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

DIRECT TESTIMONY OF LORI J. MACK

Manager of Regulatory

ON BEHALF OF BLACK HILLS NEBRASKA GAS, LLC

Date: May 1, 2025

Application No. NG-124 Direct Testimony of Lori J. Mack

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Application No. NG-124 Direct Testimony of Lori J. Mack

EXHIBITS

Application Exhibits			
Section 2, Rule 004.03A Rate Base Schedules			
	Revenue Requirement Study (Statements C, D, and E)		
Section 2, Rule 004.03A1	Utility Plant and Accumulated Depreciation		
	Revenue Requirement Study (Statement E)		
Section 2, Rule 004.03A2	Working Capital		
	Revenue Requirement Study (Statement F and Lead/Lag Study)		
Section 2, Rule 004.03A3	Other Rate Base Components		
	Revenue Requirement Study (Statement C)		
Section 2, Rule 004.03B	Allocated Rate Base Components		
	Revenue Requirement Study (Statements C, D, and E)		
Testimony Exhibits			
Direct Exhibit LJM-1	Statement of Qualifications		
Direct Exhibit LJM-2	Lead-Lag Study		
Direct Exhibit LJM-3	2018 BHSC Depreciation Study		

ADIT	Accumulated Deferred Income Taxes
AR15	Accounting Release Number 15
Base Year	Twelve (12) months beginning on January 1, 2024, and ending on December 31, 2024
ВНС	Black Hills Corporation
BH Nebraska Gas or Company	Black Hills Nebraska Gas, LLC d/b/a Black Hills Energy
BHSC	Black Hills Service Company, LLC
CIS+	Customer Information System
Commission	Nebraska Public Service Commission
CWC	Cash Working Capital
CWIP	Construction Work in Progress
EDIT	Excess Deferred Income Tax
O&M	Operating and Maintenance
RRS	Revenue Requirement Study
Test Year	Twelve months beginning on January 1, 2025, and ending December 31, 2025, applying adjustments for known and measurable changes.

LIST OF ABBREVIATIONS AND ACRONYMS

1		DIRECT TESTIMONY OF LORI J. MACK		
2		I. <u>INTRODUCTION</u>		
3	Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.		
4	A.	My name is Lori J. Mack. My business address is 7001 Mount Rushmore Road, Rapid		
5		City, South Dakota 57702.		
6	Q.	BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?		
7	А.	I am employed by Black Hills Service Company, LLC ("BHSC"), a wholly-owned		
8		subsidiary of Black Hills Corporation ("BHC"). My position is Manager of		
9		Regulatory.		
10	Q.	ON WHOSE BEHALF ARE YOU TESTIFYING?		
11	А.	I am testifying on behalf of Black Hills Nebraska Gas, LLC d/b/a Black Hills Energy		
12		("BH Nebraska Gas" or "the Company").		
13		II. STATEMENT OF QUALIFICATIONS		
14	Q.	WHAT ARE THE DUTIES AND RESPONSIBILITIES IN YOUR CURRENT		
15		POSITION?		
16	A.	I am responsible for managing the Revenue Requirements Team which provides		
17		various financial analyses in support of BHC's utility subsidiaries and provides support		
18		of revenue requirement calculations in multiple states and jurisdictions.		
19		My education, employment history and professional experience is provided in		
20		Direct Exhibit LJM–1.		
21	Q.	HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS COMMISSION?		
22	A.	No.		
23				

1		III. <u>PURPOSE OF TESTIMONY</u>
2	Q.	WHAT IS THE PURPOSE OF YOUR TESTIMONY?
3	A.	The purpose of my testimony is to provide support for the following areas:
4		A. <u>Revenue Requirement Study Relating to Rate Base</u>
5		My testimony presents the results of the Revenue Requirement Study ("RRS")
6		prepared for BH Nebraska Gas relating to rate base. ¹ The RRS supports the required
7		increase in base rate revenues that BH Nebraska Gas proposes in its Rate Review
8		Application. The RRS also establishes the cost basis for the Company's structure and
9		design of its proposed base rates.
10		B. <u>Adjustments</u>
11		My testimony discusses the reasoning behind the various adjustments made
12		within the Rate Review Application to (1) per-book investments and accumulated
13		depreciation and (2) depreciation expense relating to capital investments and explains
14		how those adjustments are reflected within the RRS.
15		C. <u>Lead Lag Study</u>
16		I sponsor the Lead-Lag Study for the 12 months ending December 31, 2024,
17		(Direct Exhibit LJM-2) and the resultant Cash Working Capital ("CWC") allowance
18		included in the RRS.
19		D. <u>Depreciation Studies</u>
20		My testimony relies upon and applies the depreciation rates and
21		recommendations contained within the depreciation study provided by Mr. John J.
22		Spanos with his Direct Testimony as Exhibit JJS-2 (Gas Plant Depreciation Study for

¹ See Direct Exhibit SKJ-2 for the completed RRS.

