electric utility industry. He was granted patent No. 3822400 for a solid state meter pulse initiator which was used in metering.

In April 1974, Mr. Dunkel was employed by the Illinois Commerce Commission in the Electric Section as a Utility Engineer. In November of 1975, he transferred to the Telephone Section of the Illinois Commerce Commission and from that time until July, 1980, he participated in essentially all telephone rate cases and other telephone rate matters that were set for hearing in the State of Illinois. During that period, he testified as an expert witness in numerous rate design cases and tariff filings in the areas of rate design, cost studies and separations. During the period 1975-1980, he was the Separations and Settlements expert for the Staff of the Illinois Commerce Commission.

From July 1977 until July 1980, Mr. Dunkel was a Staff member of the FCC-State Joint Board on Separations, concerning the "Impact of Customer Provision of Terminal Equipment on Jurisdictional Separations" in FCC Docket No. 20981 on behalf of the Illinois Commerce Commission. The FCC-State Joint Board is the national board that specifies the rules for separations in the telephone industry.

Since July 1980, Mr. Dunkel has been regularly employed as an independent consultant in state utility regulatory proceedings across the nation.

RELEVANT WORK EXPERIENCE OF
WILLIAM DUNKEL

ALASKA

- Cook Inlet Natural Gas Storage
Depreciation Rate Proceeding Docket No. U-18-043
- Golden Heart Utilities and College Utilities Corporation
Depreciation Rate Proceeding Docket No. U-15-089
- Chugach Electric
Depreciation Rate Proceeding Docket No. U-09-097
- Homer Electric
Depreciation Rate Proceeding Docket No. U-09-077
- TDX North Slope Generating
Depreciation Rate Proceeding Docket No. U-21-089
- TDX Sand Point Generating
Depreciation Rate Proceeding Docket No. U-21-088
Depreciation Rate Proceeding Docket No. U-09-029
- AWWU
Depreciation Rate Proceeding Docket No. U-08-004
- Enstar Natural Gas Company
Depreciation Rate Proceeding Docket No. U-07-174
- ML&P
Depreciation Rate Proceeding Docket No. U-12-149
Depreciation Rate Proceeding Docket No. U-06-006
- ACS of Anchorage Docket No. U-01-34
- ACS
General rate case Docket Nos. U-01-83, U-01-85, U-01-87
AFOR proceeding Docket No. R-03-003
- All Telephone Companies
Access charge proceeding Docket No. R-01-001
- Interior Telephone Company Docket No. U-07-75
- OTZ Telephone Cooperative Docket No. U-03-85

ARIZONA

- Citizens Communications Company, Arizona Gas Division
Depreciation Rates Docket No. G-01032A-02
- U.S. West Communications (Qwest)
General Rate Case/Price Cap Renewal Docket No. T-01051B-03-0454
Wholesale cost/UNE case Docket No. T-00000A-00-0194
General rate case Docket No. E-1051-93-183
Depreciation case Docket No. T-01051B-97-0689
General rate case/AFOR proceeding Docket No. T-01051B-99-0105
AFOR proceeding Docket No. T-01051B-03-0454

ARKANSAS

- Southwestern Bell Telephone Company Docket No. 83-045-U

CALIFORNIA

(on behalf of The Utility Reform Network (TURN))

- Southern California Edison Company Docket No. 16-09-001
- (on behalf of the Office of Ratepayer Advocates (ORA))
- Kerman Telephone General Rate Case A.02-01-004
- (on behalf of the California Cable Television Association)
- General Telephone of California I.87-11-033
- Pacific Bell
- Fiber Beyond the Feeder Pre-Approval Requirement

COLORADO

- Mountain Bell Telephone Company
 - General Rate Case Docket No. 96A-218T et al.
 - Call Trace Case Docket No. 92S-040T
 - Caller ID Case Docket No. 91A-462T
 - General Rate Case Docket No. 90S-544T
 - Local Calling Area Case Docket No. 1766
 - General Rate Case Docket No. 1720
 - General Rate Case Docket No. 1700
 - General Rate Case Docket No. 1655
 - General Rate Case Docket No. 1575
 - Measured Services Case Docket No. 1620
- Independent Telephone Companies
 - Cost Allocation Methods Case Docket No. 89R-608T

CONNECTICUT

- Connecticut Yankee Gas Company
 - Depreciation Study Docket No. 24-12-01
 - Depreciation Study Docket No. 18-05-10
- Connecticut Natural Gas Corporation
 - Depreciation Study Docket No. 23-11-02
 - Depreciation Study Docket No. 18-05-16
- Southern Connecticut Gas Company
 - Depreciation Study Docket No. 23-11-02
 - General Rate Case Docket No. 17-05-42
- Connecticut Light & Power
 - Depreciation Study Docket No. 17-10-46
- United Illuminating Company

<ul style="list-style-type: none"> - General Rate Case General Rate Case - Connecticut Water Company Depreciation Study 	<p>Docket No. 22-08-08</p> <p>Docket No. 16-06-04</p> <p>Docket No. 23-08-32</p>
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DELAWARE

<ul style="list-style-type: none"> - Diamond State Telephone Company General Rate Case General Rate Case Report on Small Centrex General Rate Case Centrex Cost Proceeding 	<p>PSC Docket No. 82-32</p> <p>PSC Docket No. 84-33</p> <p>PSC Docket No. 85-32T</p> <p>PSC Docket No. 86-20</p> <p>PSC Docket No. 86-34</p>
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DISTRICT OF COLUMBIA

<ul style="list-style-type: none"> - Washington Gas Light Company Depreciation issues - Potomac Electric Power Company Depreciation issues Depreciation issues - C&P Telephone Company of D.C. Depreciation issues 	<p>Formal Case No. 1091 & 1093</p> <p>Formal Case No. 1076</p> <p>Formal Case No. 1053</p> <p>Formal Case No. 926</p>
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FCC

<ul style="list-style-type: none"> - Review of jurisdictional separations - Developing a Unified Intercarrier Compensation Regime 	<p>FCC Docket No. 96-45</p> <p>CC Docket No. 01-92</p>
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FLORIDA

<ul style="list-style-type: none"> - Duke Energy Florida, LLC Depreciation issues - BellSouth, GTE, and Sprint Fair and reasonable rates 	<p>Docket No. 20240025-EI</p> <p>Undocketed Special Project</p>
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GEORGIA

<ul style="list-style-type: none"> - Atlanta Gas Light Company General Rate Proceeding General Rate Proceeding - Georgia Power Company General Rate Proceeding - Southern Bell Telephone & Telegraph Co. General Rate Proceeding General Rate Proceeding General Rate Proceeding 	<p>Docket No. 42315</p> <p>Docket No. 31647</p> <p>Docket No. 42516</p> <p>Docket No. 3231-U</p> <p>Docket No. 3465-U</p> <p>Docket No. 3286-U</p>
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General Rate Proceeding

Docket No. 3393-U

HAWAII

- Kauai Island Utility Cooperative
Depreciation Issues
General Rate Proceeding
- Hawaii Gas
Depreciation Issues
- GTE Hawaiian Telephone Company
Depreciation/separations issues
Resale case

Docket No. 2024-0224
Docket No. 2022-0208

Docket No. 2024-0158

Docket No. 94-0298
Docket No. 7702

ILLINOIS

- Commonwealth Edison Company
General Rate Proceeding
General Rate Proceeding
Section 50
Section 55
Section 50
Section 55
- Central Illinois Public Service
Section 55
Section 55
Section 55
Exchange of Facilities (Illinois Power)
General Rate Increase
Section 55
- South Beloit
General Rate Case
- Illinois Power
Section 55
Interconnection
- Verizon North Inc. and Verizon South Inc.
DSL Waiver Petition Proceeding
- Geneseo Telephone Company
EAS case
- Central Telephone Company
(Staunton merger)
- General Telephone & Electronics Co.
Usage sensitive service case
General rate case (on behalf of CUB)
(Usage sensitive rates)
(Data Service)

Docket No. 80-0546
Docket No. 82-0026
Docket No. 59008
Docket No. 59064
Docket No. 59314
Docket No. 59704

Docket No. 58953
Docket No. 58999
Docket No. 59000
Docket No. 59497
Docket No. 59784
Docket No. 59677

Docket No. 59078

Docket No. 59281
Docket No. 59435
Docket No. 02-0560

Docket No. 99-0412

Docket No. 78-0595

Docket Nos. 98-0200/98-0537
Docket No. 93-0301
Docket No. 79-0141
Docket No. 79-0310

	(Certificate)	Docket No. 79-0499
	(Certificate)	Docket No. 79-0500
-	General Telephone Co.	Docket No. 80-0389
-	SBC	
	Imputation Requirement	Docket No. 04-0461
	Implement UNE Law	Docket No. 03-0323
	UNE Rate Case	Docket No. 02-0864
	Alternative Regulation Review	Docket No. 98-0252
-	Ameritech (Illinois Bell Telephone Company)	
	Area code split case	Docket No. 94-0315
	General Rate Case	Docket No. 83-0005
	(Centrex filing)	Docket No. 84-0111
	General Rate Proceeding	Docket No. 81-0478
	(Call Lamp Indicator)	Docket No. 77-0755
	(Com Key 1434)	Docket No. 77-0756
	(Card dialers)	Docket No. 77-0757
	(Concentration Identifier)	Docket No. 78-0005
	(Voice of the People)	Docket No. 78-0028
	(General rate increase)	Docket No. 78-0034
	(Dimension)	Docket No. 78-0086
	(Customer controlled Centrex)	Docket No. 78-0243
	(TAS)	Docket No. 78-0031
	(Ill. Consolidated Lease)	Docket No. 78-0473
	(EAS Inquiry)	Docket No. 78-0531
	(Dispute with GTE)	Docket No. 78-0576
	(WUI vs. Continental Tel.)	Docket No. 79-0041
	(Carle Clinic)	Docket No. 79-0132
	(Private line rates)	Docket No. 79-0143
	(Toll data)	Docket No. 79-0234
	(Dataphone)	Docket No. 79-0237
	(Com Key 718)	Docket No. 79-0365
	(Complaint - switchboard)	Docket No. 79-0380
	(Porta printer)	Docket No. 79-0381
	(General rate case)	Docket No. 79-0438
	(Certificate)	Docket No. 79-0501
	(General rate case)	Docket No. 80-0010
	(Other minor proceedings)	Docket No. various
-	Home Telephone Company	Docket No. 80-0220
-	Northwestern Telephone Company	
	Local and EAS rates	Docket No. 79-0142
	EAS	Docket No. 79-0519

INDIANA

- Indiana-American Water Company
Depreciation issues Cause No. 44992
- Indiana Michigan Power Company (I&M)
Depreciation issues Cause No. 44075
Depreciation issues Cause No. 42959
- Public Service of Indiana (PSI)
Depreciation issues Cause No. 39584
- Indianapolis Power and Light Company
Depreciation issues Cause No. 39938

IOWA

- U S West Communications, Inc.
Local Exchange Competition Docket No. RMU-95-5
Local Network Interconnection Docket No. RPU-95-10
General Rate Case Docket No. RPU-95-11

KANSAS

- Black Hills/Kansas Gas Utility Company
General rate proceeding Docket No. 14-BHCG-502-RTS
- Kansas Gas Services
General rate proceeding Docket No. 12-KGSG-838-RTS
- Westar Energy, Inc.
General rate proceeding Docket No. 18-WSEE-328-RTS
General rate proceeding Docket No. 12-WSEE-112-RTS
General rate proceeding Docket No. 08-WSEE-1041-RTS
- Midwest Energy, Inc.
General rate proceeding Docket No. 11-MDWE-609-RTS
General rate proceeding Docket No. 08-MDWE-594-RTS
- Generic Depreciation Proceeding Docket No. 08-GIMX-1142-GIV
- Kansas City Power & Light Company
General rate proceeding Docket No. 15-KCPE-116-RTS
General rate proceeding Docket No. 12-KCPE-764-RTS
General rate proceeding Docket No. 10-KCPE-415-RTS
- Atmos Energy Corporation
General rate proceeding Docket No. 12-ATMG-564-RTS
General rate proceeding Docket No. 08-ATMG-280-RTS
- Sunflower Electric Power Corporation
Depreciation rate study Docket No. 08-SEPE-257-DRS
- Southwestern Bell Telephone Company
Commission Investigation of the KUSF Docket No. 98-SWBT-677-GIT
- Rural Telephone Service Company
Audit and General rate proceeding Docket No. 00-RRLT-083-AUD
Request for supplemental KUSF Docket No. 00-RRLT-518-KSF

- Southern Kansas Telephone Company Audit and General rate proceeding	Docket No. 01-SNKT-544-AUD
- Pioneer Telephone Company Audit and General rate proceeding	Docket No. 01-PNRT-929-AUD
- Craw-Kan Telephone Cooperative, Inc. Audit and General rate proceeding	Docket No. 01-CRKT-713-AUD
- Sunflower Telephone Company, Inc. Audit and General rate proceeding	Docket No. 01-SFLT-879-AUD
- Bluestem Telephone Company, Inc. Audit and General rate proceeding	Docket No. 01-BSST-878-AUD
- Home Telephone Company, Inc. Audit and General rate proceeding	Docket No. 02-HOMT-209-AUD
- Wilson Telephone Company, Inc. Audit and General rate proceeding	Docket No. 02-WLST-210-AUD
- S&T Telephone Cooperative Association, Inc. Audit and General rate proceeding	Docket No. 02-S&TT-390-AUD
- Blue Valley Telephone Company, Inc. Audit and General rate proceeding	Docket No. 02-BLVT-377-AUD
- JBN Telephone Company Audit and General rate proceeding	Docket No. 02-JBNT-846-AUD
- S&A Telephone Company Audit and General rate proceeding	Docket No. 03-S&AT-160-AUD
- Wheat State Telephone Company, Inc. Audit and General rate proceeding	Docket No. 03-WHST-503-AUD
- Haviland Telephone Company, Inc. Audit and General rate proceeding	Docket No. 03-HVDT-664-RTS

MAINE

- Versant Power General rate proceeding	Docket No. 2022-255
- Northern Utilities, Inc. (Unitil) General rate proceeding	Docket No. 2017-065
- Emera General rate proceeding	Docket No. 2013-443
- Central Maine Power Company General rate proceeding	Docket No. 2022-152
- Central Maine Power Company General rate proceeding	Docket No. 2013-168
- Central Maine Power Company General rate proceeding	Docket No. 2007-215
- New England Telephone Company General rate proceeding	Docket No. 92-130
- Verizon AFOR investigation	Docket No. 2005-155

MARYLAND

- Washington Gas Light Company
 - Depreciation rate proceeding Case No. 9103
 - Depreciation Rate Case Case No. 8960
- Baltimore Gas and Electric Company
 - Depreciation rate proceeding Case No. 9610
 - Depreciation rate proceeding Case No. 9355
 - Depreciation rate proceeding Case No. 9096
- PEPCO
 - General rate proceeding Case No. 9286
 - General rate proceeding Case No. 9217
 - General rate proceeding Case No. 9092
- Delmarva Power & Light Company
 - General rate proceeding Case No. 9285
- Chesapeake and Potomac Telephone Company
 - General rate proceeding Case No. 7851
 - Cost Allocation Manual Case Case No. 8333
 - Cost Allocation Issues Case Case No. 8462
- Verizon Maryland
 - PICC rate case Case No. 8862
 - USF case Case No. 8745
- Chesapeake Utilities Corporation
 - General rate proceeding Case No. 9062
- Columbia Gas of Maryland
 - General rate proceeding Case No. 9680

MASSACHUSETTS

- Eversource Energy (NSTAR Electric Company and Western Massachusetts Electric Company)
 - Depreciation Issues Case No. D.P.U. 17-005
- National Grid (Massachusetts Electric Company/Nantucket Electric Company)
 - Depreciation Issues Case No. D.P.U. 15-155

MICHIGAN

- Wisconsin Electric Power Company
 - Depreciation Rate Case Case No. U-15981
- SEMCO Energy Gas Company
 - Depreciation Rate Case Case No. U-15778
- Michigan Consolidated Gas Company
 - Depreciation Rate Case Case No. U-15699
- Consumers Energy Company
 - Depreciation Rate Case Case No. U-21176
 - Depreciation Rate Case Case No. U-20849
 - Depreciation Rate Case Case No. U-15629

MINNESOTA

- Access charge (all companies) Docket No. P-321/CI-83-203
- U. S. West Communications, Inc. (Northwestern Bell Telephone Co.)
 - Centrex/Centron proceeding Docket No. P-421/91-EM-1002
 - General rate proceeding Docket No. P-321/M-80-306
 - Centrex Dockets MPUC No. P-421/M-83-466
 - MPUC No. P-421/M-84-24
 - MPUC No. P-421/M-84-25
 - MPUC No. P-421/M-84-26
 - MPUC No. P-421/GR-80-911
 - MPUC No. P-421/GR-82-203
 - MPUC No. P-421/GR-83-600
 - MPUC No. P-421/CI-84-454
 - MPUC No. P-421/CI-85-352
 - MPUC No. P-421/M-86-53
 - MPUC No. P-999/CI-85-582
 - Docket No. P-421/M-86-508
- AT&T
 - General rate proceeding
 - General rate proceeding
 - General rate case
 - WATS investigation
 - Access charge case
 - Access charge case
 - Toll Compensation case
 - Private Line proceeding
 - Intrastate Interexchange Docket No. P-442/M-87-54

MISSISSIPPI

- South Central Bell
 - General rate filing Docket No. U-4415

MISSOURI

- AmerenUE
 - Electric rate proceeding ER-2010-0036
 - Electric rate proceeding ER-2008-0318
- American Water Company
 - General rate proceeding WR-2008-0311
- Empire District Electric Company
 - Depreciation rates ER-2008-0093
- AmerenUE
 - Electric rate proceeding ER-2007-0002
- Southwestern Bell
 - General rate proceeding TR-79-213
 - General rate proceeding TR-80-256
 - General rate proceeding TR-82-199
 - General rate proceeding TR-86-84
 - General rate proceeding TC-89-14, et al.
 - Alternative Regulation TC-93-224/TO-93-192
- United Telephone Company

- Depreciation proceeding TR-93-181
- All companies
- Extended Area Service TO-86-8
- EMS investigation TO-87-131
- Cost of Access Proceeding TR-2001-65

NEBRASKA

- SourceGas Distribution
- Depreciation proceeding NG-0079
- Black Hills Nebraska Gas
- General Rate Proceeding NG-0109

NEW JERSEY

- Mid-Atlantic Offshore Development, LLC BPU Docket No. ER24-2564
- Atlantic City Electric Company
- General Rate Proceeding BPU Docket No. ER18080925
- Rockland Electric Company
- General Rate Proceeding BPU Docket No. ER16050428
- New Jersey Natural Gas Company
- General Rate Proceeding BPU Docket No. GR19030420
- General Rate Proceeding BPU Docket No. GR15111304
- South Jersey Gas Company
- General Rate Proceeding BPU Docket No. GR13111137
- Atlantic City Electric Company
- General Rate Proceeding BPU Docket No. ER12121071
- OAL Docket No. PUC00617-2013
- Aqua New Jersey, Inc.
- General Rate Proceeding BPU Docket No. WR20010056
- New Jersey Bell Telephone Company
- General rate proceeding Docket No. 802-135
- General rate proceeding BPU No. 815-458
- Phase I - General rate case OAL No. 3073-81
- BPU No. 8211-1030
- General rate case OAL No. PUC10506-82
- BPU No. 848-856
- Division of regulated OAL No. PUC06250-84
- from competitive services BPU No. TO87050398
- Customer Request Interrupt OAL No. PUC 08557-87
- Docket No. TT 90060604

NEW MEXICO

- Public Service Company of New Mexico
- Depreciation issues Case No. 15-00261-UT

	Depreciation issues	Case No. 10-00086-UT
	Depreciation issues	Case No. 08-00273-UT
-	U.S. West Communications, Inc.	
	E-911 proceeding	Case No. 92-79-TC
	General rate proceeding	Case No. 92-227-TC
	General rate/depreciation proceeding	Case No. 3008
	Subsidy Case	Case No. 3325
	USF Case	Case No. 3223
-	VALOR Communications	
	Subsidy Case	Case No. 3300
	Interconnection Arbitration	Case No. 3495
<u>NEW YORK</u>		
-	Niagara Mohawk Power Corporation	
	Depreciation Rates	Docket Nos. 24-E-0322 & 24-G-0323
<u>OHIO</u>		
-	Ohio Bell Telephone Company	
	General rate proceeding	Docket No. 79-1184-TP-AIR
	General rate increase	Docket No. 81-1433-TP-AIR
	General rate increase	Docket No. 83-300-TP-AIR
	Access charges	Docket No. 83-464-TP-AIR
-	General Telephone of Ohio	
	General rate proceeding	Docket No. 81-383-TP-AIR
-	United Telephone Company	
	General rate proceeding	Docket No. 81-627-TP-AIR
<u>OKLAHOMA</u>		
-	Public Service of Oklahoma	
	General Rate Case	Cause No. PUD 202200093
	General Rate Case	Cause No. PUD 202100055
	General Rate Case	Cause No. PUD 201800097
	General Rate Case	Cause No. PUD 201700151
	Depreciation Case	Cause No. 96-0000214
-	Oklahoma Gas and Electric Company	
	General Rate Case	Cause No. PUD 202300087
	General Rate Case	Cause No. PUD 202100164
	General Rate Case	Cause No. PUD 201800140
	General Rate Case	Cause No. PUD 201700496
-	Oklahoma Natural Gas Company	
	General Rate Case	Cause No. PUD 202100063

PENNSYLVANIA

- GTE North, Inc.
Interconnection proceeding Docket No. A-310125F002
- Bell Telephone Company of Pennsylvania
Alternative Regulation proceeding Docket No. P-00930715
Automatic Savings Docket No. R-953409
Rate Rebalance Docket No. R-00963550
- Enterprise Telephone Company
General rate proceeding Docket No. R-922317
- All companies
InterLATA Toll Service Invest. Docket No. I-910010
Joint Petition for Global Resolution of
Telecommunications Proceedings Docket Nos. P-00991649,
P-00991648, M-00021596
- GTE North and United Telephone Company
Local Calling Area Case Docket No. C-902815
- Verizon
Joint Application of Bell Atlantic and
GTE for Approval of Agreement
and Plan of Merger Docket Nos. A-310200F0002,
A-311350F0002, A-310222F0002,
A-310291F0003
Access Charge Complaint Proceeding Docket No. C-200271905

SOUTH DAKOTA

- Northwestern Bell Telephone Company
General rate proceeding Docket No. F-3375

TENNESSEE

(on behalf of Time Warner Communications)

- BellSouth Telephone Company
Avoidable costs case Docket No. 96-00067

UTAH

- Questar Gas Company
Depreciation rate proceeding Docket No. 13-057-19
- Rocky Mountain Power
Depreciation rate proceeding Docket No. 13-035-02
- U.S. West Communications (Mountain Bell Telephone Company)
General rate case Docket No. 84-049-01
General rate case Docket No. 88-049-07
800 Services case Docket No. 90-049-05
General rate case/
incentive regulation Docket No. 90-049-06/90-
049-03
General rate case Docket No. 92-049-07
General rate case Docket No. 95-049-05
General rate case Docket No. 97-049-08

Qwest Price Flexibility-Residence	Docket No. 01-2383-01
Qwest Price Flexibility-Business	Docket No. 02-049-82
Qwest Price Flexibility-Residence	Docket No. 03-049-49
Qwest Price Flexibility-Business	Docket No. 03-049-50
- Carbon/Emery	
General rate case/USF eligibility	Docket No. 05-2302-01
<u>VIRGIN ISLANDS, U.S.</u>	
- Virgin Islands Telephone Company	
General rate case	Docket No. 264
General rate case	Docket No. 277
General rate case	Docket No. 314
General rate case	Docket No. 316
<u>VIRGINIA</u>	
- General Telephone Company of the South	
Jurisdictional allocations	Case No. PUC870029
Separations	Case No. PUC950019
<u>WASHINGTON</u>	
- US West Communications, Inc.	
Interconnection case	Docket No. UT-960369
General rate case	Docket No. UT-950200
- All Companies-	Analyzed the local calling areas in the State
<u>WISCONSIN</u>	
- Wisconsin Bell Telephone Company	
Private line rate proceeding	Docket No. 6720-TR-21
General rate proceeding	Docket No. 6720-TR-34

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-338**

DATE OF REQUEST: July 23, 2025
DATE RESPONSE DUE: August 4, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: August 4, 2025
SUBJECT: Depreciation

REQUEST:

PA-338. Depreciation: Reference: Direct Exhibit JJS-2, JJS WP-1 - BH Nebraska Gas Balances and JJS WP-2 - BH Nebraska Gas Service Life

- (a) The ending balance for Account 38197 in file “JJS WP-1 - BH Nebraska Gas Balances” shows a total of \$24,605,389.35. The service life data for account 38197 in file “JJS WP-2 - BH Nebraska Gas Service Life” shows a balance of \$15,271,590.11. Please provide the service life data that supports the ending balance of \$24,605,389.35 for Account 38197. This \$24,605,389.35 for Account 381.00 Meters – Small Volume and Other is on page 181 of Direct Exhibit JJS-2.
- (b) Does the data provided in response to part (a) support the original life table for Account 381.00 Meters – Small Volume and Other shown on pages 91-92 of Direct Exhibit JJS-2.
- (c) Please provide the reconciliation and/or revised workpapers for all other accounts that support the Original Life Table data shown in Section VII of Direct Exhibit JJS-2.

RESPONSE:

- (a) The service life data file that supports the plant balance for Account 38197 is set forth in response to PA19-318. An updated calculated remaining life depreciation accrual is shown in Attachment PA 23-338a – Acct 381 Depr Calc.
- (b) The data referenced in part (a) does not support the original life table for Account 381.00 Meters – Small Volume and Other shown on pages 91-92 of Direct Exhibit JJS-2. The corrected original life table pages are included as Attachment PA 23-338b – Acct 381 Life Table.

- (c) Attachment PA 23-338c – Accts 380, 382, and 383 Curves and Life Tables includes the updated original life tables shown in Section VII of Direct Exhibit JJS-2. All the accounts except Account 381 still maintain the same life characteristics since this file was utilized in determining the estimates prior to creating the report documents.

Attachment PA 23-338d – Revised Table 1 – Summary of Depreciation Rates includes the revision to Account 381 Meters – Small Volume and Other.

The Company will include and apply this change in the depreciation rate to its overall cost of service rates at a future point in the proceeding but no later than the filing of rebuttal testimony.

ATTACHMENT(S):

- Attachment PA 23-338a – Acct 381 Depreciation Calculations
- Attachment PA 23-338b – Acct 381 Life Table
- Attachment PA 23-338c – Accts 380 Curves and Life Tables
- Attachment PA 23-338d – Revised Table 1 – Summary of Depreciation Rates

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-151**

DATE OF REQUEST: May 14, 2025
DATE RESPONSE DUE: May 27, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: May 27, 2025
SUBJECT: Depreciation

REQUEST:

PA-151. Depreciation:

- (a) Is it correct that in Docket No. 2022-00152 in Maine, in a rebuttal testimony dated February 7, 2023, starting on line 22 of page 22, Mr. Spanos (John J. Spanos) made this statement:
“The Michigan Commission’s decision supports a number of important points related to the net salvage methodology that I employ in CMP’s depreciation study. In particular, the Michigan Commission recognized that net salvage estimates must be based on estimates of future costs, that the traditional method is widely accepted and supported by authoritative sources, and that customers are compensated for any impacts of growth and inflation that is included in these estimates due to the resulting reduction in rate base.”
Please begin the response with “yes” or “no.”
- (b) Is it correct that Mr. Spanos put into page 22 of his above-mentioned rebuttal testimony the following quotation from the Michigan Commission:
“The accrual for net salvage must be based on estimates of the future cost that will be incurred, not the removal cost at today’s price level. Therefore, it is appropriate to ask current customers to pay for future costs of removal at inflated price levels, and, as Mr. Watson pointed out, the rate base offset compensates rate payers for the prior payment for the costs incurred by the utility.”
Please begin the response with “yes” or “no.”
- (c) Is it Mr. Spanos’s position that “it is appropriate to ask current customers to pay for future costs of removal at inflated price levels”?
Please begin the response with “yes” or “no.”

- (d) Is it Mr. Spanos's position that the "accrual for net salvage must be based on estimates of the future cost that will be incurred, not the removal cost at today's price level"? Please begin the response with "yes" or "no."
- (e) Is it Mr. Spanos's position that "that net salvage estimates must be based on estimates of future costs"? Please begin the response with "yes" or "no."
- (f) Is it Mr. Spanos's position that net salvage costs calculated in this case should include future inflation out to the future time when the investment is expected to retire? Please begin the response with "yes" or "no." If the response is "no," how far out should future inflation be included in the determination of net salvage? Explain the response.
- (g) Separately and directly answer each prior part of this request, beginning the response with "yes" or "no."

RESPONSE:

BH Nebraska Gas objects to this request to the extent that it calls for information that is not relevant nor likely to lead to relevant information, calls for BH Nebraska Gas to prepare a study or conduct analysis that does not currently exist, or call for voluminous amounts of data or information that would create an administrative burden on BH Nebraska Gas to produce.

Without waiving or limiting its objection, BH Nebraska Gas responds as follows:

- (a) Yes.
- (b) Yes.
- (c) Yes, although the citations in parts (a) and (b) of this question are provided without context. More precisely, Mr. Spanos' position, which is the standard position in the industry, is adopted by the vast majority of regulatory commissions, supported by the USOA and depreciation textbooks, is that depreciation recovers the service value of plant in service over the service life of the property. The service value includes the original cost, recorded at the price level at the time of installation, and the net salvage, recorded at the time of retirement. This is the most equitable approach because it fully recovers the service value on a systematic and rational basis over the service life of the property. Depreciation does not incorporate adjustments for the time value of money or inflation but is instead based on recorded or future costs. The time value of money is accounted for in the return on rate base, of which accumulated

depreciation is a deduction. Mr. Spanos considers this standard approach to be appropriate.

- (d) Yes.
- (e) Please refer to part (c) of this response.
- (f) Please refer to part (c) of this response. However, the question implies additional future inflation is added and that is not accurate.

ATTACHMENT(S):

None

Public Utility Depreciation Practices

August 1996



Compiled and Edited by
Staff Subcommittee on Depreciation of
The Finance and Technology Committee
of the
National Association of Regulatory Utility Commissioners

Published by

National Association of Regulatory Utility Commissioners
1101 Vermont Avenue, N.W., Suite 200
Washington, DC 20005
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CURRENT CONCEPTS OF DEPRECIATION

21

**Impact of Inflation and Deflation on the
Recovery of Capital Through Depreciation Practices**

Today's regulatory depreciation practices almost universally require charging the original cost of property as an expense to the various periods of operation. There is one important difference between depreciation expense and most other expenses. Depreciation expense is recovered with current dollars but is an allocation of a historical cost which was incurred years earlier. During sustained periods of inflation or deflation, the question arises: Should an adjustment be made to the depreciation expense in order to compensate for this value fluctuation?

The primary aim of depreciation under the original cost concept is to maintain the integrity of the original capital invested in the business. By reinvesting depreciation accruals, the capital investment in total dollars does not change even though the physical assets may change. In periods of rapid change in the purchasing power of the dollar, however, the integrity of the original capital investment is not strictly maintained. This is because accruals over the life of the original plant will equal the same number of dollars originally spent, but the dollars collected will purchase more or less new plant depending on whether inflation or deflation has taken place and whether technological enhancements have created more economical plant.

It is generally accepted that the cost of money includes an inflation component to compensate lenders for the reduced purchasing power of the repaid principal. The dollars paid by customers because of this inflation component are typically treated as a return on capital, not as a return of capital. Some have proposed removing the inflation component from the rate of return and including it in the depreciation schedule for equipment. This "economic depreciation" produces a series of annual accruals that increases with time, as opposed to the constant accruals with straight-line depreciation.

This concept erroneously implies that these adjustments are intended to ensure that at the end of the life of any item, there should be sufficient dollars in the accumulated depreciation account to replace the item at then current prices. This is unlikely, as no one can predict future replacement costs years in advance. Also, this approach amounts to having customers make contributions-in-aid-of-construction which will not accrue interest, which is not appropriate. Depreciation expense is accrued in installments over the life of the property. These installments are available for reinvestment in new property or other purposes as management deems appropriate.

In its *1943 NARUC Report*, the NARUC Committee on Depreciation reached the following related conclusions:

1. A cost depreciation base is consistent with the fundamental concept of depreciation as resulting in a cost of operation.
2. Cost of plant is a definitely known amount and is not subject to the vagaries of estimates of value or of replacement cost.
3. The use of cost as a base permits ready ascertainment of depreciation charges and facilitates the making of operating forecasts.

PUBLIC UTILITIES DEPRECIATION PRACTICES

4. The use of cost as a depreciation base tends to prevent manipulation of depreciation charges for financial expediency because the percentage of depreciation charges to plant is readily apparent from consideration of the income and balance sheet statements.
5. A cost depreciation base conforms to the accepted accounting principle that operating expenses should be based on cost and not be influenced by fair value estimates nor by what costs may be at some future date.

The 1954 report of the Committee on Depreciation revisited the matter of a proper depreciation base and concluded:

This Committee's re-examination of the question as to what is the proper depreciation base, leads firmly to the conclusion that the claims advanced in support of economic depreciation are lacking in probative force. The Committee is convinced that the long-established cost basis is sound, practical and equitable and should be continued.

As a result, economic depreciation is not used in a regulatory environment.

Regulatory Considerations

Under traditional rate base, rate of return regulation, measurement of the rate of return produced by present or prospective rates for service is important. The rate of return is the ratio of two quantities: net earnings after expenses and rate base.

At least since the decision in the *Knoxville Water Company*, 212 U.S. 1, (1909), depreciation has been recognized in both the numerator and the denominator of this ratio, in that the expenses in the numerator include depreciation and the property investment in the denominator is after deduction of an amount to cover accrued depreciation. Since the Knoxville case, there has been increased awareness that there should be a consistent relationship between depreciation expense and accumulated depreciation (*Lindheimer v. Illinois Bell Telephone Company*, 292 U.S. 151, (1934)). That is, the depreciation deducted from rate base should be consistent with the annual depreciation expense.

If the objective is consistent treatment of depreciation, there are a number of questions which must be decided before a regulatory body arrives at an equitable final result. A number of regulatory bodies prescribe depreciation rates for utilities under their jurisdiction. The FCC, for example, prescribes rates for large telephone companies. It revises them every three years after receiving basic data, depreciation studies, and recommended rates submitted by the utility.

Prescribing depreciation rates is one of the most important regulatory commission activities impacting customer rates. The estimation of depreciation parameters is not, of course, a scientifically exact process, since it involves a large element of informed judgment regarding future developments. At the same time, it cannot be an arbitrary figure selected

CHAPTER VIII

ACTUARIAL LIFE ANALYSES

Knowing what happened yesterday may help one to better understand what is happening today and what may happen tomorrow. This is also true with depreciation studies. Historical life analysis is the study of past occurrences that may be used to indicate the future survivor characteristics of property. Accumulation of suitable data is essential in an historical life analysis. As discussed in the previous chapter, the detail available in the data determines the kinds of analyses (actuarial v. simulation) that can be performed. Understanding the data is necessary in order to assess the limitations and application of the data in reflecting future events. Informed judgment plays a major role in determining how the data should be interpreted and used.