1 BH Nebraska Gas). In addition, my testimony relies upon and applies the depreciation 2 rates and recommendations contained in the Black Hills Service Company 3 Depreciation Study previously prepared by Mr. Spanos in 2018.² Both of the 4 depreciation studies referenced herein were prepared by Gannett Fleming Valuation 5 and Rate Consultants, LLC.

6 Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. I am sponsoring information in two sections of Application Exhibit 1 that has the
information required by Rule 004 of the Nebraska Public Service Commission
("Commission") Rules and Regulations.³ Much of the information required by
Commission Rule 004 is contained within the RRS, which is identified as Direct
Exhibit SKJ-2. With respect to Commission Rule 004 requirements, I sponsor the
following sections of Application Exhibit 1:

- Section 2, Rule 004.03A Rate Base Schedules
- Section 2, Rule 004.03A1 Utility Plant and Accumulated Depreciation
- Section 2, Rule 004.03A2 Working Capital.
- Section 2, Rule 004.03A3 Other Rate Base Components.
- Section 2, Rule 004.03B Allocated Rate Base Schedules.

² The 2018 BHSC depreciation study was admitted into the record in BH Nebraska's last rate review proceeding in Commission Application No. NG-109, and BHSC provides the 2018 BHSC Common Plant Depreciation Study as Direct Exhibit LJM-3 as additional support of the depreciation rates used by BH Nebraska Gas in development of its Rate Review Application in this proceeding. BH Nebraska Gas followed the requirements of the Stipulation and Agreement of Settlement related to depreciation rates from Commission Application No. NG-109.

³ 291 Neb. Admin. Code. Ch. 9, Rule 004 (General Rate Filings).

1		I am also sponsoring the following Testimony Exhibit(s):
2		• Direct Exhibit LJM-1 -Statement of Qualifications.
3		• Direct Exhibit LJM-2 -Lead/Lag Study.
4		• Direct Exhibit LJM-3- 2018 BHSC Depreciation Study.
5	Q.	HAVE THE TESTIMONY AND EXHIBITS THAT YOU ARE SPONSORING
6		BEEN PREPARED BY YOU OR UNDER YOUR SUPERVISION?
7	A.	Yes, except for Direct Exhibit LJM-3- 2018 BHSC Depreciation Study, as discussed
8		above.
9		IV. <u>RATE BASE</u>
10	Q.	PLEASE DESCRIBE THE RATE BASE USED IN THE RRS.
11	A.	Rate base is the value of invested capital, including all items used to provide utility
11 12	A.	Rate base is the value of invested capital, including all items used to provide utility service. Rate base represents the investor financed plant facilities and other
11 12 13	A.	Rate base is the value of invested capital, including all items used to provide utility service. Rate base represents the investor financed plant facilities and other investments required in providing utility service to customers. A regulated utility is
11 12 13 14	А.	Rate base is the value of invested capital, including all items used to provide utility service. Rate base represents the investor financed plant facilities and other investments required in providing utility service to customers. A regulated utility is allowed and should have a reasonable opportunity to earn a fair rate of return on rate
 11 12 13 14 15 	А.	Rate base is the value of invested capital, including all items used to provide utility service. Rate base represents the investor financed plant facilities and other investments required in providing utility service to customers. A regulated utility is allowed and should have a reasonable opportunity to earn a fair rate of return on rate base. ⁴ As summarized on Statement B of the RRS, rate base includes Plant in Service,
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 11 12 13 14 15 16 17 18 	A.	Rate base is the value of invested capital, including all items used to provide utility service. Rate base represents the investor financed plant facilities and other investments required in providing utility service to customers. A regulated utility is allowed and should have a reasonable opportunity to earn a fair rate of return on rate base. ⁴ As summarized on Statement B of the RRS, rate base includes Plant in Service, Accumulated Depreciation, Working Capital, and Other Rate Base Items which include Accumulated Deferred Income Taxes ("ADIT"), Customer Advances, Customer Deposits, and Regulatory Liabilities.

⁴ Neb. Rev. Stat. § 66-1825.

1 A. **Rate Base Components** 2 Q. PLEASE EXPLAIN GENERALLY HOW RATE BASE IS CALCULATED IN A 3 **RRS**. 4 A. Rate base represents the net investment by a utility necessary to operate the business 5 and serve customers. Rate base is made up of two general components. 6 1. **Property, Plant, and Equipment** 7 The primary components of rate base are the costs related to property, plant, 8 and equipment, which includes the initial investment such as Gross Plant in Service, 9 but also any related offset that the Company has received. Offsets to the rate base cost 10 component include Accumulated Depreciation, ADIT, Customer Deposits and Contributions in Aid of Construction. 11 12 2. Working Capital 13 The other component used in calculating rate base is the investment necessary 14 for a company to pay its bills and meet financial obligations necessary to operate the 15 business. This component is referred to as working capital. 16 The total investment is determined by summing CWC, Materials and Supplies, 17 and Prepaid Expenses. Goodwill or acquisition adjustments and stored gas are 18 generally not included in rate base unless otherwise approved by the Commission. 19 Q. WHAT ITEMS ARE INCLUDED IN OTHER RATE BASE ITEMS? 20 A. Schedule C-1 within the RRS shows each item that is included in the RRS. Schedule 21 C-1 includes Deferred Income Tax Assets, Regulatory Liabilities for Excess Deferred 22 Income Tax ("EDIT"), Deferred Income Tax Liabilities (categorized as Property and 23 Other), State Tax Items, Other Utility Plant Deferred Income Tax (the ADIT associated

with Allocated plant from BHSC), Customer Deposits, and Customer Advances. Mr.
 Kenneth L. Crouch explains the derivation of the tax-related items in his direct
 testimony.

4

5

Q. WHAT METHOD OF CALCULATING RATE BASE IS THE COMPANY PROPOSING FOR THE RRS PRESENTED IN THIS REVIEW?

6 A. The Company uses a Base Year 12-month period ending on December 31, 2024, and 7 adjusted the year-end rate base, as permitted under the Commission's Rules and Regulations, through December 31, 2025, as the basis of its rate base calculation⁵ as 8 9 the Test Year. The Base Year is used as the anchor of the data and uses known and 10 measurable adjustments to calculate the period end rate base included in the Test Year. Allocated plant is recorded in FERC Account 118 and is included as part of rate base 11 12 as shown on Schedule D-1 lines 65 to 71. The associated allocated accumulated reserve 13 is recorded in FERC Account 119 as shown on Schedule E-1 lines 77 to 86 in Direct 14 Exhibit SKJ-2. Allocated plant and accumulated reserve are shown by the method of 15 allocation rather than by account.

16 B. Adjustments

Q. PLEASE DESCRIBE THE ADJUSTMENTS MADE TO PLANT IN SERVICE TO REFLECT THE CHANGES FROM THE END OF THE BASE YEAR

19

17

18

- 20 **2025).**
- 21 A. The adjustments are as follows:
- 22



• *Pro Forma* plant retirements during calendar year 2025.

(DECEMBER 31, 2024) TO THE END OF THE TEST YEAR (DECEMBER 31,

[•] *Pro Forma* plant additions during calendar year 2025; and

⁵ 291 Neb. Admin. Code, Ch. 9, Rule 005.06.

1

2025 Capital Additions⁶

1.

3		The first adjustment to rate base included in the RRS is to include plant that is	
4		planned to go into service during calendar year 2025. The list of Nebraska direct capital	
5		additions projects included as plant additions in calendar year 2025 is presented and	
6		discussed by Mr. Jarosz in his direct testimony ⁷ . The capital additions are summarized	
7		in Direct Exhibit SKJ-2, Schedule D-1, Col (f) with the gross plant additions detailed	
8		on Schedule D-2. The Company will update both the list of capital additions and the	
9		RRS at the appropriate time in the proceeding to reflect the status of the projects at that	
10		time.	
11		2. Planned Retirements	
12		The second adjustment to rate base is to account for expected plant retirements	
13		that will occur in calendar year 2025. Atypical retirements, such as one-time operation	
14	centers or land divestitures, were removed from annual retirement amounts. The		
15		Planned Retirements adjustment is \$20,891,908 and is summarized on Direct Exhibit	
16		SKJ-2, Schedule D-1, Col (g) with the gross plant retirements detailed on Schedule D-	
17		3.	
18	Q.	PLEASE EXPLAIN THE PROPOSED PLANT ADDITIONS.	
19	A.	As shown on Schedule D-2, Line 73, the Company proposes to include \$127.8 million	
20		of plant additions, including allocated plant additions, that BH Nebraska Gas projects	
21		to be placed into service before December 31, 2025. The pro forma plant additions are	

 ⁶ BH Nebraska Gas refers to the 2025 rate base investment permitted by Commission Rule 005.06D as "Capital Additions."
 ⁷ Direct Exhibit KMJ-4.

7	Q.	DOES BH NEBRASKA GAS ACCOUNT FOR NEW CUSTOMERS
6		major BH Nebraska projects in his testimony.
5		million is related to allocated BHSC plant additions. Mr. Kevin M. Jarosz discusses
4		approximately \$19.6 million is related to general plant., and (4) approximately \$5.1
3		existing facilities, (2) approximately \$23.89 million is related to growth capital, (3)
2		plant additions, (1) approximately \$79.2 million is related to replacing or repairing
1		primarily related to replacing existing plant. Of the approximately \$127.8 million of

ASSOCIATED WITH GROWTH CAPITAL?