Actuarial analysis is the process of using statistics and probability to describe the retirement history of property. The process may be used as a basis for estimating the probable future life characteristics of a group of property.

Actuarial analysis requires information in greater detail than do other life analysis models (e.g., turnover, simulation) and, as a result, may be impractical to implement for certain accounts (see Chapter VII). However, for accounts for which application of actuarial analysis is practical, it is a powerful analytical tool and, therefore, is generally considered the preferred approach.

Actuarial analysis objectively measures how the company has retired its investment. The analyst must then judge whether this historical view depicts the future life of the property in service. The analyst takes into consideration various factors, such as changes in technology, services provided, or capital budgets.

Mortality History

The purpose of actuarial analysis is to analyze the life characteristics of the utility's property using the historical data contained in the Continuing Property Records (CPR) (see Chapter III). In order to be used in actuarial analyses, the database must contain the property's year of installation (i.e., vintage) and year of retirement. Since the property records are maintained primarily for purposes other than depreciation studies (e.g., for capital budgeting or to accurately reflect a utility's plant), they may require adjustment before use in a depreciation study.

The Treatment of Adjustments and Transfers

The company's property records may contain adjusting entries and transfers (see Chapter III). In the treatment of these adjustments and transfers for preparing life tables, all plant

ACTUARIAL LIFE ANALYSIS

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(1) the importance of large differences is increased, and (2) the result is a positive number, hence the squared differences can be summed to generate a measure of the total absolute difference between the two curves. The curves with the least sum of squared deviations are considered the best fits. The intent is not to select the one *best* curve but to consider the indicated patterns.

Interpreting the Results

Once data assembly and property grouping have been completed, the next step is to determine how to use this information. Several techniques are available to detect changes in the property. For example, placement bands may be used to show the effects of technological and material changes, whereas experience bands are used to show the effects of business and operational changes. Such banding is necessary because the analyst does not have access to a database wherein each factor (e.g., change in materials/technology or operational environment) is held constant.

In order to help identify the effect of trends in the historical data, analysts in the telecommunications field often use "worm charts," so called for their resemblance to the shape of a worm. Figure 8-2, a worm chart, shows the indicated life obtained from each band.

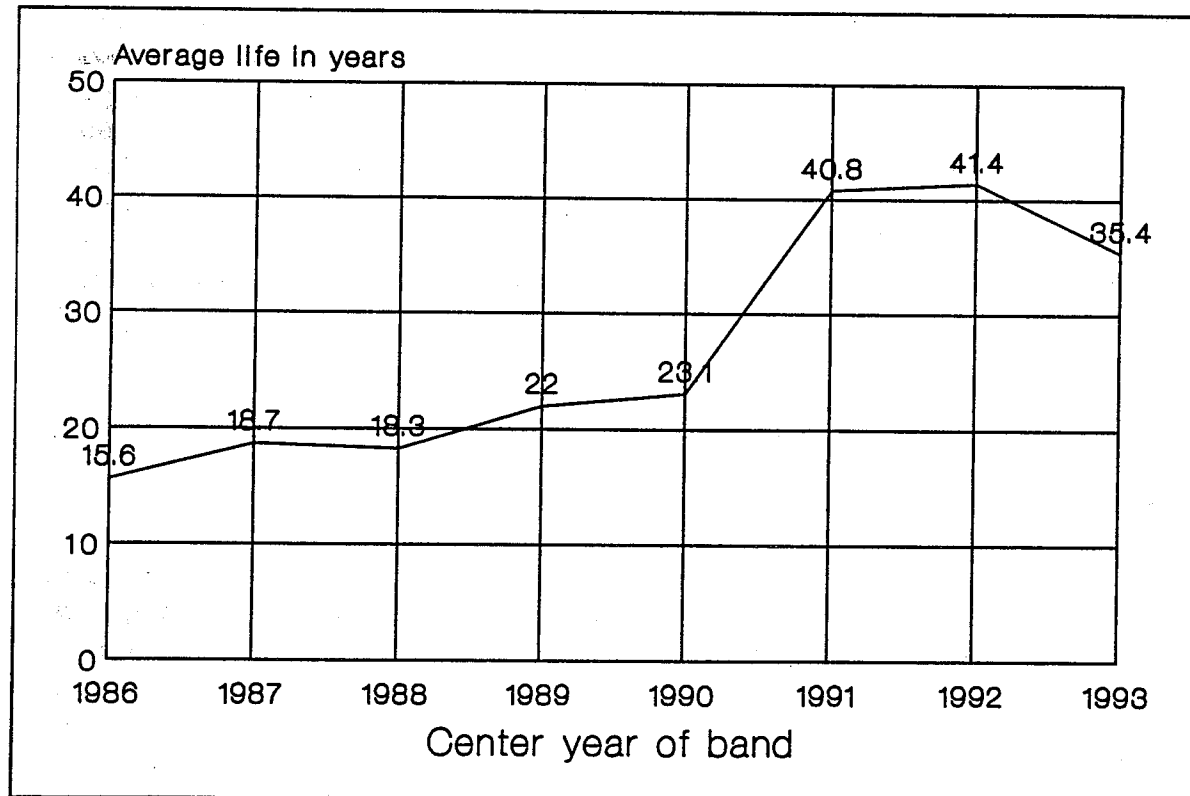


Figure 8-2. Worm Chart—Three-Year Band.

CHAPTER XI

ESTIMATING SALVAGE AND COST OF REMOVAL

General

A general discussion of salvage and cost of removal is presented in Chapter III. Before discussing the process of analyzing and estimating these factors, a review of definitions and discussion of general principles is presented below.

When depreciable plant facilities are retired from service and physically removed, costs may be incurred and/or cash or other value may be realized if they are sold or retained for reuse. The abandonment of utility property in place can also cause costs to be incurred, (e.g., the cost of filling an abandoned gas pipe line with an inert gas). The term gross salvage refers to the amount received for retired property sold or junked, reimbursement received from insurance or other sources, or the amount at which reusable material is charged to a utility's Material and Supplies Account.¹ Cost of removal is the expenditure incurred in connection with retiring, removing, and dispersing of property. Net salvage is the difference between gross salvage and cost of removal.

Historically, most regulatory commissions have required that both gross salvage and cost of removal be reflected in depreciation rates. The theory behind this requirement is that, since most physical plant placed in service will have some residual value at the time of its retirement, the original cost recovered through depreciation should be reduced by that amount. Closely associated with this reasoning are the accounting principle that revenues be matched with costs and the regulatory principle that utility customers who benefit from the consumption of plant pay for the cost of that plant, no more, no less. The application of the latter principle also requires that the estimated cost of removal of plant be recovered over its life.

Some commissions have abandoned the above procedure and moved to current-period accounting for gross salvage and/or cost of removal. In some jurisdictions gross salvage and cost of removal are accounted for as income and expense, respectively, when they are realized. Other jurisdictions consider only gross salvage in depreciation rates, with the cost of removal being expensed in the year incurred.

Determining a reasonably accurate estimate of the average or future net salvage is not an easy task; estimates can be the subject of considerable discussion and controversy between regulators and utility personnel. This is one of the reasons advanced in support of current-period accounting for these items. When estimating future net salvage, every effort should be made to ensure that the estimate is as accurate as possible. Normally, the process should start by

¹ Regulatory agencies generally require that reusable material consisting of retirement units be salvaged at original cost, while minor items may be salvaged at current prices new. Some regulatory agencies take into consideration the fact that depreciation has been sustained.

analyzing past salvage and cost of removal data and by using the results of this analysis to project future gross salvage and cost of removal.

When performing an analysis of net salvage data, certain considerations should be kept in mind. Generally, if transfers or sales of plant have contributed significantly to realized salvage, and such transactions are considered to be unrepresentative of the future, these transactions should be eliminated from the data. If the account consists of several categories of plant, such as several radically different types and sizes of buildings, the realized salvage should be analyzed to determine whether the related retirements are a representative cross-section of the account. The age of the retired plant, market conditions prevailing at the time of retirement, company policy regarding reuse in the past, environmental remediation costs, and reimbursements in instances of damage, condemnation or forced relocation resulting from highway construction should all be considered in preparation for projecting future net salvage.

It is frequently the case that net salvage for a class of property is negative, that is, cost of removal exceeds gross salvage. This circumstance has increasingly become dominant over the past 20 to 30 years; in some cases negative net salvage even exceeds the original cost of plant. Today few utility plant categories experience positive net salvage; this means that most depreciation rates must be designed to recover more than the original cost of plant. The predominance of this circumstance is another reason why some utility commissions have switched to current-period accounting for gross salvage and, particularly, cost of removal.

Analysis and Forecast

Data relative to gross salvage and cost of removal associated with past retirement of plant can be obtained from a variety of sources; the depth of the necessary analysis will depend on the particular circumstances surrounding the past retirement of plant from the account under analysis. Generally, a first cut can be obtained from data found in the utility's annual report filed with the state regulatory commission; that data should replicate the data contained in the utility's Depreciation Reserve or Accumulated Depreciation account records. The utility, however, may subdivide primary accounts into two or more classifications for depreciation purposes, while the data contained in its annual report to the regulatory commission may be for the entire primary account.

Frequently it is necessary to go beyond the summary information contained in utility annual reports. Internal utility reports that provide monthly and cumulative data on retirements, gross salvage, and cost of removal by sub-account or depreciation category are usually available. Review of these records, particularly monthly records, can be of great benefit in isolating the circumstances surrounding apparently abnormal data. It may be necessary to review specific work orders or estimates to determine whether particular data is correct and/or representative of the category and future activity. If the utility is using retirement work orders, and is using them properly, the salvage and cost of removal amounts appearing in a utility's Accumulated

BLACK HILLS NEBRASKA
SUMMARY OF ANNUAL ACCRUAL AMOUNTS (DEPRECIATION EXPENSE)
AS OF SEPTEMBER 30, 2024

PLANT CATEGORY	CURRENT	COMPANY PROPOSED		PUBLIC ADVOCATE PROPOSED		
	ANNUAL ACCRUAL AMOUNT	ANNUAL ACCRUAL AMOUNT	INCREASE FROM CURRENT	ANNUAL ACCRUAL AMOUNT	INCREASE FROM COMPANY	INCREASE FROM CURRENT
INTANGIBLE PLANT	75,057	227,520	152,463	227,520	0	152,463
TRANSMISSION PLANT	42,673	55,084	12,411	55,084	0	12,411
DISTRIBUTION PLANT	21,406,844	30,447,836	9,040,992	25,242,997	(5,204,839)	3,836,153
GENERAL PLANT	5,279,405	5,630,323	350,918	5,630,323	0	350,918
UNRECOVERED RESERVE	212,172	444,957	232,784	444,957	0	232,784
TOTAL PLANT	27,016,151	36,805,720	9,789,569	31,600,881	(5,204,839)	4,584,730

BLACK HILLS NEBRASKA GAS, LLC

SURVIVOR CURVES, NET SALVAGE PERCENTS AND CALCULATED ANNUAL ACCRUAL
RELATED TO GAS PLANT AS OF SEPTEMBER 30, 2024

PUBLIC ADVOCATE PROPOSED

ACCOUNT		SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST AS OF SEPTEMBER 30, 2024	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
DEPRECIABLE PLANT										
INTANGIBLE PLANT										
302.00	FRANCHISES AND CONSENT	30	-SQ	0	121,062.49	120,416	647	832	0.69	0.8
303.00	MISCELLANEOUS INTANGIBLE PLANT	15	-SQ	0	742,880.94	591,828	151,053	201,405	27.11	0.7
303.01	MISCELLANEOUS INTANGIBLE PLANT - EASEMENTS	20	-SQ	0	500,000.00	405,187	94,813	25,283	5.06	3.8
TOTAL INTANGIBLE PLANT					1,363,943.43	1,117,431	246,513	227,520	16.68	
TRANSMISSION PLANT										
365.03	LAND AND LAND RIGHTS - RIGHTS OF WAY	70	-R4	0	170,272.49	123,290	46,983	1,261	0.74	37.3
366.01	STRUCTURES AND IMPROVEMENTS	60	-R4	0	8,173.65	7,151	1,023	36	0.44	28.4
367.00	MAINS	70	-R3	(10)	5,572,872.00	4,201,069	1,929,091	43,296	0.78	44.6
369.03	MEASURING AND REGULATING STATION EQUIPMENT	50	-R2	(5)	674,604.58	395,343	312,992	10,491	1.56	29.8
TOTAL TRANSMISSION PLANT					6,425,922.72	4,726,852	2,290,089	55,084	0.86	
DISTRIBUTION PLANT										
374.03	LAND AND LAND RIGHTS	75	-R4	0	7,863,066.29	2,460,119	5,402,948	82,859	1.05	65.2
375.01	STRUCTURES AND IMPROVEMENTS	40	-R1	0	3,909,712.00	1,668,962	2,240,750	67,296	1.72	33.3
375.20	STRUCTURES AND IMPROVEMENTS - OTHER STRUCTURES	45	-R3	0	12,119.44	3,193	8,927	255	2.10	35.0
376.00	MAINS	75	-R2	(20)	542,138,340.23	177,345,253	473,220,755	7,512,633	1.39	62.99
378.00	MEASURING AND REGULATING STATION EQUIPMENT	55	-R2	(20)	38,178,179.10	8,125,543	37,688,272	802,486	2.10	47.0
379.00	MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE	55	-R2	(20)	4,441,003.48	2,378,695	2,950,509	74,546	1.68	39.6
380.00	SERVICES	47	-S1.5	(40)	278,292,187.38	56,562,420	333,046,642	8,555,013	3.07	38.93
381.00	METERS									
	SMALL VOLUME AND OTHER	26	-R1.5	(2)	24,605,389.35	(907,168)	26,004,665	1,385,438	5.63	18.77
	ERT, AMR AND AMI	12	-S1.5	0	15,039,182.75	(2,009,589)	17,048,772	2,345,228	15.59	7.3
TOTAL METERS					39,644,572.10	(2,916,757)	43,053,436	3,730,666	9.41	19.3
382.01	METER INSTALLATIONS	45	-R2.5	(5)	15,682,125.44	8,345,479	8,120,752	319,841	2.04	25.39
383.01	HOUSE REGULATORS	42	-R2.5	(25)	109,537,005.44	19,894,476	117,026,780	3,637,153	3.32	32.2
383.71	HOUSE REGULATORS - FARM TAPS	42	-R2.5	0	289,365.80	59,809	229,557	6,345	2.19	36.2
384.01	HOUSE REGULATOR INSTALLATIONS	40	-S2.5	(25)	855,208.60	(419,351)	1,488,362	134,426	15.72	11.1
385.00	INDUSTRIAL MEASURING AND REGULATING EQUIPMENT	30	-R0.5	0	7,406,059.92	(447,344)	7,853,404	302,437	4.08	26.0
386.00	OTHER PROPERTY ON CUSTOMERS' PREMISES	20	-R4	0	35,278.87	27,536	7,743	5,618	15.92	1.4
387.00	OTHER EQUIPMENT	25	-O1	0	387,625.05	145,262	242,363	11,424	2.95	21.2
TOTAL DISTRIBUTION PLANT					1,048,671,849.14	273,233,295	1,032,581,201	25,242,997	2.41	
GENERAL PLANT										

**SURVIVOR CURVES, NET SALVAGE PERCENTS AND CALCULATED ANNUAL ACCRUAL
RELATED TO GAS PLANT AS OF SEPTEMBER 30, 2024**

PUBLIC ADVOCATE PROPOSED

ACCOUNT		SURVIVOR CURVE		NET SALVAGE PERCENT	ORIGINAL COST AS OF SEPTEMBER 30, 2024	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL AMOUNT	CALCULATED ANNUAL ACCRUAL RATE	COMPOSITE REMAINING LIFE
(1)		(2)		(3)	(4)	(5)	(6)	(7)	(8)=(7)/(4)	(9)
390.01	STRUCTURES AND IMPROVEMENTS	40	-R1	0	43,420,758.03	4,495,281	38,925,477	1,078,619	2.48	36.1
390.51	LEASEHOLD IMPROVEMENTS	15	-S1	0	5,716.18	5,716	0	0	0.00	0
391.01	OFFICE FURNITURE AND EQUIPMENT	20	-SQ	0	2,405,229.07	617,000	1,788,229	120,236	5.00	14.9
391.03	COMPUTER HARDWARE									
	FULLY ACCRUED				792,090.92	792,091	0	0	0	0
	AMORTIZED	5	-SQ	0	1,737,545.52	1,116,000	621,546	347,482	20.00	1.8
	TOTAL COMPUTER HARDWARE				2,529,636.44	1,908,091	621,546	347,482	13.74	
391.07	IPAD HARDWARE									
	FULLY ACCRUED				1,709.50	1,710	0	0	0	0
	AMORTIZED	5	-SQ	0	22,042.82	11,598	10,445	4,409	20.00	2.4
	TOTAL IPAD HARDWARE				23,752.32	13,308	10,445	4,409	18.56	
	TOTAL OFFICE FURNITURE AND EQUIPMENT				4,958,617.83	2,538,399	2,420,220	472,127	9.52	19.1
	TRANSPORTATION EQUIPMENT									
392.01	OTHER	12	-S1.5	0	383,367.55	151,608	231,759	33,257	8.67	7.0
392.03	LIGHT TRUCKS	9	-L3	20	25,316,342.20	7,363,219	12,889,855	2,465,220	9.74	5.2
392.04	MEDIUM TRUCKS	8	-L2	25	3,598,920.07	1,943,876	755,314	103,713	2.88	7.3
392.05	HEAVY TRUCKS	12	-R3	5	6,689,837.35	2,423,289	3,932,056	544,874	8.14	7.2
392.06	TRAILERS	12	-S1	10	1,475,868.36	819,731	508,551	53,160	3.60	9.6
	TOTAL TRANSPORTATION EQUIPMENT				37,464,335.53	12,701,723	18,317,535	3,200,224	8.54	36.3
393.00	STORES EQUIPMENT	25	-SQ	0	276,835.74	60,500	216,336	11,083	4.00	19.5
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	25	-SQ	0	11,999,362.56	3,595,000	8,404,363	480,250	4.00	17.5
395.00	LABORATORY EQUIPMENT									
	FULLY ACCRUED				9,631.71	9,632	0	0	0	0
	AMORTIZED	20	-SQ	0	37,591.43	29,260	8,331	1,879	5.00	4.4
	TOTAL LABORATORY EQUIPMENT				47,223.14	38,892	8,331	1,879	3.98	
396.00	POWER OPERATED EQUIPMENT	15	-L2	10	7,810,142.47	3,810,496	3,218,633	320,026	4.10	10.1
397.00	COMMUNICATION EQUIPMENT									
	FULLY ACCRUED				175,556.28	175,556	0	0	0	0
	AMORTIZED	15	-SQ	0	916,116.64	547,200	368,917	61,062	6.67	6.0
	TOTAL COMMUNICATION EQUIPMENT				1,091,672.92	722,756	368,917	61,062	5.59	
398.00	MISCELLANEOUS EQUIPMENT	20	-SQ	0	100,965.45	26,600	74,365	5,053	5.00	14.7
	TOTAL GENERAL PLANT				107,175,629.85	27,995,363	71,954,176	5,630,323	5.25	