9 A. Yes. The Company has included an adjustment to its revenues for incremental growth 10 on Statement I, column (j) to reflect the expected additional customers associated with 11 adding growth capital in its revenue requirement. Mr. Ethan J. Fritel discusses this 12 adjustment further in his direct testimony.

13 Q. WERE ANY ASSUMPTIONS MADE IN THE INCLUSION OF THE CAPITAL

ADDITIONS TO THE DETAILED PLANT ACCOUNTS IN DIRECT EXHIBIT NO. SKJ-2, SCHEDULE D-2?

16 A. Yes, the Company allocated additions to plant FERC accounts based on a historical
17 closure allocation of similar types of projects.

18 Q. IF A HISTORIC RATIO IS USED AND ESTIMATES ARE USED, ARE THE

19 DOLLARS REPRESENTED IN THE PLANT ACCOUNTS REASONABLE?

- 20 A. The dollars in the plant accounts are reasonable. While the actual dollars recorded for
- 21 these projects may fluctuate, the methods described above provide a reasonable
- 22 representation of the plant that will be placed in service.

23

2

Q. PLEASE DESCRIBE THE PRO FORMA PLANT ADDITIONS ASSOCIATED WITH THE ALLOCATED SERVICE COMPANY ASSETS?

- 3 A. The allocated Service Company asset additions of \$5,118,813 represent BH Nebraska
- 4 Gas' portion of allocated capital expenditures for computer software and hardware as
- 5 well as fleet expenditures. Major projects for BHSC in 2025 include the completion of
- the Gas SCADA System Upgrade, implementation of an asset management system for
 natural gas assets, and leasehold improvements.
- 8 Q. IS CONSTRUCTION WORK IN PROGRESS ("CWIP") INCLUDED IN RATE
 9 BASE?
- 10 A. No. The Company assumes that all CWIP will be placed in service prior to December
 11 31, 2025, as part of the capital additions.
- 12 Q. PLEASE DESCRIBE THE ADJUSTMENTS MADE TO ACCUMULATED
 13 DEPRECIATION.
- 14 A. The Company has made the following adjustments to the Base Period amounts included15 in Statement E:
- 16 1. The first adjustment is related to the 2025 capital additions in the 17 amount of \$2,214,214 as shown on Schedule E-2, Line 73, Col (g). The accumulated 18 depreciation associated with the capital additions is calculated using a mid-year 19 convention using the proposed depreciation rates.
- 20 2. The second adjustment is related to the 2025 estimated capital 21 retirements. Since assets are retired at cost, this adjustment removes the full cost of the 22 assets at (\$20,891,909) as well as accumulated depreciation for those assets calculated

1		using a mid-year convention with the proposed depreciation rates for (\$666,859) for a
2		total adjustment of (\$21,558,768) as shown on Schedule E-3, Line 73, Col (g).
3		3. The third adjustment is to roll forward the accumulated depreciation
4		associated with the plant in service as of December 31, 2024, to reflect the balance as
5		of December 31, 2025. This roll forward in the amount of \$33,801,207 is shown on
6		Direct Exhibit SKJ-2, Schedule E-4. This schedule shows the results of the calculation
7		of the depreciation expense under the existing depreciation rates through December 31,
8		2025. An associated adjustment on Schedule C-1, Line 28 moves the ADIT to the
9		projected December 31, 2025, balance.
10		V. <u>WORKING CAPITAL</u>
11	Q.	WHAT IS WORKING CAPITAL?
12	A.	Working capital is the capital necessary to operate the business and is made up of CWC,
13		materials and supplies, and prepaid expenses. The working capital components are
14		shown on Statement F of the RRS. CWC is determined by a lead-lag study. ⁸ The other
15		items, materials and supplies and prepaid expenses, use the Base Year 13-month
16		average balance. The final adjusted working capital total is used in the calculation of
17		rate base.
18	Q.	PLEASE DESCRIBE CWC.
19	A.	CWC is the amount of investor-supplied capital required to fund the day-to-day
20		operations of a utility after accounting for the timing differences between the
21		occurrence of the transaction and the actual receipt of, or payment of, cash.
22		

⁸ The Lead-Lag Study in this Rate Application can be found in Direct Exhibit LJM-2.

1 Q. PLEASE DESCRIBE HOW THE CWC AMOUNT WAS CALCULATED.

A. The per book and adjusted CWC amounts were determined based on the results of a
Lead-Lag Study.⁹ The Company prepared both per book and adjusted CWC amounts
for this rate review. The per book base year CWC is located on Schedule F-2, page 1,
and the adjusted test year CWC is on Schedule F-2, page 2. The adjusted CWC amount
is included in rate base within the RRS on Statement B, line 24.

7 Q. WHAT ADJUSTMENTS WERE MADE TO PREPAID EXPENSES AND 8 MATERIALS AND SUPPLIES?

9 A. Prepaid Expenses and Materials and Supplies were adjusted to reflect the 13-month 10 average balances for the Base Year. Using the 13-month average method represents 11 the ongoing level of investment necessary to serve customers throughout the year. This 12 method avoids using a snapshot of investment that could be either a peak or valley of 13 investment based upon timing. This differs from Property, Plant, and Equipment 14 investment because Materials and Supplies and Prepaid expenses are expected to be 15 used or consumed in less than a year while Property, Plant, and Equipment are expected 16 to have a useful life of multiple years. These balances of \$6,037,584 for material and 17 supplies and \$259,364 for prepaid expenses are shown on Direct Exhibit SKJ-2, 18 Schedule F-1.

19

Q. WHAT MATERIALS AND SUPPLIES ARE INCLUDED IN RATE BASE?

- A. The inventory of materials and supplies used for construction, operation, and
 maintenance purposes are included in the Materials and Supplies accounts.
 - ⁹ See Direct Exhibit LJM-2.

Q. DOES THE COMPANY ANTICIPATE ANY CHANGES TO THE LEVEL OF INVENTORY?

A. No. While inventory levels fluctuate month by month, the Company believes the Base
Year 13-month average is representative of normal inventory levels going forward.

5 Q.

6

REQUIRED FOR BUSINESS OPERATIONS?

HOW DOES A LEAD-LAG STUDY MEASURE THE AMOUNT OF CASH

7 A. A lead-lag study measures the difference between: (1) when goods or services are 8 obtained or used and when payments for those goods or services are made ("lead") and 9 (2) when a service is rendered and when revenues for that service are received ("lag"). 10 The applicable lead period for each major category of expense is compared to the 11 revenue lag period. The difference between those periods, expressed in days, 12 multiplied by the average daily operating expense, yields the amount of CWC required 13 for a company to meet its normal business obligations.

14

Q.

HOW ARE THE REVENUE LAG DAYS CALCULATED?

15 A. The revenue lag days are comprised of the Service Lag, Billing Process Lag, and the 16 Payment Receipt Lag on customer bills, which are added together to calculate the 17 Revenue Lag, and utilizes data from the Company's Customer Information System 18 ("CIS+"). The Service Lag is a weighted average of the total days of the billing period 19 divided by two. The Service Lag weighting is based on the dollar amount of the billing 20 revenue of the bill. The Billing Process Lag is the number of days between when the 21 meter is read and when the customer is billed and is also weighted by the dollar amount 22 of the billing revenue. Finally, the Receipt Lag is the weighted average number of days 23 between billing and receipt of payment. For customers that utilize budget billing, the payment received is applied to the oldest balance first. Prior revenue lag calculations
by BH Nebraska Gas did not include the impact of budget billing which leads to an
increase of almost two days for the current proceeding's revenue lag calculation when
compared to prior filings. All three of these factors are calculated using the Company's
CIS+ data which holds the customer accounting transaction information. The resulting
calculation is a Revenue Lag of 39.65 days as shown in Direct Exhibit LJM-2, Schedule
F-2, column (d).

8 Q. HOW WAS THE EXPENSE LEAD CALCULATED FOR THIS RATE 9 REVIEW?

10 A. The expense lead days were determined by analyzing the actual data from the Per Book 11 Base Year for the expense categories as shown on Schedule F-2, column (b) of Direct 12 Exhibit LJM-2. The Lead-Lag Study steps through the calculation of the expense lead. 13 The expense lead days are the number of days between when goods or services are 14 received (a midpoint is used when the service is received over a period, such as payroll 15 and payroll tax expenses) and when payment is made for those goods or services. That 16 payment date is referred to as a settlement date. The lead days are calculated by taking 17 the settlement date less the midpoint of service to arrive at the lead days for each month 18 in the Per Book Base Year or Test Year. A monthly percent of total payment is 19 calculated by dividing the amount expensed in the month by the total annual amount 20 expensed. The weighted average lead/lag days are then calculated by multiplying the 21 percent of total payment in each period by the lead days in each period to arrive at a 22 total lead day amount. The monthly lead days are summed to arrive at the total annual 23 lead days by expense category.

1	All recorded costs were reviewed for the following Operating and Maintenance
2	("O&M") categories:
3	• Direct Payroll
4	Gas Purchases
5	Direct and Allocated Materials and Services
6	Allocated Payroll
7	• Other O&M
8	The direct payroll expense lead days are the number of days between when
9	employees provide labor/services and when employees are paid. To determine the
10	payroll expense lead, a midpoint is calculated for each pay period. The date funds are
11	transferred to employees is the day before each pay date. The lead days for each period
12	is then calculated by taking the number of days between when funds are transferred
13	and the midpoint. Finally, an average of the lead days is taken to arrive at a payroll
14	expense lead of 14 days.
15	The Gas Purchases expense lead days are the number of days between when the
16	goods or services are received (a midpoint is used when the service is received over a
17	period) and when payment is made. The lead days are calculated by taking settlement
18	date minus the midpoint of service to arrive at a lead day for each month in the Per
19	Book Base Year or Current Test Year. As there are multiple payments made on
20	different days throughout each service period, a weighted average lead days is
21	calculated for each payment within each month to arrive at the total lead days per
22	period. These weighted lead days are then totaled for each service period and a
23	weighted average is calculated once more by multiplying the percent of total payment

in each period by the lead days in each period to arrive at the weighted average lead days for each service period. The Gas Purchases lead days are 33.80.

3 The direct materials and direct services expense lead days are calculated by 4 taking an average of the number days between when materials or services are received 5 and when payment is made to arrive at the total lead days in each period. As there are 6 multiple payments made on different days throughout each service period, a weighted 7 average lead days is calculated for each payment within each month to arrive at the 8 total lead days per period. These weighted lead days are then totaled for each service 9 period and a weighted average is calculated once more by multiplying the percent of 10 total payment in each period by the lead days in each period to arrive at the weighted 11 average lead days for each service period. Finally, the weighted average lead days are 12 summed to arrive at the expense lead days of 29.34 for direct materials and 21.98 for 13 direct services.

14 The allocated materials, services, and payroll expense lead days are all 15 calculated when they are paid through intercompany settlements. Since costs are 16 coming from affiliated companies, they are settled monthly via a systematic process in 17 which each company is made whole. The settlement date for each month is subtracted 18 from the midpoint of each service period to arrive at the total number of lead days. 19 Then the monthly expense is divided by the overall expense to calculate the allocation 20 amount which is then multiplied by the month's lead days to arrive at that month's 21 weighted average lead days. Finally, the weighted average lead days are totaled to 22 arrive at the expense lead of 36.22 for allocated materials, 35.91 for allocated services, 23 and 36.00 for allocated payroll.

15

1	The remaining Other O&M category utilized the weighted average of all other
2	expense lead days which calculated to 30.85 lead days. The total expense lead days are
3	a weighted average calculated by taking the sum of the total expenses per category
4	divided by the total expenses multiplied by the expense lead per category, as shown in
5	Direct Exhibit LJM-2, Schedule F-2, column (e).
6	In addition to O&M expenses, the Company also reviewed the Gas Purchases
7	for the Choice Gas Supplier Payments. The lead days are calculated by taking
8	settlement date minus the midpoint of service to arrive at a lead day for each month in
9	the Per Book Base Year or Current Test Year. As there are multiple payments made on
10	different days throughout each service period, a weighted average lead days is
11	calculated for each payment within each month to arrive at the total lead days per
12	period. These weighted lead days are then totaled for each service period and a
13	weighted average is calculated once more by multiplying the percent of total payment
14	in each period by the lead days in each period to arrive at the weighted average lead
15	days for each service period. The Gas Purchases for Choice Gas lead days are 33.30.
16	All costs were also reviewed for the following Taxes Other Than Income Taxes
17	expense categories:
18	Property Taxes
19	• Federal Insurance Contributions Act ("FICA") Taxes – Employer's
20	• Unemployment Taxes (Federal Unemployment Tax Act ("FUTA") and
21	State Unemployment Tax Act ("SUTA")
22	City Franchise Taxes
23	Sales Taxes

• Current Federal and State Income Taxes

To determine the property tax expense lead, a period midpoint is calculated. The lead days for each period is calculated by determining the number of days between the period midpoint and the payment date. Next, a weighted average lead day percent is calculated by dividing the period expense by the total annual expense. The average lead days for each period is then calculated by multiplying the weighted average lead day percent by the lead days. Finally, the average lead days are totaled to arrive at a property tax expense lead of 341.56 days.

9 FICA Taxes – Employer's and Unemployment Taxes (FUTA and SUTA) –
10 both follow the Direct Payroll calculation since they are accrued in correlation with
11 payroll payments and have a lead of 14.00 days.

12 The franchise tax expense lead is calculated by first determining the weighted 13 days outstanding for each period by dividing the period expense by the total annual 14 expense. Next, a midpoint is determined for each period. Monthly lead days are then 15 calculated by determining the number of days between the midpoint and the payment 16 date. The monthly lead days are then multiplied by the weighted days outstanding for 17 each period and totaled to determine the lead days for the monthly expense. The 18 weighted lead days are then calculated by dividing the total monthly expense by the 19 sum of the monthly expense. Finally, the weighted lead days for the monthly expense 20 are totaled to arrive at a franchise tax expense lead of 55.34 days.

To calculate the sales tax expense lead, a midpoint for each period is determined. The lead days for each period are then calculated by taking the number of days between the midpoint and the payment date. Next, a percent of the annual expense

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is calculated by dividing the expense in each period by the total annual expense. The
 weighted average lead days are then calculated by multiplying the percent of the annual
 expense by the lead days. Finally, the weighted average lead days are summed to
 calculate the sales tax expense lead of 21.59 days.

5 To calculate the income tax expense lead days, a single period midpoint is 6 determined. As there are four quarterly income tax payments made throughout the year, 7 this midpoint is used for each payment. Next, the lead days for each payment are 8 calculated by determining the number of days between the midpoint and the payment 9 date. The percent of the total annual expense for each payment, 25% (four quarterly 10 payments), is then multiplied by the lead days for each payment to arrive at the 11 weighted average lead days. Finally, the weighted average lead days are summed to 12 arrive at the income tax expense lead of 37.00 days.

13 Q. WHAT WERE THE RESULTS OF THE LEAD-LAG STUDY?

A. When the Lead-Lag Factors are applied to the updated expense levels, it results in a
positive CWC allowance and a decrease to rate base for the Test Year CWC of
\$405,504 as shown on Schedule F-2 Page 2, Line 24, column (h) and on Statement F,
line 1, column (g) of Direct Exhibit SKJ-2.

- 18 The individual results of the Lead and Lag for each category are summarized in
 19 Table LJM-1 below:
- 20
- 21
- 22
- 23

Line No	Account Description	Revenue Lag (Days)	Expense Lead (Days)
1	Operations & Maintenance Expense		
2	Direct Payroll	39.65	14.00
3	Gas Purchases - PGA	39.65	33.80
4	O&M Expenses – Direct Materials	39.65	29.34
5	O&M Expenses – Direct Services	39.65	21.98
6	O&M Expenses – Allocated Materials	39.65	36.22
7	O&M Expenses – Allocated Services	39.65	35.91
8	O&M Expenses – Allocated Payroll	39.65	36.00
9	Other O&M	39.65	30.85
	Gas Purchases (Choice Gas Supplier		
10	Payments)	39.65	33.30
11	Property Taxes	39.65	341.56
12	FICA Taxes - Employer's	39.65	14.00
13	Unemployment Taxes (FUTA & SUTA)	39.65	14.00
14	City Franchise Taxes	39.65	55.34
15	Sales Taxes	39.65	21.59
16	Current Income Taxes-Federal and State	39.65	37.00

Table LJM-1 - Lead and Lag

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Q. WHAT IS THE TOTAL RATE BASE VALUE PROPOSED BY THE

4 **COMPANY**?

5 A. In summary, the Company proposes a total rate base of \$898,989,017 as shown in the

6 RRS on Stmt B pg 1, Line 27, Col (h). This consists of the following items:

- Plant in Service \$1,344,463,233 as shown on Stmt D, Line 11, Col (g);
 - Accumulated Depreciation (\$336,641,567) as shown on Stmt E, Line 13, Col (g);
- Other Rate Base Items (\$114,724,093) as shown on Stmt C, Line 13, Col (g);
 and
- Working Capital \$5,891,444 as shown on Stmt F, Line 5, Col (g).
- 13

1 VI. **DEPRECIATION AND AMORTIZATION** 2 Q. WAS A DEPRECIATION STUDY COMPLETED AS PART OF THIS RATE 3 **REVIEW?** 4 A. Yes, a depreciation study was completed for BH Nebraska Gas as part of this rate 5 review. That study is presented by Mr. Spanos along with his direct testimony in this 6 proceeding as Direct Exhibit JJS-2 and represents the depreciation rates calculated 7 using plant and accumulated depreciation balances as of September 30, 2024. As noted 8 above, and included as an exhibit with my testimony, BHSC's depreciation study was 9 approved in the BH Nebraska Gas' last rate proceeding in Commission Application 10 NG-109. It is used in the BH Nebraska Gas rate application in this proceeding as the 11 basis for calculating depreciation expense for allocated plant.

12 Q. IS THE COMPANY ADOPTING ANY CHANGES IN ITS DEPRECIATION 13 ACCOUNTING IN THIS PROCEEDING?

14 A. No. However, Gannett Fleming recommends re-aligning the accumulated depreciation 15 reserve balances to implement for utility accounts utilizing Vintage Year Accounting under Accounting Release Number 15 ("AR 15"). This realignment of accumulated 16 17 depreciation reserve balances will reflect the appropriate Accumulated Depreciation 18 balances going forward for depreciation groups that were calculated in the study 19 prepared by Mr. Spanos. The realignment creates a debit balance, of unrecovered 20 reserve, to be amortized separately from the depreciation study. The Company proposes 21 to amortize BH Nebraska Gas' unrecovered reserve balance over five (5) years. This 22 annual amortization amount is \$444,957 and shown on Statement J, line 6. BHSC will 23 continue to amortize its unrecovered reserve balance for the remainder of the ten (10)

years approved in the last rate application. The allocated portion of this amortization
 expense is \$639,885 annually and is shown on Schedule J-1, lines 11.