**SURVIVOR CURVES, NET SALVAGE PERCENTS AND CALCULATED ANNUAL ACCRUAL
RELATED TO GAS PLANT AS OF SEPTEMBER 30, 2024**

PUBLIC ADVOCATE PROPOSED

ACCOUNT		SURVIVOR	NET	ORIGINAL COST	BOOK	FUTURE	CALCULATED		COMPOSITE
		CURVE	SALVAGE	AS OF	DEPRECIATION	ACCRUALS	ANNUAL ACCRUAL	RATE	REMAINING
(1)		(2)	PERCENT	SEPTEMBER 30, 2024	RESERVE	(6)	AMOUNT	(8)=(7)/(4)	LIFE
			(3)	(4)	(5)		(7)		(9)
TOTAL DEPRECIABLE PLANT				<u>1,163,637,345.14</u>	<u>307,072,941</u>	<u>1,107,071,978</u>	<u>31,155,924</u>	<u>2.68</u>	
UNRECOVERED RESERVE TO BE AMORTIZED									
391.01	OFFICE FURNITURE AND EQUIPMENT				(206,011)		41,202		
391.03	OFFICE FURNITURE AND EQUIPMENT - COMPUTER HARDWARE				(726,591)		145,318		
391.04	OFFICE FURNITURE AND EQUIPMENT - SOFTWARE				114,834		(22,967)		
391.07	OFFICE FURNITURE AND EQUIPMENT - IPAD HARDWARE				9,426		(1,885)		
393.00	STORES EQUIPMENT				(14,889)		2,978		
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT				(1,365,069)		273,014		
395.00	LABORATORY EQUIPMENT				(13,884)		2,777		
397.00	COMMUNICATION EQUIPMENT				(48,394)		9,679		
398.00	MISCELLANEOUS EQUIPMENT				<u>25,794</u>		<u>(5,159)</u>		
TOTAL UNRECOVERED RESERVE TO BE AMORTIZED					(2,224,784)		444,957		
NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED									
301.00	ORGANIZATION			256.00	256				
303.02	MISCELLANEOUS INTANGIBLE PLANT - TRADEMARKS			302,000.00					
374.01	LAND			325,130.37					
374.02	LAND AND LAND RIGHTS			176,100.00					
389.01	LAND			<u>5,666,731.18</u>					
TOTAL NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED				<u>6,470,217.55</u>	<u>256</u>				
TOTAL GAS PLANT				<u>1,170,107,562.69</u>	<u>304,848,414</u>		<u>31,600,881</u>		

NOTES NEW ADDITIONS FOR ACCOUNT 392.02 TRANSPORTATION EQUIPMENT - CARS WILL HAVE A DEPRECIATION RATE OF 10.43% BASED ON A SURVIVOR CURVE OF 9-S3 AND NET SALVAGE OF 10 PERCENT.

BLACK HILLS NEBRASKA GAS, LLC

COMPARISON OF ACCRUAL RATES AND ANNUAL ACCRUAL AMOUNTS
AS OF SEPTEMBER 30, 2024

ACCOUNT				ORIGINAL COST AS OF SEPTEMBER 30, 2024		BOOK DEPRECIATION RESERVE		CURRENT		COMPANY PROPOSED			PUBLIC ADVOCATE PROPOSED			
								CALCULATED ANNUAL ACCRUAL		CALCULATED ANNUAL ACCRUAL		INCREASE FROM CURRENT	CALCULATED ANNUAL ACCRUAL		INCREASE FROM COMPANY	INCREASE FROM CURRENT
								AMOUNT	RATE	AMOUNT	RATE		AMOUNT	RATE		
DEPRECIABLE PLANT																
INTANGIBLE PLANT																
302.00	FRANCHISES AND CONSENT		121,062.49		120,416	702	0.58%	832	0.69%	130	832	0.69%	0	130		
303.00	MISCELLANEOUS INTANGIBLE PLANT		742,880.94		591,828	49,104	6.61%	201,405	27.11%	152,301	201,405	27.11%	0	152,301		
303.01	MISCELLANEOUS INTANGIBLE PLANT - EASEMENTS		500,000.00		405,187	25,250	5.05%	25,283	5.06%	33	25,283	5.06%	0	33		
TOTAL INTANGIBLE PLANT			1,363,943.43		1,117,431	75,057	5.50%	227,520	16.68%	152,463	227,520	16.68%	0	152,463		
TRANSMISSION PLANT																
365.03	LAND AND LAND RIGHTS - RIGHTS OF WAY		170,272.49		123,290	1,294	0.76%	1,261	0.74%	(33)	1,261	0.74%	0	(33)		
366.01	STRUCTURES AND IMPROVEMENTS		8,173.65		7,151	40	0.49%	36	0.44%	(4)	36	0.44%	0	(4)		
367.00	MAINS		5,572,872.00		4,201,069	27,307	0.49%	43,296	0.78%	15,989	43,296	0.78%	0	15,989		
369.03	MEASURING AND REGULATING STATION EQUIPMENT		674,604.58		395,343	14,032	2.08%	10,491	1.56%	(3,541)	10,491	1.56%	0	(3,541)		
TOTAL TRANSMISSION PLANT			6,425,922.72		4,726,852	42,673	0.66%	55,084	0.86%	12,411	55,084	0.86%	0	12,411		
DISTRIBUTION PLANT																
374.03	LAND AND LAND RIGHTS		7,863,066.29		2,460,119	74,699	0.95%	82,859	1.05%	8,160	82,859	1.05%	0	8,160		
375.01	STRUCTURES AND IMPROVEMENTS		3,909,712.00		1,668,962	29,714	0.76%	67,296	1.72%	37,582	67,296	1.72%	0	37,582		
375.20	STRUCTURES AND IMPROVEMENTS - OTHER STRUCTURES		12,119.44		3,193	259	2.14%	255	2.10%	(4)	255	2.10%	0	(4)		
376.00	MAINS		542,138,340.23		177,345,253	7,427,295	1.37%	8,776,497	1.62%	1,349,202	7,512,633	1.39%	(1,263,864)	85,338		
378.00	MEASURING AND REGULATING STATION EQUIPMENT		38,178,179.10		8,125,543	1,034,629	2.71%	802,486	2.10%	(232,143)	802,486	2.10%	0	(232,143)		
379.00	MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE		4,441,003.48		2,378,695	62,618	1.41%	74,546	1.68%	11,928	74,546	1.68%	0	11,928		
380.00	SERVICES		278,292,187.38		56,562,420	7,458,231	2.68%	11,655,757	4.19%	4,197,526	8,555,013	3.07%	(3,100,744)	1,096,782		
381.00	METERS															
	SMALL VOLUME AND OTHER		24,605,389.35		(907,168)	784,912	3.19%	2,170,710	8.82%	1,385,798	1,385,438	5.63%	(785,272)	600,526		
	ERT, AMR AND AMI		15,039,182.75		(2,009,589)	964,012	6.41%	2,345,228	15.59%	1,381,216	2,345,228	15.59%	0	1,381,216		
TOTAL METERS			39,644,572.10		(2,916,757)	1,748,924	4.41%	4,515,938	11.39%	2,767,014	3,730,666	9.41%	(785,272)	1,981,742		
382.01	METER INSTALLATIONS		15,682,125.44		8,345,479	418,713	2.67%	374,799	2.39%	(43,914)	319,841	2.04%	(54,958)	(98,872)		
383.01	HOUSE REGULATORS		109,537,005.44		19,894,476	2,935,592	2.68%	3,637,153	3.32%	701,561	3,637,153	3.32%	0	701,561		
383.71	HOUSE REGULATORS - FARM TAPS		289,365.80		59,809	6,395	2.21%	6,345	2.19%	(50)	6,345	2.19%	0	(50)		
384.01	HOUSE REGULATOR INSTALLATIONS		855,208.60		(419,351)	10,348	1.21%	134,426	15.72%	124,078	134,426	15.72%	0	124,078		
385.00	INDUSTRIAL MEASURING AND REGULATING EQUIPMENT		7,406,059.92		(447,344)	191,076	2.58%	302,437	4.08%	111,361	302,437	4.08%	0	111,361		
386.00	OTHER PROPERTY ON CUSTOMERS' PREMISES		35,278.87		27,536	367	1.04%	5,618	15.92%	5,251	5,618	15.92%	0	5,251		
387.00	OTHER EQUIPMENT		387,625.05		145,262	7,985	2.06%	11,424	2.95%	3,439	11,424	2.95%	0	3,439		
TOTAL DISTRIBUTION PLANT			1,048,671,849.14		273,233,295	21,406,844	2.04%	30,447,836	2.90%	9,040,992	25,242,997	2.41%	(5,204,839)	3,836,153		
GENERAL PLANT																
390.01	STRUCTURES AND IMPROVEMENTS		43,420,758.03		4,495,281	1,293,939	2.98%	1,078,619	2.48%	(215,320)	1,078,619	2.48%	0	(215,320)		
390.51	LEASEHOLD IMPROVEMENTS		5,716.18		5,716	530	9.28%	0	0.00%	(530)	0	0.00%	0	(530)		

BLACK HILLS NEBRASKA GAS, LLC

COMPARISON OF ACCRUAL RATES AND ANNUAL ACCRUAL AMOUNTS
AS OF SEPTEMBER 30, 2024

ACCOUNT		ORIGINAL COST AS OF SEPTEMBER 30, 2024	BOOK DEPRECIATION RESERVE	CURRENT		COMPANY PROPOSED			PUBLIC ADVOCATE PROPOSED			
				CALCULATED ANNUAL ACCRUAL		CALCULATED ANNUAL ACCRUAL		INCREASE FROM CURRENT	CALCULATED ANNUAL ACCRUAL		INCREASE FROM COMPANY	INCREASE FROM CURRENT
				AMOUNT	RATE	AMOUNT	RATE		AMOUNT	RATE		
391.01	OFFICE FURNITURE AND EQUIPMENT	2,405,229.07	617,000	120,261	5.00%	120,236	5.00%	(25)	120,236	5.00%	0	(25)
391.03	COMPUTER HARDWARE FULLY ACCRUED AMORTIZED	792,090.92 1,737,545.52	792,091 1,116,000	347,509	20.00%	347,482	20.00%	0 (27)	0 347,482	0.00% 20.00%	0 0	0 (27)
	TOTAL COMPUTER HARDWARE	2,529,636.44	1,908,091	347,509	13.74%	347,482	13.74%	(27)	347,482	13.74%	0	(27)
391.07	IPAD HARDWARE FULLY ACCRUED AMORTIZED	1,709.50 22,042.82	1,710 11,598	4,409	20.00%	4,409	20.00%	0 0	0 4,409	0.00% 20.00%	0 0	0 0
	TOTAL IPAD HARDWARE	23,752.32	13,308	4,409	18.56%	4,409	18.56%	0	4,409	18.56%	0	0
	TOTAL OFFICE FURNITURE AND EQUIPMENT	4,958,617.83	2,538,399	472,179	9.52%	472,127	9.52%	(52)	472,127	9.52%	0	(52)
	TRANSPORTATION EQUIPMENT											
392.01	OTHER	383,367.55	151,608	14,683	3.83%	33,257	8.67%	18,574	33,257	8.67%	0	18,574
392.02	CARS				9.87%		10.43%	0			0	0
392.03	LIGHT TRUCKS	25,316,342.20	7,363,219	1,772,144	7.00%	2,465,220	9.74%	693,076	2,465,220	9.74%	0	693,076
392.04	MEDIUM TRUCKS	3,598,920.07	1,943,876	452,024	12.56%	103,713	2.88%	(348,311)	103,713	2.88%	0	(348,311)
392.05	HEAVY TRUCKS	6,689,837.35	2,423,289	318,436	4.76%	544,874	8.14%	226,438	544,874	8.14%	0	226,438
392.06	TRAILERS	1,475,868.36	819,731	97,260	6.59%	53,160	3.60%	(44,100)	53,160	3.60%	0	(44,100)
	TOTAL TRANSPORTATION EQUIPMENT	37,464,335.53	12,701,723	2,654,547	7.09%	3,200,224	8.54%	545,677	3,200,224	8.54%	0	545,677
393.00	STORES EQUIPMENT	276,835.74	60,500	11,073	4.00%	11,083	4.00%	10	11,083	4.00%	0	10
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	11,999,362.56	3,595,000	479,975	4.00%	480,250	4.00%	275	480,250	4.00%	0	275
395.00	LABORATORY EQUIPMENT FULLY ACCRUED AMORTIZED	9,631.71 37,591.43	9,632 29,260	1,880	5.00%	0 1,879	0.00% 5.00%	0 (1)	0 1,879	0.00% 5.00%	0 0	0 (1)
	TOTAL LABORATORY EQUIPMENT	47,223.14	38,892	1,880	3.98%	1,879	3.98%	(1)	1,879	3.98%	0	(1)
396.00	POWER OPERATED EQUIPMENT	7,810,142.47	3,810,496	299,128	3.83%	320,026	4.10%	20,898	320,026	4.10%	0	20,898
397.00	COMMUNICATION EQUIPMENT FULLY ACCRUED AMORTIZED	175,556.28 916,116.64	175,556 547,200	61,105	6.67%	0 61,062	0.00% 6.67%	0 (43)	0 61,062	0.00% 6.67%	0 0	0 (43)
	TOTAL COMMUNICATION EQUIPMENT	1,091,672.92	722,756	61,105	5.60%	61,062	5.59%	(43)	61,062	5.59%	0	(43)
398.00	MISCELLANEOUS EQUIPMENT	100,965.45	26,600	5,048	5.00%	5,053	5.00%	5	5,053	5.00%	0	5
TOTAL GENERAL PLANT		107,175,629.85	27,995,363	5,279,405	4.93%	5,630,323	5.25%	350,919	5,630,323	5.25%	0	350,918
TOTAL DEPRECIABLE PLANT		1,163,637,345.14	307,072,941	26,803,979	2.30%	36,360,763	3.12%	9,556,785	31,155,924	2.68%	(5,204,839)	4,351,945
UNRECOVERED RESERVE TO BE AMORTIZED												

BLACK HILLS NEBRASKA GAS, LLC

COMPARISON OF ACCRUAL RATES AND ANNUAL ACCRUAL AMOUNTS
AS OF SEPTEMBER 30, 2024

ACCOUNT		ORIGINAL COST AS OF SEPTEMBER 30, 2024	BOOK DEPRECIATION RESERVE	CURRENT		COMPANY PROPOSED			PUBLIC ADVOCATE PROPOSED			
				CALCULATED		CALCULATED		INCREASE FROM CURRENT	CALCULATED		INCREASE FROM COMPANY	INCREASE FROM CURRENT
				ANNUAL ACCRUAL		ANNUAL ACCRUAL	RATE		ANNUAL ACCRUAL	RATE		
				AMOUNT	RATE	AMOUNT	RATE		AMOUNT	RATE		
391.01	OFFICE FURNITURE AND EQUIPMENT		(206,011)	70,784		41,202			41,202			
391.03	OFFICE FURNITURE AND EQUIPMENT - COMPUTER HARDWARE		(726,591)	177,238		145,318			145,318			
391.04	OFFICE FURNITURE AND EQUIPMENT - SOFTWARE		114,834	160,964		(22,967)			(22,967)			
391.07	OFFICE FURNITURE AND EQUIPMENT - IPAD HARDWARE		9,426	1,113		(1,885)			(1,885)			
393.00	STORES EQUIPMENT		(14,889)	(464)		2,978			2,978			
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT		(1,365,069)	(129,677)		273,014			273,014			
395.00	LABORATORY EQUIPMENT		(13,884)	1,323		2,777			2,777			
397.00	COMMUNICATION EQUIPMENT		(48,394)	(44,853)		9,679			9,679			
398.00	MISCELLANEOUS EQUIPMENT		25,794	(24,256)		(5,159)			(5,159)			
TOTAL UNRECOVERED RESERVE TO BE AMORTIZED			(2,224,784)	212,172		444,957			444,957			232,784
NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED												
301.00	ORGANIZATION	256.00	256									
303.02	MISCELLANEOUS INTANGIBLE PLANT - TRADEMARKS	302,000.00										
374.01	LAND	325,130.37										
374.02	LAND AND LAND RIGHTS	176,100.00										
389.01	LAND	5,666,731.18										
TOTAL NONDEPRECIABLE PLANT AND ACCOUNTS NOT STUDIED			6,470,217.55	256								
TOTAL GAS PLANT			1,170,107,562.69	304,848,414		36,805,720			31,600,881			

NOTES NEW ADDITIONS FOR ACCOUNT 392.02 TRANSPORTATION EQUIPMENT - CARS WILL HAVE A DEPRECIATION RATE OF 10.43% BASED ON A SURVIVOR CURVE OF 9-S3 AND NET SALVAGE OF 10 PERCENT.

PARAMETERS

ACCOUNT (1)		CURRENT		COMPANY PROPOSED				PUBLIC ADVOCATE PROPOSED					
		SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	INCREASE OVER EXISTING		SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	INCREASE OVER COMPANY		INCREASE OVER EXISTING	
						SURVIVOR CURVE LIFE (Years)	NET SALVAGE PERCENT			SURVIVOR CURVE LIFE (Years)	NET SALVAGE PERCENT	SURVIVOR CURVE LIFE (Years)	NET SALVAGE PERCENT
DEPRECIABLE PLANT													
INTANGIBLE PLANT													
302.00	FRANCHISES AND CONSENT	30 SQ	0	30 -SQ	0	0	0	30 -SQ	0	0	0	0	0
303.00	MISCELLANEOUS INTANGIBLE PLANT	15 SQ	0	15 -SQ	0	0	0	15 -SQ	0	0	0	0	0
303.01	MISCELLANEOUS INTANGIBLE PLANT - EASEMENTS	20 SQ	0	20 -SQ	0	0	0	20 -SQ	0	0	0	0	0
TRANSMISSION PLANT													
365.03	LAND AND LAND RIGHTS - RIGHTS OF WAY	70 R4	0	70 -R4	0	0	0	70 -R4	0	0	0	0	0
366.01	STRUCTURES AND IMPROVEMENTS	60 R4	0	60 -R4	0	0	0	60 -R4	0	0	0	0	0
367.00	MAINS	70 R3	0	70 -R3	(10)	0	(10)	70 -R3	(10)	0	0	0	(10)
369.03	MEASURING AND REGULATING STATION EQUIPMENT	45 R2	(5)	50 -R2	(5)	5	0	50 -R2	(5)	0	0	5	0
DISTRIBUTION PLANT													
374.03	LAND AND LAND RIGHTS	75 R4	0	75 -R4	0	0	0	75 -R4	0	0	0	0	0
375.01	STRUCTURES AND IMPROVEMENTS	60 R1	0	40 -R1	0	(20)	0	40 -R1	0	0	0	(20)	0
375.20	STRUCTURES AND IMPROVEMENTS - OTHER STRUCTURES	45 R3	0	45 -R3	0	0	0	45 -R3	0	0	0	0	0
376.00	MAINS	70 R2.5	(25)	70 -R2.5	(30)	0	(5)	75 -R2	(20)	5	10	5	5
378.00	MEASURING AND REGULATING STATION EQUIPMENT	45 S1	(15)	55 -R2	(20)	10	(5)	55 -R2	(20)	0	0	10	(5)
379.00	MEASURING AND REGULATING STATION EQUIPMENT - CITY GATE	60 R3	(15)	55 -R2	(20)	(5)	(5)	55 -R2	(20)	0	0	(5)	(5)
380.00	SERVICES	44 S1	(20)	42 -S1	(60)	(2)	(40)	47 -S1.5	(40)	5	20	3	(20)
381.00	METERS												
	SMALL VOLUME AND OTHER	26 R1.5	0	21 -S0.5	(2)	(5)	(2)	26 -R1.5	(2)	5	0	0	(2)
	ERT, AMR AND AMI	13 S1.5	0	12 -S1.5	0	(1)	0	12 -S1.5	0	0	0	(1)	0
TOTAL METERS													
382.01	METER INSTALLATIONS	36 R2	(2)	40 -R2.5	(5)	4	(3)	45 -R2.5	(5)	5	0	9	(3)
383.01	HOUSE REGULATORS	45 R2	(15)	42 -R2.5	(25)	(3)	(10)	42 -R2.5	(25)	0	0	(3)	(10)
383.71	HOUSE REGULATORS - FARM TAPS	45 R2	0	42 -R2.5	0	(3)	0	42 -R2.5	0	0	0	(3)	0
384.01	HOUSE REGULATOR INSTALLATIONS	47 R4	(5)	40 -S2.5	(25)	(7)	(20)	40 -S2.5	(25)	0	0	(7)	(20)
385.00	INDUSTRIAL MEASURING AND REGULATING EQUIPMENT	38 R0.5	0	30 -R0.5	0	(8)	0	30 -R0.5	0	0	0	(8)	0
386.00	OTHER PROPERTY ON CUSTOMERS' PREMISES	20 R4	0	20 -R4	0	0	0	20 -R4	0	0	0	0	0
387.00	OTHER EQUIPMENT	25 R2.5	0	25 -O1	0	0	0	25 -O1	0	0	0	0	0
GENERAL PLANT													
390.01	STRUCTURES AND IMPROVEMENTS	38 R2	(5)	40 -R1	0	2	5	40 -R1	0	0	0	2	5
390.51	LEASEHOLD IMPROVEMENTS	15 S1	0	15 -S1	0	0	0	15 -S1	0	0	0	0	0
391.01	OFFICE FURNITURE AND EQUIPMENT	20 SQ	0	20 -SQ	0	0	0	20 -SQ	0	0	0	0	0
391.03	COMPUTER HARDWARE												
	FULLY ACCRUED												
	AMORTIZED	5 SQ	0	5 -SQ	0	0	0	5 -SQ	0	0	0	0	0
TOTAL COMPUTER HARDWARE													
391.07	IPAD HARDWARE												
	FULLY ACCRUED												
	AMORTIZED	5 SQ	0	5 -SQ	0	0	0	5 -SQ	0	0	0	0	0

PARAMETERS

ACCOUNT		CURRENT		COMPANY PROPOSED				PUBLIC ADVOCATE PROPOSED							
		SURVIVOR CURVE	NET SALVAGE PERCENT	SURVIVOR CURVE	NET SALVAGE PERCENT	INCREASE OVER EXISTING		SURVIVOR CURVE	NET SALVAGE PERCENT	INCREASE OVER COMPANY		INCREASE OVER EXISTING			
						SURVIVOR CURVE LIFE	NET SALVAGE PERCENT			SURVIVOR CURVE LIFE	NET SALVAGE PERCENT				
(1)	(2)	(3)	(2)	(3)	(Years)		(2)	(3)	(Years)		(Years)				
	TOTAL IPAD HARDWARE														
	TOTAL OFFICE FURNITURE AND EQUIPMENT														
	TRANSPORTATION EQUIPMENT														
392.01	OTHER			12	-\$1.5	0	12	0	12	-\$1.5	0	0	12	0	
392.02	CARS			9	-\$3	10	9	10	9	-\$3	10	0	0	9	10
392.03	LIGHT TRUCKS	9 L3	25	9	-L3	20	0	(5)	9	-L3	20	0	0	0	(5)
392.04	MEDIUM TRUCKS	8 L2	25	8	-L2	25	0	0	8	-L2	25	0	0	0	0
392.05	HEAVY TRUCKS	11 R3	5	12	-R3	5	1	0	12	-R3	5	0	0	1	0
392.06	TRAILERS	12 S1	0	12	-S1	10	0	10	12	-S1	10	0	0	0	10
	TOTAL TRANSPORTATION EQUIPMENT														
393.00	STORES EQUIPMENT	25 SQ	0	25	-\$Q	0	0	0	25	-\$Q	0	0	0	0	0
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	25 SQ	0	25	-\$Q	0	0	0	25	-\$Q	0	0	0	0	0
395.00	LABORATORY EQUIPMENT FULLY ACCRUED AMORTIZED	20 SQ	0	20	-\$Q	0	0	0	20	-\$Q	0	0	0	0	0
	TOTAL LABORATORY EQUIPMENT														
396.00	POWER OPERATED EQUIPMENT	13 L1.5	10	15	-L2	10	2	0	15	-L2	10	0	0	2	0
397.00	COMMUNICATION EQUIPMENT FULLY ACCRUED AMORTIZED	15 SQ	0	15	-\$Q	0	0	0	15	-\$Q	0	0	0	0	0
	TOTAL COMMUNICATION EQUIPMENT														
398.00	MISCELLANEOUS EQUIPMENT	20 SQ	0	20	-\$Q	0	0	0	20	-\$Q	0	0	0	0	0

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-155**

DATE OF REQUEST: May 14, 2025
DATE RESPONSE DUE: May 27, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: May 27, 2025
SUBJECT: Depreciation

REQUEST:

PA-155. Depreciation: On page 10, lines 7–11, Mr. Spanos’s testimony makes this statement:

“For example, the full recovery of the service value of a \$20,000 regulator includes not only the \$20,000 of original cost, but also, on average, \$4,200 to remove the regulator at the end of its life and \$200 in salvage value.”

Assume the depreciation rate is being calculated at the time that regulator went into service and that regulator was expected to be in service for 40 years.

- (a) Is it Mr. Spanos’s position that the \$4,200 cost to remove that regulator is the expected cost at the time the regulator retires, and therefore the \$4,200 cost is stated in the inflated dollars from decades in the future? Please begin the response with “yes” or “no” and explain the response.
- (b) Assume the cost to remove that type of regulator is currently \$1,000, but it is expected that because of inflation, 40 years in the future the cost to remove that type of regulator would be \$4,200. (The \$4,200 amount is stated in the future dollars.) Is it Mr. Spanos’s position that \$4,200 amount stated in the future dollars is the amount that should be used in calculating the current depreciation rate? Please begin the response with “yes” or “no” and explain the response.

RESPONSE:

- (a) As stated in the quote above from the Direct Testimony of John J. Spanos, \$4,200 is the cost to remove the regulator at the end of its life.

- (b) Yes, because the \$4,200 is the cost to remove the regulator at the time it is retired. Depreciation recovers the full-service value of plant in service over the service life of the property. The service value includes the original cost, recorded at the price level at the time of installation, and the net salvage, recorded at the time of retirement. This is the most equitable approach because it fully recovers the service value on a systematic and rational basis over the service life of the property.

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-152**

DATE OF REQUEST: May 14, 2025
DATE RESPONSE DUE: May 27, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: May 27, 2025
SUBJECT: Depreciation

REQUEST:

PA-152. Depreciation: Please refer to page 140 of Direct Exhibit JJS-2 [the Depreciation Study of BH Nebraska Gas]. Page 140 of Direct Exhibit JJS-2, for Account 380.00 Services, shows 173% for the year 2023 Cost of Removal Percent.

- (a) Is it correct the 173% was calculated by dividing the \$2,391,234 Cost of Removal Amount, which is the Cost of Removal incurred in the year 2023, by the \$1,383,516 Regular Retirement amount, which is the Original Cost of the investments which retired in 2023? Please begin the response with “yes” or “no.”
- (b) Is it correct the 173% was calculated by division in which the numerator is measured in dollars recorded at the time of retirement, while the denominator is measured in the original cost recorded at the time of installation? Please begin the response with “yes” or “no.”
- (c) If the response to either part (a) or part (b) is “no,” please provide the corrected statement and provide the workpapers showing the calculation of the 173%.
- (d) Is it correct that the 173% so calculated is impacted by the inflation that occurred between the time the plant went into service (when the Original Cost was recorded) and the time the plant retired (when the Cost of Removal was recorded)? Please begin the response with “yes” or “no.”
- (e) If the response to part (d) is “no,” please provide the corrected statement and provide the explanation and support for that corrected statement.

RESPONSE:

- (a) Yes.
- (b) Yes. The average age of retirements in 2023 for this account was 32.5.
- (c) See the responses provided in parts (a) and (b).
- (d) The retirements are measured at original cost and the cost of removal and gross salvage are expressed as 2023 costs. The inflation that occurred between installation and retirement can impact the -173% net salvage. However, as noted in part (b), the average age of retirement is 32.5 years, which is lower than the 42-year average service life estimate for this account. Accordingly, the historical data incorporates less inflation than will be experienced over the service lives of the assets in this account.

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-154**

DATE OF REQUEST: May 14, 2025
DATE RESPONSE DUE: May 27, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: May 27, 2025
SUBJECT: Depreciation

REQUEST:

PA-154. Depreciation: Please refer to page 10 of the Direct testimony of John J. Spanos (the “Spanos Direct Testimony” or “Mr. Spanos’s testimony”).

On lines 14–16 of page 10, Mr. Spanos made this statement:

“I estimated the net salvage percentages by reviewing the Company’s account specific historical gross salvage and cost of removal data for the period 2010 through 2024 as a percentage of the associated retired plant,”

- (a) Please admit or deny that page 157 of NARUC’s “Public Utility Depreciation Practices” states:

“The theory behind this requirement is that, since most physical plant placed in service will have some residual value at the time of its retirement, the original cost recovered through depreciation should be reduced by that amount.” (Emphasis added).

- (b) Please admit or deny that on page 162 of the NARUC “Public Utility Depreciation Practices,” in the example shown by NARUC, the net salvage is positive, and the amount of original cost to be recovered through depreciation is reduced by the Net Salvage.
- (c) Please admit or deny that in the other example shown by NARUC on page 164 of the NARUC’s “Public Utility Depreciation Practices,” the net salvage is also positive, and the amount of original cost to be recovered through depreciation is reduced by the Net Salvage.
- (d) Please admit or deny that nowhere in NARUC’s “Public Utility Depreciation Practices” does NARUC show any example in which the

method that includes dividing the dollars of net salvage by the dollars of original cost of plant retired is applied when the net salvage is **negative**, (where the Cost of Removal is larger than the Gross Salvage). If the response is “deny,” please cite the page in NARUC’s “Public Utility Depreciation Practices” that includes this example.

- (e) For any of parts (a), (b), (c), or (d), where the response is “deny,” please provide the corrected statement and provide the support for the corrected statement.

RESPONSE:

BH Nebraska Gas objects to this request to the extent that it calls for information that is not relevant nor likely to lead to relevant information, calls for BH Nebraska Gas to prepare a study or conduct analysis that does not currently exist, or call for voluminous amounts of data or information that would create an administrative burden on BH Nebraska Gas to produce.

Without waiving or limiting its objection, BH Nebraska Gas responds as follows:

- (a) The retirements are measured at original cost and the cost of removal and gross salvage are expressed as 2023 costs. The inflation that occurred between installation and retirement can impact the -30% net salvage. However, as noted in part (b), the average age of retirement is 13.6 years, which is much lower than the 40-year average service life estimate for this account. Accordingly, the historical data incorporates less inflation than will be experienced over the service lives of the assets in this account.
- (b) Mr. Spanos is unclear as to the point of these questions, as a textbook example is not controlling on the method of recovery, particularly when the language cited in part (a), is clear that cost of removal is included and analyzed in the same manner as the example cited here. Mr. Spanos would agree that the example shows positive salvage, but that the textbook makes clear that cost of removal should be analyzed in the same manner.
- (c) See the response to part (b).
- (d) Mr. Spanos would agree that there is not a specific example showing negative net salvage. However, the plain text of NARUC, discussed in part (a), makes clear that the same analysis and approach applies to cost of removal as gross salvage.

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-149**

DATE OF REQUEST: May 14, 2025
DATE RESPONSE DUE: May 27, 2025
REQUESTOR: Public Advocate
WITNESS: Lori Mack
DATE RESPONDED: May 27, 2025
SUBJECT: Depreciation

REQUEST:

PA-149. Depreciation: Please see the attached “Attachment 1-Split Accrual.” The data in columns A and B of this Attachment are from page 51 of Direct Exhibit JJS-1 (the Company Depreciation Study). In columns C and D, we have calculated the amount of the Annual Accrual Amount from column B that is the Accrual Amount for Net Salvage.

- (a) For each account shown, is the amount in column D the Annual Accrual Amount for Net Salvage (plus or minus 2% to allow for rounding) in the Black Hills’ proposal in this case?
- (b) If the response to part (a) is not an unqualified affirmative, then for each Transmission and Distribution account/subaccount on page 51 of Direct Exhibit JJS1, please break down the annual Accrual Amount proposed by Black Hills Nebraska Gas into (1) the accrual amount that is for Net Salvage and (2) the accrual amount for other than Net Salvage, and provide the workpapers in Excel that support the response provided.

RESPONSE:

- (a) Based on the table presented which is the calculation of the existing plant balance, the amount in Column D is the annual accrual amount for net salvage in this case. This represents the annual amount that will equally recover the net salvage costs for all assets over the life of the assets. Therefore, it should be clear the annual accrual amount and the net salvage accrual reflect the overall recovery over the life of the assets in each account. The annual accrual reflects the future amount to be recovered equitably over the life of the assets.
- (b) Not applicable.