3 Q. PLEASE EXPLAIN VINTAGE YEAR ACCOUNTING UNDER AR 15?

4 A. Accounting Release Number 15 is a vintage year accounting method approved by 5 FERC, Vintage Year Accounting for General Plant Accounts, dated January 1, 1997. 6 Vintage year accounting for group depreciation allows a company to simplify its 7 depreciation method for high-volume, low-cost assets. This depreciation accounting 8 method does not require a company to track these types of assets individually but rather 9 allows for the assets to be systematically retired after their depreciable life. These 10 assets are limited to assets commonly referred to as General Plant excluding land, 11 buildings, and vehicles and transportation equipment.

12 The Company's depreciation expert, Mr. Spanos of Gannett Fleming, 13 recommends aligning the accumulated depreciation reserve balances with an 14 appropriate starting point to implement AR 15. This realignment will reflect the 15 appropriate Accumulated Depreciation balances going forward for depreciation groups 16 that were calculated in the study. This realignment creates a debit balance, of 17 unrecovered reserve, to be amortized separately from the depreciation study.

18 Q. WHAT IS THE TOTAL DEPRECIATION EXPENSE ADJUSTMENT THAT 19 THE COMPANY IS PROPOSING?

A. The Company is proposing a total depreciation expense adjustment of \$12,313,203 as shown on Stmt J, Line 14, Col (e). This is the annualized amount that the Company expects to incur going forward and is based on adjusted test year plant balances that utilized the proposed depreciation rates.

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Q. PLEASE DESCRIBE HOW DEPRECIATION AND AMORTIZATION EXPENSE WAS CALCULATED IN THE RRS?

3 As shown on Schedule J-1, depreciation and amortization expense for assets directly A. 4 owned by the Company was calculated by multiplying the adjusted plant balances as 5 shown on Direct Exhibit SKJ-2, Schedule D-1, less any non-depreciable items, by each 6 account's depreciation rate as presented in the Direct Exhibit JJS-2 (Gas Plant 7 Depreciation Study for BH Nebraska Gas). This study provides the on-going annual 8 depreciation and amortization expense for the Test Year based on the plant in service 9 at the end of the Test Year. Depreciation and amortization expense for assets owned by 10 BHSC was calculated by multiplying the allocated portion of each allocation basis by 11 the corresponding composite rate of each method of allocation.

12 Q. WHY WAS THE COMPOSITE RATE CALCULATED FOR THE BHSC 13 ASSETS CALCULATED INSTEAD OF USING THE DEPRECIATION RATES 14 FROM THE BHSC DEPRECIATION STUDY (DIRECT EXHIBIT LJM-3)?

15 A. The composite rate was calculated to accurately determine the depreciation expense 16 that would be allocated to the Company. For instance, computer software account 17 391.18 is allocated to BH Nebraska Gas by multiple allocation factors. Software used 18 to track locations of pipe is used by all gas utilities and uses a blended ratio to allocate 19 those assets to BH Nebraska Gas. Additionally, software used to produce customer 20 bills for both electric and gas customers is allocated based upon the customer count of 21 all regulated utilities. Therefore, to calculate the appropriate amount of depreciation 22 expense for each allocation method, the Company used the detail of the Base Year

ending balance and depreciation expense as the basis of its composite rate for BHSC
 assets.

3 Q. HOW WAS THE COMPOSITE RATE CALCULATED?

A. The Company applied the depreciation rates from the Common Plant Depreciation
Study for BHSC to the detail of the plant FERC accounts that make up each of the
allocation methods. The total depreciation expense calculated for each category and
compared to the total plant used to determine the depreciation expense. The percentage
of depreciation expense to the gross plant used to calculate the depreciation expense is
the percentage used as the composite rate for each allocation method.

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VII. <u>CONCLUSION</u>

11 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

12 A. Yes.

STATE OF SOUTH DAKOTA)) SS COUNTY OF PENNINGTON)

I, Lori Mack, being first duly sworn on oath, depose and state that I am the witness identified in the foregoing prepared testimony and I am familiar with its contents, and that the facts set forth are true to the best of my knowledge, information and belief.

Hou Mack

Subscribed and sworn to before me this 10^{th} day of April, 2025.



My Commission Expires: 8/31/2028

Notary Public