ATTACHMENT(S):

None

Attachment 1-Split Accrual

Black Hills -NEB

**COLUMNS A AND B FROM
PAGE 51- OF DIRECT EXHIBIT JJS-2**

NET SALVAGE PERCENT	COMPANY PROPOSED ANNUAL ACCRUAL AMOUNT
A	B

TRANSMISSION PLANT

365.03	LAND AND LAND RIGHTS - RIGHTS OF WAY	0	1,261
366.01	STRUCTURES AND IMPROVEMENTS	0	36
367.00	MAINS	(10)	43,296
369.03	MEASURING AND REGULATING STATION EQUIP	(5)	10,491

DISTRIBUTION PLANT

374.03	LAND AND LAND RIGHTS	0	82,859
375.01	STRUCTURES AND IMPROVEMENTS	0	67,296
375.20	STRUCTURES AND IMPROVEMENTS - OTHER ST	0	255
376.00	MAINS	(30)	8,776,497
378.00	MEASURING AND REGULATING STATION EQUIP	(20)	802,486
379.00	MEASURING AND REGULATING STATION EQUIP	(20)	74,546
380.00	SERVICES	(60)	11,655,757
381.00	METERS		
	SMALL VOLUME AND OTHER	(2)	2,170,710
	ERT, AMR AND AMI	0	2,345,228
382.01	METER INSTALLATIONS	(5)	374,799
383.01	HOUSE REGULATORS	(25)	3,637,153
383.71	HOUSE REGULATORS - FARM TAPS	0	6,345
384.01	HOUSE REGULATOR INSTALLATIONS	(25)	134,426
385.00	INDUSTRIAL MEASURING AND REGULATING EQI	0	302,437
386.00	OTHER PROPERTY ON CUSTOMERS' PREMISES	0	5,618
387.00	OTHER EQUIPMENT	0	11,424

**CALCULATION OF
NET SALVAGE ACCRUAL IN COMPANY PROPOSAL**

PERCENT OF ACCRUAL FOR NET SALVAGE	ACCRUAL AMOUNT FOR NET SALVAGE	ACCRUAL AMOUNT OTHER THAN FOR NET SALVAGE
C = -A/(100-A)	D = C * B	E= B -D
0.00%	\$ -	\$ 1,261
0.00%	\$ -	\$ 36
9.09%	\$ 3,936	\$ 39,360
4.76%	\$ 500	\$ 9,991
0.00%	\$ -	\$ 82,859
0.00%	\$ -	\$ 67,296
0.00%	\$ -	\$ 255
23.08%	\$ 2,025,345	\$ 6,751,152
16.67%	\$ 133,748	\$ 668,738
16.67%	\$ 12,424	\$ 62,122
37.50%	\$ 4,370,909	\$ 7,284,848
1.96%	\$ 42,563	\$ 2,128,147
0.00%	\$ -	\$ 2,345,228
4.76%	\$ 17,848	\$ 356,951
20.00%	\$ 727,431	\$ 2,909,722
0.00%	\$ -	\$ 6,345
20.00%	\$ 26,885	\$ 107,541
0.00%	\$ -	\$ 302,437
0.00%	\$ -	\$ 5,618
0.00%	\$ -	\$ 11,424

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-153**

DATE OF REQUEST: May 14, 2025
DATE RESPONSE DUE: May 27, 2025
REQUESTOR: Public Advocate
WITNESS: Jennifer Bingaman, Kevin Jarosz, Tatyana Bannan
DATE RESPONDED: May 27, 2025
SUBJECT: Depreciation

REQUEST:

PA-153. Depreciation:

- (a) Does Black Hills Nebraska Gas have, or in recent years, has it had, a program to replace cast iron mains or other specific types of mains or services?
- (b) If so, in what year did this program begin, and in what year is it expected to be completed?
- (c) What is the name of this program?

RESPONSE:

- (a) Yes, BH Nebraska Gas has several replacement programs. Details for these programs are outlined in the SSIR Filing. See Ms. Tatyana Bannan's Direct Testimony.
- (b) Start and completion dates vary for each program. Completion dates are approximate and may be impacted by increases in construction and material cost.
 - Bare Steel Program – The current program began in 2021 and is estimated to be complete in 2034.
 - Obsolete Pipe Program – The current program began in 2016 and is estimated to be complete in 2053.
 - Top of Ground Program – The current program began in approximately 2010 and is estimated to be complete in 2029.
 - Shallow Main Program – The current program began in 2021 and is estimated to be complete in 2049.

(c) See response to part (b) of this response for names of each program.

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-218**

DATE OF REQUEST: June 16, 2025
DATE RESPONSE DUE: June 26, 2025
REQUESTOR: Public Advocate
WITNESS: Lori Mack and John Spanos
DATE RESPONDED: June 24, 2025
SUBJECT: Depreciation

REQUEST:

PA-218. Depreciation. Please refer to “JJS-WP- 3 BH Nebraska Gas Net Salvage” which is an excel file provided in this proceeding by Black Hills Nebraska as one of the workpapers of John J. Spanos.

Line 13,233 of that Excel document “JJS-WP- 3 BH Nebraska Gas Net Salvage” shows a Removal Cost of \$2,929,716.03 in Account 38099 with a Transaction Year of 2022.

- (a) Provide an explanation of what occurred that resulted in this \$2,929,716.03 being recorded as a Removal Cost in 2022.
- (b) Does Black Hills Nebraska claim that all of this \$2,929,716.03 is the Cost of Removal (or Cost of Retirement) directly incurred in workorders for the physical retirement/removal of Services (Account 380)? If the response is “yes”, provide the workpapers and workorders that support that response.
- (c) Provide the dollar amount of this \$2,929,716.03 that were not costs incurred in work orders for the physical retirement/removal of Services. Explain what resulted in the amounts provided in response to this part being recorded as Cost of Removal in 2022.
- (d) Line 13,238 of that excel document “JJS-WP- 3 BH Nebraska Gas Net Salvage” shows a Removal Cost of \$2,170,391.23 in Account 38099 with a Transaction Year of 2022. Answer parts (a), (b and (c) of this request for this \$2,170,391.23.

- (e) Line 13,592 of that excel document “JJS WP- 3 BH Nebraska Gas Net Salvage” shows a Removal Cost of \$1,020,719.11 in Account 38099 with a Transaction Year of 2023. Answer parts (a), (b and (c) of this request for this \$1,020,719.11.
- (f) Line 3,752 of that excel document “JJS WP- 3 BH Nebraska Gas Net Salvage” shows a Removal Cost of \$939,520.00 in Account 37699 with a Transaction Year of 2020. Answer parts (a), (b and (c) of this request for this \$939,520.00 for Mains (Account 376).

RESPONSE:

- (a) A bulk of the dollars (\$2,924,427.18) relate to the unitization of 10 work orders relating to At Risk Meter Replacement (“ARMR”) projects that were placed into service in 2021. The remainder belonged to smaller replacement projects.
- (b) Yes, the Company utilized the contractor invoices to allocate charges to Cost of Removal for the ARMR projects. If the contractor invoices don’t specify the Cost of Removal charges, the project manager can estimate the costs through the work management system which will allocate a portion of the overall cost of the project to Cost of Removal. See Attachment PA 8-218a - August 2022 Project Closures for a summary of charges by work order showing the allocation to Cost of Removal.
- (c) N/A – the whole amount is considered part of Cost of Removal.
- (d) These work orders were unitized in 2022, so that is when the Cost of Removal was posted in the system. See Attachment PA 8-218b - September 2022 Project Closures for a summary of charges by work order showing the allocation to Cost of Removal. See response to part (c).
- (e) These work orders were unitized in 2023, so that is when the Cost of Removal was posted in the system. See Attachment PA 8-218c - March 2023 Project Closures for a summary of charges by work order showing the allocation to Cost of Removal. See response to part (c).
- (f) These work orders were unitized in 2020, so that is when the Cost of Removal was posted in the system. See Attachment PA 8-218d - June 2020 Project Closures for a summary of charges by work order showing the allocation to Cost of Removal. See response to part (c).

ATTACHMENT(S):

- Attachment PA 8-218a - August 2022 Project Closures

- Attachment PA 8-218b - September 2022 Project Closures
- Attachment PA 8-218c - March 2023 Project Closures
- Attachment PA 8-218d - June 2020 Project Closures

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-332**

DATE OF REQUEST: July 21, 2025
DATE RESPONSE DUE: July 31, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: July 31, 2025
SUBJECT: Depreciation

REQUEST:

PA-332. Depreciation: Please refer to page 141 of Direct Exhibit JJS-2 (Depreciation Study of BH Nebraska Gas).

- (a) The Cost of Removal amount of \$1,120,891 shown for the year 2021 is over 100 times the Cost of Removal shown for any other year. Please explain what occurred that resulted in this extraordinarily high and Cost of Removal amount being recorded in the year 2021.
- (b) Is it BHN's position that this cost of removal is the result of activities which actually physically occurred during the year 2021? Explain the response.
- (c) Was this the Cost of Removal recorded in the year 2021 for events which had actually occurred in several prior years? Explain the response.

RESPONSE:

- (a) The cost of removal recorded in 2021 was related to the retirements made in 2021 and prior years as well. A significant portion of these costs is associated with a multi-year project focused on removing residential customer meters that were failing. This project spanned from 2017 through 2020. Although the physical work was completed over those years, the associated work order was unitized in 2021, which triggered the posting of the cost of removal in PowerPlan.
- (b) It is very common that recording of retirements and cost of removal are not always time synchronized. It is likely that some of the cost of removal recorded in 2021 relates to retirements made in prior years. Consequently we analyze net salvage not only annually but with 3-year rolling bands and a most recent 5-year average. Presenting the data in

that way helps to normalize the analysis and look at the overall picture instead of focusing on single years of data to estimate an appropriate net salvage percentage.

(c) Please see the responses to parts (a) and (b).

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-333**

DATE OF REQUEST: July 21, 2025
DATE RESPONSE DUE: July 31, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: July 31, 2025
SUBJECT: Depreciation

REQUEST:

PA-333. Depreciation: Please refer to page 143 of Direct Exhibit JJS-2 (Depreciation Study of BH Nebraska Gas).

- (a) The Cost of Removal amount of \$316,012 shown for the year 2022 is over 7 times the Cost of Removal shown for any other year. Please explain what occurred that resulted in this extraordinarily high and Cost of Removal amount being recorded in the year 2022.
- (b) Is it BHN's position that this cost of removal recorded in the year 2022 is the result of activities which actually physically occurred during the year 2022? Explain the response.
- (c) Was this the Cost of Removal recorded in 2022 for events which had actually occurred in several prior years? Explain the response.

RESPONSE:

- (a) The cost of removal recorded in 2022 was related to the retirements made in 2022 and prior years as well. This cost of removal relates to retirements in the At Risk Meter Removal ("ARMR") projects as well as retirements from the removal of copper loops.
- (b) It is very common that recording of retirements and cost of removal are not always time synchronized. It is likely that some of the cost of removal recorded in 2022 relates to retirements made in prior years. Consequently, we analyze net salvage not only annually but with 3-year rolling bands and a most recent 5-year average. Presenting the data in that way helps to normalize the analysis and look at the overall picture instead of focusing on single years of data to estimate an appropriate net salvage percentage.

(c) Please see the responses to parts (a) and (b).

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-334**

DATE OF REQUEST: July 21, 2025
DATE RESPONSE DUE: July 31, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: July 31, 2025
SUBJECT: Depreciation

REQUEST:

PA-334. Depreciation: Please refer to page 144 of Direct Exhibit JJS-2 (Depreciation Study of BH Nebraska Gas).

- (a) The Cost of Removal amounts shown for the years 2022, 2023, 2024 are each over 8 times the Cost of Removal shown for any year prior to 2022. Please explain what occurred that resulted in this extraordinarily high and Cost of Removal amount being recorded in the years 2022, 2023, 2024.
- (b) Is it BHN's position that this cost of removal amounts recorded in the years 2022, 2023, and 2024 are the result of activities which actually physically occurred during the years 2022, 2023, 2024? Explain the response.
- (c) Were these Cost of Removal recorded in the years 2022, 2023, and 2024 for events which had actually occurred in several prior years? Explain the response.

RESPONSE:

- (a) The cost of removal recorded in 2022-2024 was related to the retirements made in 2022-2024 and prior years as well. The increased cost of removal seen in these years was also a result of increased retirements during these years. The Company has also been completing numerous at risk meter replacement projects which have led to increased cost of removal.
- (b) It is very common that recording of retirements and cost of removal are not always time synchronized. It is likely that the some of the cost of removal recorded in 2022-2024 relates to retirements made in prior

years. Consequently, we analyze net salvage not only annually but with 3-year rolling bands and a most recent 5-year average. Presenting the data in that way helps to normalize the analysis and look at the overall picture instead of focusing on single years of data to estimate an appropriate net salvage percentage.

(c) Please see the responses to parts (a) and (b).

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-335**

DATE OF REQUEST: July 21, 2025
DATE RESPONSE DUE: July 31, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: July 31, 2025
SUBJECT: Depreciation

REQUEST:

PA-335. Depreciation: Please refer to page 145 of Direct Exhibit JJS-2 (Depreciation Study of BH Nebraska Gas).

- (a) The Cost of Removal amounts shown for the years 2023, and 2024 are each over 5 times the Cost of Removal shown for any year prior to 2023. Please explain what occurred that resulted in these extraordinarily high and Cost of Removal amount being recorded in the years 2023 and 2024.
- (b) Is it BHN's position that these Cost of Removal amounts recorded in the years 2023 and 2024 are the result of activities which physically occurred during the years 2023 and 2024? Explain the response.
- (c) Were these Cost of Removal recorded in the years 2023 and 2024 for events which had actually occurred in several prior years? Explain the response.

RESPONSE:

- (a) The cost of removal recorded in 2023 and 2024 was related to the retirements made in 2023 and 2024 and prior years as well. The historical data does not have many recorded retirements so there is not a robust history to analyze. Due to At Risk Meter Removal ("ARMR") projects, 2023 and 2024 had larger retirements than in many prior years thus there was more cost of removal recorded in 2023 and 2024 than in prior years.
- (b) It is very common that recording of retirements and cost of removal are not always time synchronized. It is likely that some of the cost of removal recorded in 2023 and 2024 relates to retirements made in prior years. Consequently, we analyze net salvage we present 3-year rolling

bands and a most recent 5-year average. Presenting the data in that way helps to normalize the analysis and look at the overall picture instead of focusing on single years of data to estimate an appropriate net salvage percentage.

(c) Please see the responses to (a) and (b).

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-220**

DATE OF REQUEST: June 16, 2025
DATE RESPONSE DUE: June 26, 2025
REQUESTOR: Public Advocate
WITNESS: Lori Mack and Kevin Jarosz
DATE RESPONDED: June 24, 2025
SUBJECT: Depreciation

REQUEST:

PA-220. Depreciation. Please refer to “Attachment PA-2-146l Data Questions” provided by Black Hills Nebraska in response to PA-2-146.

The second question on page 2 of this document is as follows:

Account 380.00 Services

What is the reason for the larger than usual cost of removal in 2022 and 2023?
Is some of this related to retirements in previous years?

- (a) \$5,840,096 in 2022
- (b) \$2,391,234 in 2023

The BHN response is as follows:

Projects related to At Risk Meter Replacement. Cost of removal specified on contractor invoices.

Please respond to the following requests:

- (a) Please explain why contractors working on the At Risk Meter Replacement are apparently spending significant resources on retiring/removing Services.
- (b) Is it correct that whatever Services these contractors may have retired, they retired-in-place (as opposed to excavating and removing the entire length of the service line). If this is not a correct statement, please provide the corrected statement and the support for the corrected statement.

- (c) Other than the fact that the “contractor invoices” showed the the contractors working on the At Risk Meter Replacement billed millions of dollars in 2022 and 2023 for retiring/removing Services, what evidence does Black Hills Nebraska have that these contractors spent millions of dollars of resources in retiring/removing Services. Provide copies of this other evidence (other than invoices), if any.
- (d) Why does the 2019, 2020, 2021, and 2024 data not show millions of dollars per year for cost of removal of Services? Where At Risk Meters being replaced in those years?
- (e) In what year did the At Risk Meter Replacement program start, and in what year is it scheduled to end?
- (f) How many At Risk Meters were replaced in the year 2022 and how many in the year 2023?
- (g) How many At Risk Meters were replaced in the work covered by the “contractor invoices” which included billing for these millions of dollars of cost of removal of Services (the invoices with the cost of removal included in the years 2022 and 2023)?
- (h) How many At Risk Meters remain to be replaced?
- (i) Is it correct that the full amount of the cost of removal for Services as determined from the referenced contractor invoices was included in the Cost of Removal of Services shown on page 140 of Direct Exhibit JJS-2? If this is not a correct statement, please provide the corrected statement and the support for the corrected statement. If some amount of the cost of removal from these invoices was excluded from the cost of removal numbers shown in section VIII (Summary of Book Salvage) in Direct Exhibit JS-2 state the dollar amount excluded and provide the supporting workpapers and documents.
- (j) Did the referenced contractor invoices clearly and directly show as a separate line item the amount that the contractor was billing for the Cost of Remove of Services? If the response is “no” then explain how was the amount that is allegedly for cost of remove of Services was determined and provide the supporting workpapers (preferably in Excel).
- (k) If the response to part (k) is “yes” provide a copy of the ten largest such invoices and for each invoice state on what page and line the separate line item(s) showing the amount that the contractor was billing for the Cost of Remove of Services is located.

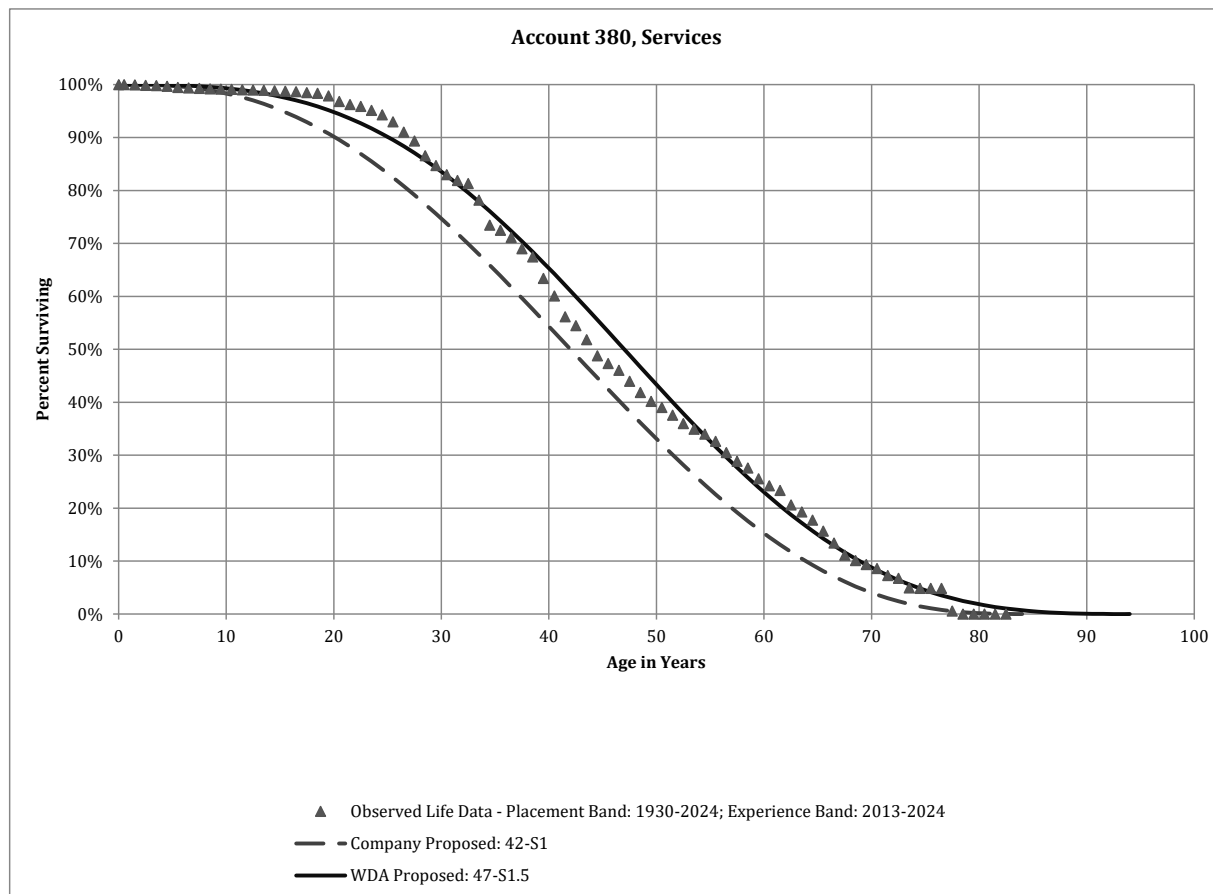
RESPONSE:

- (a) Part of the activity relating to the At Risk Meter Replacement (“ARMR”) program is relocating the service line attached to the meter that is being replaced. The service line typically needs to be relocated when the meter is moved up to the structure. To reduce future potential leaks, a solid or continuous service line is installed from the main to the new meter which is more efficient than fusing pieces of pipe onto existing older service lines.
- (b) This is a partially correct statement. While some of the service line pipe itself may be retired in place, the contractor still needs to dig out the connection point to the main and cap the pipe. They also need to dig down and cap the pipe where it was previously fed to the meter.
- (c) The Company has a list of lines that need to be removed. This is compared to contractor invoices as they are received and approved by the project manager.
- (d) ARMR projects in 2019 and 2020 were created one at a time for a specific residence and were much smaller. Projects placed into service in 2021 were unitized in 2022, resulting in the cost of removal being posted to the system in 2022. See Attachment PA 8-218a - August 2022 Project Closures and Attachment PA 8-218b - September 2022 Project Closures in the response to PA 8-218 which details the costs for many of the 2021 ARMR projects. Projects that went into service towards the end 2024 would have been unitized in 2025 to allow for all the charges to be posted to the work order.
- (e) The At Risk Meter Replacement program, initiated in 2020, is projected to conclude in 2046 based on the current annual replacement rate of approximately 3,000 meters per year. Projects are scoped on an annual basis to determine how many meters need to be relocated during each construction season.
- (f) In 2022, a total of 2,949 At Risk Meters were relocated with an additional 275 service retirements. In 2023, a total of 3,084 At Risk Meters were relocated with an additional 753 service retirements. The additional service retirements occurred at locations where gas service was no longer required.
- (g) Contractors performing At Risk Meter work relocated 2,867 meters in 2022 and 2,898 in 2023. An additional 235 service retirements were completed in 2022 and 400 in 2023.

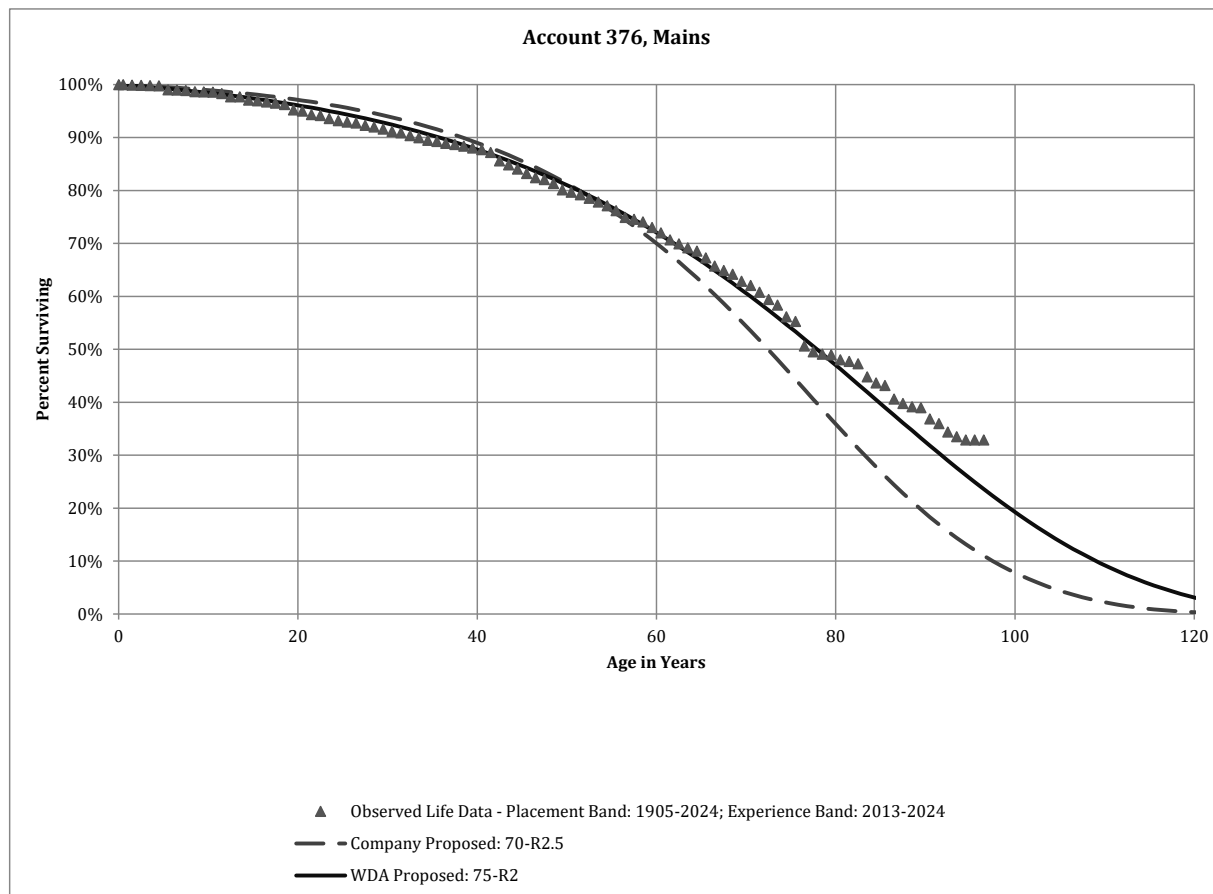
- (h) The BHE geographical information system (GIS) indicates 67,023 meters with a meter location code within the scope of the program.
- (i) Yes, it is correct.
- (j) Yes, contractor invoices show lines that were retired or removed. As an example, Attachment PA 8-218a - August 2022 Project Closures Tab 10076311 details how the invoice was allocated between the installation of the new pipe and the retirement of pipe when the work order was unitized.
- (k) See Attachment PA 8-220a - COR Invoices for a list of invoices with details. Attachments PA 8-220b through PA 8-220k are copies of the contractor invoices.

ATTACHMENT(S):

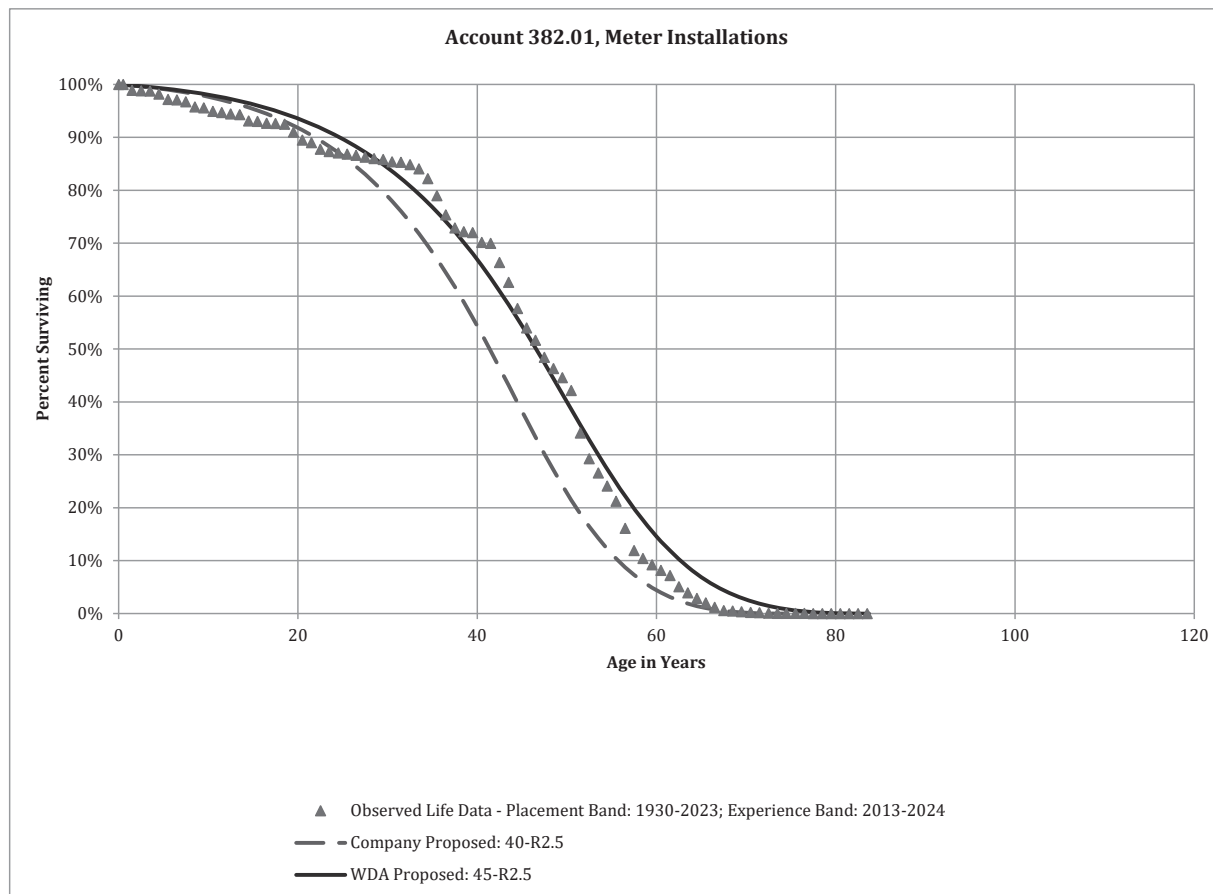
- Attachment PA 8-220a - COR Invoices
- Attachment PA 8-220b - J&G Dirt Works Invoice 13
- Attachment PA 8-220c - J&G Dirt Works Invoice 20
- Attachment PA 8-220d - J&G Dirt Works Invoice 254
- Attachment PA 8-220e - J&G Dirt Works Invoice 243
- Attachment PA 8-220f - J&G Dirt Works Invoice 292
- Attachment PA 8-220g - J&G Dirt Works Invoice 285
- Attachment PA 8-220h - J&G Dirt Works Invoice 246
- Attachment PA 8-220i - J&G Dirt Works Invoice 233
- Attachment PA 8-220j - J&G Dirt Works Invoice 284
- Attachment PA 8-220k - J&G Dirt Works Invoice 196



Sum of Square Difference ("SSD") Comparison Account 380, Services		
	Company Proposed: 42-S1	WDA Proposed: 47-S1.5
Observed Life Data - Placement Band: 1930-2024; Experience Band: 2013-2024	3,780	499
Note: A lower number indicates a better fit to the actual data (Observed Life Data)		



Sum of Square Difference ("SSD") Comparison Account 376, Mains		
	Company Proposed: 70-R2.5	WDA Proposed: 75-R2
Observed Life Data - Placement Band: 1905-2024; Experience Band: 2013-2024	6,786	527
Note: A lower number indicates a better fit to the actual data (Observed Life Data)		



Sum of Square Difference ("SSD") Comparison Account 382.01, Meter Installations		
	Company Proposed: 40-R2.5	WDA Proposed: 45-R2.5
Observed Life Data - Placement Band: 1930-2023; Experience Band: 2013-2024	6,485	876
Note: A lower number indicates a better fit to the actual data (Observed Life Data)		

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-313**

DATE OF REQUEST: July 18, 2025
DATE RESPONSE DUE: July 31, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: July 31, 2025
SUBJECT: Depreciation

REQUEST:

PA-313. Depreciation: Reference NG-109, Exhibit No. WWD-22, Response to Data Request No. PA-248 part (c) and NG-124 Spanos workpaper JJS-02 Nebraska Gas Service Life. In the prior case Black Hills Nebraska responded to Data Request No. PA-248 part (c) as follows:

“The data for 2012 and prior for Source Gas was not available by transactional entry and vintage.”

In this current case, Spanos workpaper “JJS-02 Nebraska Gas Service Life” shows transactional entries and vintage.

Please answer the following:

- (a) In this current case, is it correct that the transactional entries and vintage in “JJS-02 Nebraska Gas Service Life” for the years 2012 and prior, do NOT include data for what had been Source Gas? If this is not a correct statement, provide the corrected statement and the support for the corrected statement.
- (b) In this current case, is it correct that the transactional entries and vintage in “JJS-02 Nebraska Gas Service Life” in the year 2013 and after, DO include data for both what had been Source Gas and for what had been Aquila? If this is not a correct statement, provide the corrected statement and the support for the corrected statement.

RESPONSE:

- (a) Clarification for the response in the last proceeding is that not all of the transactional data for 2012 and prior for Source Gas was available by transactional entry and vintage. The vintage balances as of 2012 at the

time of transfer to Black Hills were available but not all of the transactional data for every entry. There is transactional data in the service life file for years 2012 and prior. The data in this proceeding for 2012 and prior is the same as what was provided in the last proceeding.

- (b) The data for 2013 and subsequent includes all transactional data from all sources prior to acquisition of Black Hills Nebraska.

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-314**

DATE OF REQUEST: July 18, 2025
DATE RESPONSE DUE: July 31, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: July 31, 2025
SUBJECT: Depreciation

REQUEST:

PA-314. Depreciation: Reference NG-124 Spanos workpaper “JJS-02 Nebraska Gas Service Life” and NG-109 Exhibit No. WWD-21, Data Request No. PA-255. Spanos’s data shows that in the transaction year 2012 a total of Response to \$178,020,139 is marked as Code 3 (Transfer).

In the prior case, Data Request No. PA-255 (Exhibit No. WWD-21) asked about the “178 million investment transferred (code 3) during the year 2012” The Company response stated:

“c. The amounts are not actual transfers but the establishment of opening balances at December 2012 for BH Gas Distribution (formerly SourceGas) prior to acquisition due to the 2012 implementation of PowerPlan by SourceGas.

d. BH Gas Distribution (formerly SourceGas) prior to acquisition implemented PowerPlan from its previous fixed asset management system. Plant detail data was not uploaded into PowerPlan prior to 2012, but instead, opening balances were input into PowerPlan.”

And

“f. BH Gas Distribution (formerly SourceGas), prior to acquisition, implemented PowerPlan from its previous fixed asset management system in December 2012. Opening balances were established at December 2012 with additions, retirements, and other activities being documented through 2013 and 2014 during the implementation of PowerPlan.”

Please answer the following:

- (a) Are each of the BHN responses quoted above from the prior case, valid pertaining to the \$178 million in the current case which is marked as Code 3 (Transfer) in the transaction year 2012 in the excel workpaper of Mr. Spanos named "JJS-02 Nebraska Gas Service Life"?
- (b) If the response to part (a) is "no" or effectively "no," then provide the revised responses which are valid in the current case, provide the support of the revised responses, and explain what changed between the prior case and the current case pertaining to this \$178 million Code 3 amount in the transaction year 2012.

RESPONSE:

- (a) The responses to PA-255 in the prior case are still valid as there has been no change to the data for transaction year 2012.
- (b) Not applicable.

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-315**

DATE OF REQUEST: July 18, 2025
DATE RESPONSE DUE: July 31, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: July 31, 2025
SUBJECT: Depreciation

REQUEST:

PA-315. Depreciation: Reference Spanos workpaper “JJS-02 Nebraska Gas Service Life” and NG-109 Exhibit No. WWD-23, Response to Data Request No. PA-249

- (a) Admit or deny that for Account 380 Services (referred to as 38099 in JJS-02 Nebraska Gas Service Life) the total of the regular retirement (code 0) in the transaction year 2008 is negative \$966,616 (plus or minus 5%) in JJS-02 Nebraska Gas Service Life. If the Company denies this, provide the correct number and the support for the correct number.
- (b) Admit or deny that for this Account 38099, in the transaction year 2008 the total of the regular retirements (code 0) in the year 1987 vintage is negative \$572,710 (plus or minus 5%) in JJS-02 Nebraska Gas Service Life. If the Company denies this, then provide the correct number and the support for the correct number.
- (c) Does the Company claim that of all retirements in this account that occurred during the year 2008, 59% were retirements of Services that had physically gone into service in the year 1987? ($-\$572,710/-\$966,616=59\%$).
- (d) Explain what occurred that resulted in the data in JJS-02 Nebraska Gas Service Life file showing that of all normal retirements in this account that occurred during the year 2008, 59% appear to be retirements of Services that were the year-1987 vintage.
- (e) In NG-109, as shown on Exhibit No. WWD-23, Response to Data Request No. PA-249, the Company responded to similar requests with the following responses.

“c. It is correct that a large portion of the recorded retirements to this account in 2008 were placed in service in 1987. The accounting practices for the individual system in 2008 had some service (blankets) recorded in the mains account if the service was installed at the same time the main was installed.”

“d. See response to part c. above. Some older services were booked in the mains account due to accounting practices of the predecessor companies.”

Are the BHN responses quoted above from the prior case valid in this current case?

- (f) If the response to part (e) is “no” or effectively “no,” then provide the revised responses which is valid in the current case, provide the support of the revised responses, and explain what changed between the prior case and the current case pertaining to these transactions in the transaction year 2008.
- (g) Which predecessor company had booked some “older services” “in the mains account”?

RESPONSE:

There are no changes to the responses in part (a) through (e) in this proceeding.

- (f) The response to part (e) has not changed.
- (g) The predecessor company that had booked some “older services” in the mains account was Aquila.

ATTACHMENT(S):

None

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-318**

DATE OF REQUEST: July 18, 2025
DATE RESPONSE DUE: July 31, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: July 31, 2025
SUBJECT: Depreciation

REQUEST:

PA-318. Depreciation: Reference NG-109, Exhibit No. WWD-25, Response to Data Request No. PA-193; NG-124 Spanos workpaper JJS-02 Nebraska Gas Service Life; and in response to PA 1-75. In response to Data Request No. PA-193, the Company provided certain information related to the “Sale of the Elkhorn system:.

- (a) As is discussed in part (f) of Data Request No. PA-193 in the prior case, certain retirements were excluded by the Company from the life analysis of Account 37600 [Distribution Mains] because those retirements resulted from “Sale of the Elkhorn system”.

In the current case, have any retirements been excluded from the data for Mains, (Account 376) in the excel workpaper of Mr. Spanos named “JJS-02 Nebraska Gas Service Life” because those retirements resulted from the sale of the Elkhorn system? If so, provide the workpaper(s) showing the amounts which were excluded because those retirements resulted from the sale of the Elkhorn system.

- (b) In the current case, have any retirements been excluded from the data for Account 380, or Account 382, or Account 383 in the excel workpaper of Mr. Spanos named “JJS-02 Nebraska Gas Service Life” because those retirements resulted from the sale of the Elkhorn system? If so, provide the workpaper showing, by account, the amounts which were excluded because those retirements resulted from the sale of the Elkhorn system.
- (c) In the current case, in response to PA 1-75, the Company provided Attachment PA 1-75- Summary of Outlier Retirements. On that document we do not see any retirements excluded from the data because those retirements were related to the sale of the Elkhorn system. Please

explain why the retirements related to the sale of the Elkhorn system (apparently) were not excluded (as outliers) from the data used by the Company in the life analysis.

RESPONSE:

- (a) There are retirements excluded from the service life database for mains related to the sale of the Elkhorn system. These are the same retirements excluded in the last case.
- (b) There are retirements in the current case in Accounts 380, 382 or 383 related to the sale of the Elkhorn system. These are the same retirements as in the last case.
- (c) The retirements related to the sale of the Elkhorn system listed in the attachment PA 1-75-Summary of Outlier Retirements were excluded in the service life analysis in this case. However, they were erroneously not presented in the original service life file presented in the workpapers. The attached file sets forth the proper service life file in the case that sets forth the code 2s that are related to the Elkhorn system sale.

ATTACHMENT(S):

- Attachment PA 19-318 – BH Nebraska Gas Service Life

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-79**

DATE OF REQUEST: May 8, 2025
DATE RESPONSE DUE: N/A
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: May 8, 2025
SUBJECT: Company's Depreciation Study

REQUEST:

PA-79. Company's Depreciation Study:

- (a) For each of the accounts in the Company's Depreciation Study, please provide a copy of any surveys or summaries in the possession of Black Hills or in the possession of the organization or consulting firm that prepared the Black Hills Nebraska depreciation study, showing the net salvages, average service lives, and Iowa curve and depreciation rates by account used by other utilities.
- (b) Please state the source of the surveys or summaries provided in the responses to part a.
- (c) Are the net salvages, average service lives, Iowa Curves, and depreciation rates, provided in the responses to part a, the values that were proposed by a party, or are they the values that were accepted by the relevant state commission?

RESPONSE:

- (a) Attachment PA 1-79 - Industry Statistics sets forth the industry statistics of life and net salvage parameters maintained by Gannett Fleming as part of its depreciation studies.
- (b) The industry statistics supplied in part a) are the Gannett Fleming database of all studies conducted by the firm in recent years.
- (c) All parameters listed in the attachment represent the proposed parameters and in most cases are the accepted parameters. However, if parameters were revised due to settlement proceeding, the parameters

were not updated since the basis is not related to statistical analysis or informed judgment related to the specific asset class.

ATTACHMENT(S):

- Attachment No. PA 1-79 – Industry Statistics

**BLACK HILLS NEBRASKA GAS, LLC
NEBRASKA GAS RATE REVIEW
APPLICATION NO. NG-124
RESPONSE TO PUBLIC ADVOCATE
DATA REQUEST NO. PA-157**

DATE OF REQUEST: May 14, 2025
DATE RESPONSE DUE: May 27, 2025
REQUESTOR: Public Advocate
WITNESS: John Spanos
DATE RESPONDED: May 27, 2025
SUBJECT: Depreciation

REQUEST:

PA-157. Depreciation:

- (a) Is it correct that in Docket No. 2022-00152 in Maine, in a rebuttal testimony dated February 7, 2023, starting on line 20 of page 14, Mr. Spanos (John J. Spanos) made this statement:

“Instead, the analysis detailed by the authors is designed to account for the fact that the traditional net salvage analysis tends to understate future net salvage (i.e., produces results that are less negative than will occur in the future) because the average age of historical retirements is less than those of future retirements...” (Emphasis added).

- (b) Is it correct that when Mr. Spanos calculates the “average age of historical retirements,” he calculates that average age weighted by original cost dollars (i.e., he does not calculate that average age weighted by unit count)? If this statement is not correct, please provide the corrected statement and provide the support for the correct statement.
- (c) Assume the only units that retired in the year 2021 in an account were (1) an asset installed in 1945 with an installed cost of \$18.03 and (2) a similar asset installed in the year 2020 with an installed cost of \$500. Is it correct that with these inputs, using the way Mr. Spanos calculates average age at retirement, Mr. Spanos would calculate the average age of these retirements at (or about) 3.6 years (as shown below)?

	A	B	C= A*B
	Investment	Age	
	\$18.03	76	1370
	\$500.00	1	500
Total	\$518.03		1870
Average Age			
	1870 / \$518.03 = 3.6 Average Age		

Please begin the response with “yes” or “no.” If the response is “no,” please explain the response.

RESPONSE:

BH Nebraska Gas Objects to this request to the extent that it calls for information that is not relevant nor likely to lead to relevant information, calls for BH Nebraska Gas to prepare a study or conduct analysis that does not currently exists, or call for voluminous amounts of data or information that would create an administrative burden on BH Nebraska Gas to produce.

Without waiving or limiting its objection, BH Nebraska Gas responds as follows:

- (a) Yes. The entire quote from the Direct Testimony of John J. Spanos is below:

Instead, the analysis detailed by the authors is designed to account for the fact that the traditional net salvage analysis tends to understate future net salvage (*i.e.*, produces results that are less negative than will occur in the future) because the average age of historical retirements is less than those of future retirements (and, therefore, the historical net salvage analysis contains less inflation than Mr. Dunkel seems to believe). The more detailed analysis of net salvage by age and the model described by Wolf and Fitch are designed to more accurately reflect the impact of age and inflation, the results of which would typically be more negative net salvage estimates than the traditional method (not less).

- (b) Yes, Mr. Spanos calculates the average age using original cost dollars. This is because the traditional method of analysis for net salvage divides the dollars of recorded net salvage by the dollars of

retirements. Because this analysis uses dollars rather than units of property, the average age needs to be dollar-weighted rather than quantity-weighted.

- (c) Responding to purely hypothetical examples that do not include the typical activity of mass property assets has no value. However, given the example on how the average age of retirements would be calculated, the answer is yes. The resulting average age of retirements of 3.6 years means there would be 3.6 years of inflation incorporated in the cost of removal associated with these retirements.

ATTACHMENT(S):

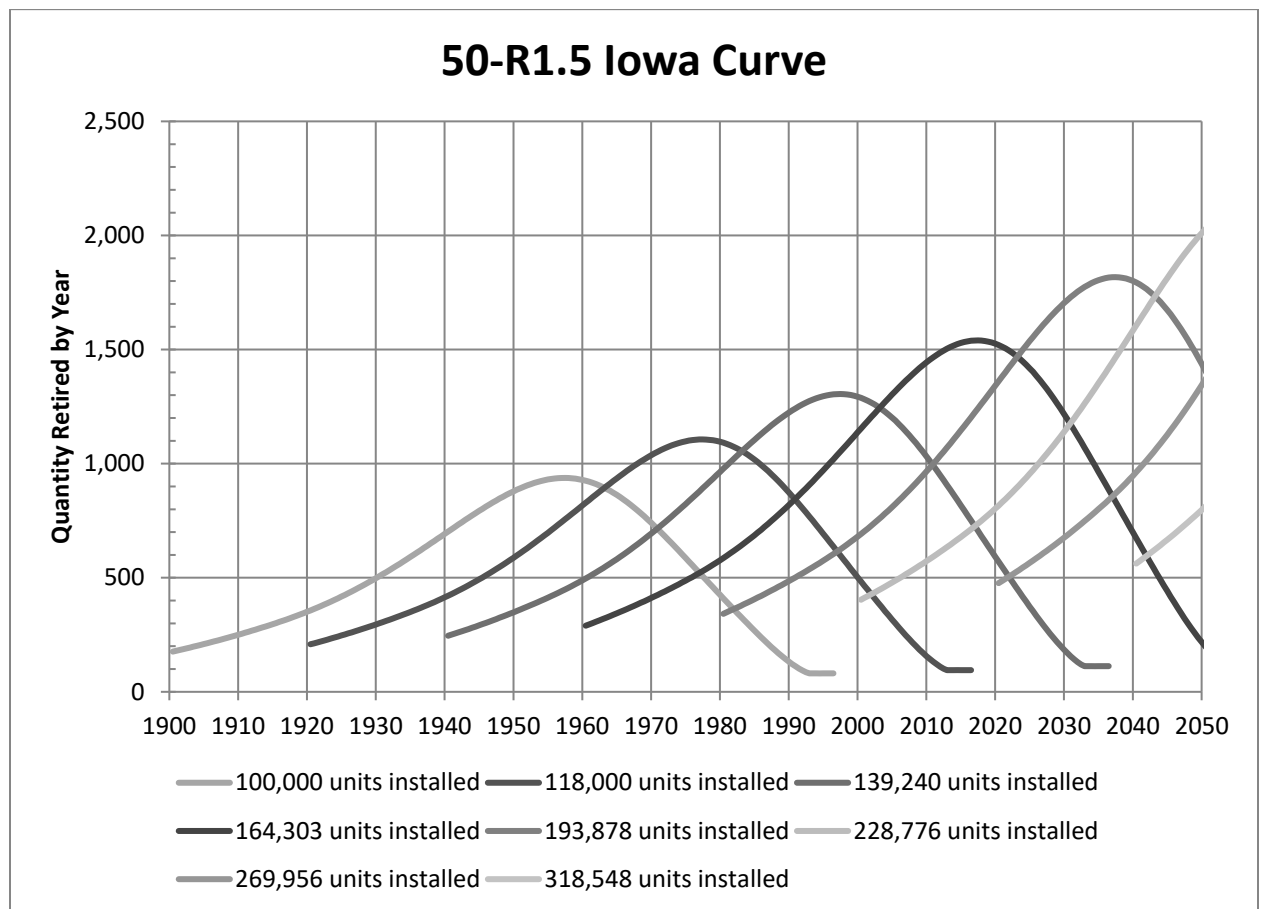
None

THE HISTORIC NET SALVAGE DATA IS NOT FROM THE RETIREMENTS FROM ONLY ONE VINTAGE, OR ONLY FROM INVESTMENTS WHICH RETIRED AT A YOUNG AGE.

A “mass” account, like Mains and Services, contains thousands of assets which were installed at different times in the past (different “vintages”). The net salvage that we see in recent actual data is impacted by all these prior vintages.

The Figure below illustrates the multiple vintages which are in an account:

Figure 1:¹

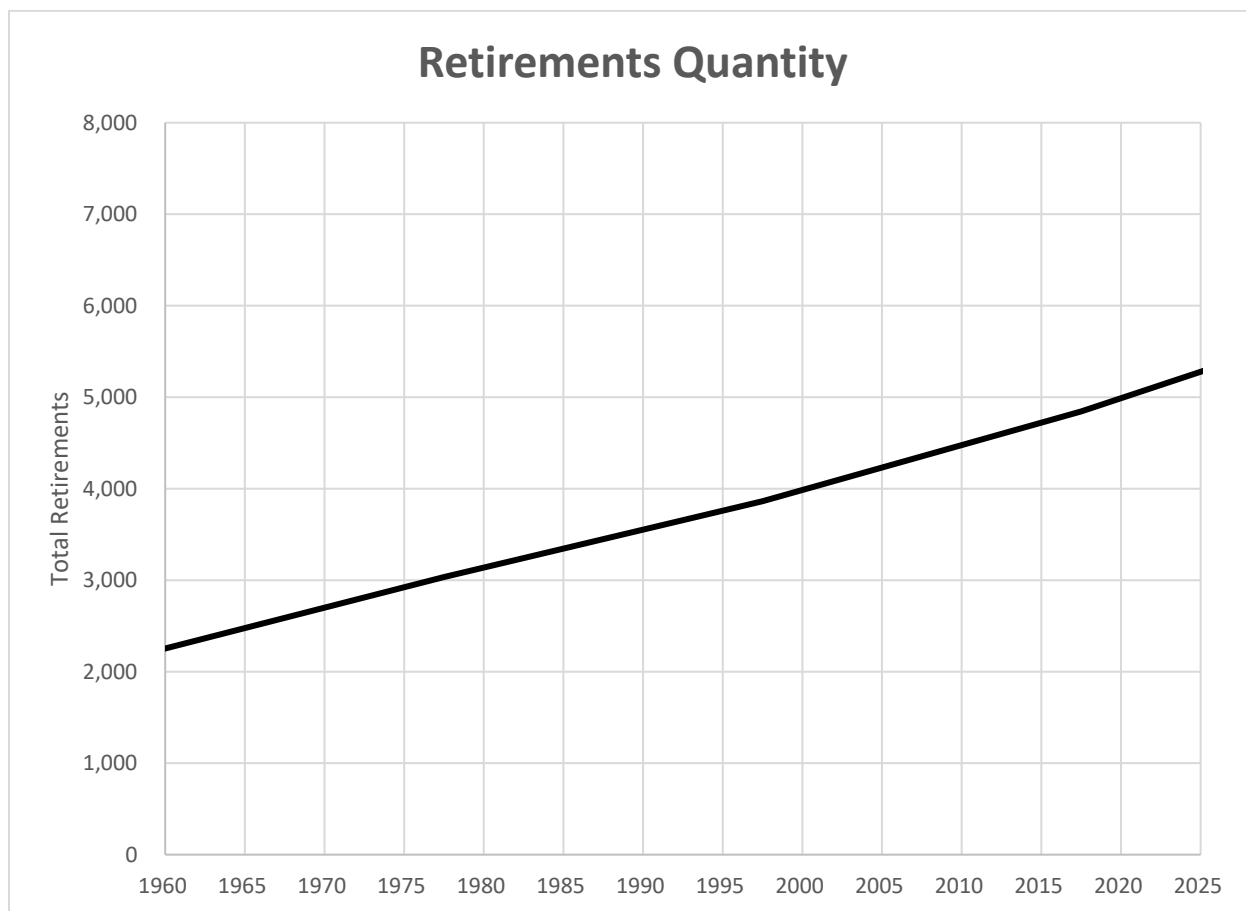


¹ Actually, there is vintage each year. We only show a vintage every 20 years. If we showed a vintage every year the figure would be difficult to read. This is an illustrative account, not an actual account.

Looking at the year 2000 as an example, some of the retirements that occur in the year 2000 are retirements from the 1940 vintage. At that point, the retirements in the 1940 vintage are **decreasing** and in the future the retirement level from the 1940 vintage will be **less** than it was in the year 2000. On the other hand, some of the retirements that occur in the year 2000 are retirements from the 1960 vintage. At that point the retirements in the 1960 vintage are increasing and in the future the retirement level from the 1960 vintage will be **greater** than it was in the year 2000. This demonstrates you cannot look at one vintage and, based upon one vintage, say the retirement level will be higher or lower in the future. The expected retirement level in the future is a mix of some vintages which are increasing and other vintages which are decreasing.

When retirements from all the vintages are included, the retirements are as follows:

Figure 2:



This is the sum of the retirements from all the vintages in prior Figure 1.

Of course, in the real world there will be year-to-year fluctuations, which is one reason I calculate both five-year averages and 10-year averages.

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Application of Black
Hills Nebraska Gas, LLC d/b/a Black Hills
Energy, Rapid City, South Dakota, seeking
approval of a general rate increase.

Application No. NG-124

AFFIDAVIT OF WITNESS

STATE OF Illinois

COUNTY OF Sangamon

) ss.

I, William Dunkel, being first duly sworn on oath, depose
and state that I am the witness identified in the foregoing prepared testimony filed in the above-
captioned action and I am familiar with its contents, and that the facts set forth therein are true to
the best of my knowledge, information, and belief.

William Dunkel

SUBSCRIBED and sworn to before me this 12 day of August, 2025.

(SEAL)

[Signature]

Notary Public

My Commission Expires:

