

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) APPLICATION NO. NG-109
CITY, SOUTH DAKOTA, SEEKING)
APPROVAL OF A GENERAL RATE)
INCREASE)**

REBUTTAL TESTIMONY AND EXHIBITS OF

THOMAS J. SULLIVAN, JR.

ON BEHALF OF

BLACK HILLS NEBRASKA GAS, LLC.

October 13, 2020

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Exhibits

Application Exhibits	
Revised Application Exhibit No. 1, Section 1, Schedule B2	Bill Impacts – Existing Rates, Proposed Rates and Alternate Rates
Revised Application Exhibit No. 1, Section 4, Exhibit A	Functionalization and Classification of Rate Base and Cost of Service
Revised Application Exhibit No. 1, Section 4, Exhibit B	Allocation of Rate Base and Cost of Service

Testimony Exhibits

Revised Exhibit No. TJS-7	Fully Cost-Based on Proposed Rate Design
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1 **REBUTTAL TESTIMONY OF THOMAS J. SULLIVAN, JR.**

2
3 **I. INTRODUCTION AND BACKGROUND**

4 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

5 A. My name is Thomas J. Sullivan, Jr. My business address is 15898 Millville Road,
6 Richmond, Missouri 64085.

7 **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

8 A. I am President and owner of Navillus Utility Consulting LLC (“Navillus”).

9 **Q. ON WHOSE BEHALF ARE YOU TESTIFYING?**

10 A. I am testifying on behalf of BH Nebraska Gas, LLC (“BH Nebraska Gas” or “Company”)
11 d/b/a Black Hills Energy. BH Nebraska Gas is the natural gas utility resulting from the
12 recent internal consolidation of the Nebraska gas utility assets and operations of BHC's two
13 former Nebraska gas utility distribution subsidiaries, Black Hills Gas Distribution, LLC
14 (“BH Gas Distribution”) and Black Hills/Nebraska Gas Utility Company, Inc. (“BH Gas
15 Utility”)¹. BH Nebraska Gas is a wholly owned subsidiary of Black Hills Utility Holdings,
16 inc. (“BHUH”). BHUH is a wholly owned subsidiary of Black Hills Corporation (“BHC”).
17 BHSC is a wholly owned subsidiary of Black Hills Corporation (“BHC”).

18 **Q. DID YOU FILE DIRECT TESTIMONY IN THIS PROCEEDING?**

19 A. Yes, my Direct Testimony was filed in this proceeding on June 1, 2020.

20 **Q. ARE YOU SPONSORING ANY EXHIBITS TO YOUR REBUTTAL TESTIMONY?**

21 A. Yes. I'm sponsoring the following exhibits:

¹ See Nebraska Public Service Commission Application No. NG-100.

Application Exhibits	
Revised Application Exhibit No. 1, Section 1, Schedule B2	Bill Impacts – Existing Rates, Proposed Rates and Alternate Rates
Revised Application Exhibit No. 1, Section 4, Exhibit A	Functionalization and Classification of Rate Base and Cost of Service
Revised Application Exhibit No. 1, Section 4, Exhibit B	Allocation of Rate Base and Cost of Service

Testimony Exhibits

Revised Exhibit No. TJS-7 Fully Cost-Based on Proposed Rate Design

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Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my testimony is to respond to issues raised in Answer Testimonies of the following witnesses as they relate to jurisdictional and class cost of service and rate design:

1. Mr. Howard Solganick who filed testimony on behalf of the Public Advocate of the Nebraska Public Service Commission (“Public Advocate”) related to the jurisdictional and class cost of service study (“CCOSS”) and rate design.
2. Ms. Donna Mullinax who filed testimony on behalf of the Public Advocate of the Nebraska Public Service Commission (“Public Advocate”) related to the jurisdictional allocation of her proposed adjustments to the Company’s rate base and revenue requirements.
3. Provide an updated CCOSS and rate design to reflect corrections and changes to billing determinants, rate base, and the revenue requirements that resulted from the discovery process and Public Advocate testimony that the Company has accepted.

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II. CLASS COST OF SERVICE STUDY

Q. PLEASE SUMMARIZE THE PUBLIC ADVOCATE’S POSITION REGARDING THE JURISDICTIONAL AND CLASS COST OF SERVICE STUDY.

A. In response to his question on Page 8 Line 7 of his Direct Testimony asking if the results of the Company’s CCOSS are reasonable, Mr. Solganick states: “Yes. The CCOSS provided by the Company uses cost allocation methodologies that are accepted in the industry and, in most cases, follow prior practice for the legacy companies in prior cases. However, should the revenue requirements adjustments reflect major changes in line items it would be wise to update the CCOSS before the final revenue allocation and rate are implemented. I have not made these updates as I have respected the significant cautions highlighted by the Company about making changes to the CCOSS.”

Thus, the Company and the Public Advocate are in agreement with regards to the CCOSS methodologies and allocations and there are no issues related to the CCOSS itself. However, Mr. Solganick correctly points out that there is a linkage between the jurisdictional and class cost allocation and the revenue requirements. The Public Advocate has proposed numerous changes to the Company’s revenue requirements and rate base, but as Mr. Solganick states, the Public Advocate has not run these changes through the CCOSS. These changes would impact how the revenue requirements are allocated to both jurisdictional and non-jurisdictional customer classes and thus the jurisdictional revenue deficiency (or excess). Since the Public Advocate did not update the CCOSS, the jurisdictional allocation in Ms. Mullinax’s testimony and revenue excess by customer class used by Mr. Solganick are not correct.

1 **Q. PLEASE FURTHER EXPLAIN WHY THE PUBLIC ADVOCATE'S**
2 **JURISDICTIONAL ALLOCATIONS OF ITS PROPOSED ADJUSTMENTS ARE**
3 **NOT CORRECT.**

4 A. Ms. Mullinax's jurisdictional allocations use the allocations that would result from the
5 Company's filed position which are different than the allocations that would result from
6 the Public Advocate's position. The Company's jurisdictional allocation of each
7 component of rate base and revenue requirement originates in the CCOSS. The
8 jurisdictional allocation shown in the revenue requirements and rate base schedules are
9 simply showing the allocations that result from the CCOSS. Since Mr. Solganick relies
10 upon the allocations used by Ms. Mullinax, the revenue allocation he uses in his proposed
11 rate design is also incorrect. In addition, as discussed in the rebuttal testimony of Mr.
12 Clevinger, there are also indirect impacts that Ms. Mullinax's proposed adjustments have
13 on the total Nebraska revenue requirement that is then inputted into the CCOSS to
14 determine the jurisdictional allocation.

15 As an example, Ms. Mullinax's proposed plant adjustment (Adjustment Number 1)
16 also impacts how other rate base items and expense items are classified in the
17 Functionalization and Classification of Rate Base and Cost of Service (Application Exhibit
18 1, Section 4, Exhibit A). For example, the classification of plant Accounts 376 (Mains)
19 and 380 (Service Lines) impact how distribution operation and maintenance expenses are
20 classified in Accounts 870, 874, 880, 881, 885, and 894 (as shown in Column P of the
21 exhibit). These classifications in turn impact the calculation of Supervised O&M which
22 impacts the classification of administration and general expenses and general plant.

1 Further, any other costs classified based on rate base or distribution plant, are also
2 impacted.

3 Further, the adjustments proposed by the Public Advocate in Ms. Mullinax's
4 testimony are not additive as shown in her Table 2 since the Public Advocate's adjustments
5 are not mutually exclusive. For example, the adjustment to the rate of return does not have
6 the same impact on the overall revenue requirement if you calculate it individually (on the
7 Company's proposed jurisdictional rate base) as it would on the lower rate base proposed
8 by the Public Advocate. In other words, the adjustments have a compounding and inter-
9 related impact on not only the total Nebraska revenue requirements but also on the
10 jurisdictional allocation in the CCOSS. As such, in order to properly determine the impact
11 of any revenue requirements or rate base changes, such changes must be run through both
12 the total Nebraska revenue requirements calculation and the CCOSS.

13 **Q. HAVE YOU PREPARED A CCOSS BASED ON THE PUBLIC ADVOCATE'S**
14 **PROPOSED REVENUE REQUIREMENTS AND RATE BASE ADJUSTMENTS**
15 **THAT CORRECTS THE PUBLIC ADVOCATE'S CLASS AND JURISDICTIONAL**
16 **COST ALLOCATION AND JURISDICTIONAL CLASS REVENUE**
17 **DEFICIENCIES?**

18 A. Yes. The Company has run the Public Advocate's proposed adjustments through its
19 revenue requirements model as discussed in Mr. Clevinger's rebuttal testimony. In turn, I
20 have run this revised revenue requirement and rate base (Statement N) through the CCOSS.
21 I have also included the minor correction identified in Mr. Solganick's direct testimony
22 related to the Company's proposed weather normalization adjustment. A comparison of

1 the results of this CCOSS with figures provided in the Public Advocate’s testimony and
2 exhibits is contained in Table TJS-8 below.

3 **Table TJS-8 – Comparison of Public Advocate Deficiency (Excess)**

Jurisdictional Class	Public Advocate Position – As Filed	Public Advocate Position – Corrected
Residential	(\$30,418)	\$2,315,463
Commercial	(\$1,758,816)	(\$871,397)
Total	(\$1,789,234)	\$1,444,066

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9 As shown in the table above, the Public Advocate’s short-cutting the CCOSS produces
10 significantly different results than properly running the adjustments through the revenue
11 requirement and CCOSS allocations. As alluded to earlier, the primary issue in what the
12 Public Advocate has done is that they have assumed that the individual adjustments are
13 additive. This assumption would be expected to bias their results towards overstating the
14 impacts of their adjustments primarily because many of their adjustments reduce rate base
15 and thus would reduce the rate base upon which any change in the cost of capital would be
16 applied and thus reduce the impact of a change in the cost of capital. Similarly, the
17 shortcuts taken by Public Advocate to determine their revenue allocation by jurisdictional
18 class is incorrect and improper.

19 **Q. WHAT IS YOUR RECOMMENDATION REGARDING ANY CHANGES MADE**
20 **TO THE REVENUE REQUIREMENT OR RATE BASE?**

21 A. I generally agree with Mr. Solganick’s recommendation restated earlier in my rebuttal
22 testimony but with a slight change to his “it would be wise” recommendation; the CCOSS
23 must be updated to reflect any proposed changes to the rate base or revenue requirements

1 so that the jurisdictional class revenue requirements can be properly determined and then
2 by extension rates designed to recover the jurisdictional class revenue requirements.

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4 **III. RATE DESIGN**

5 **Q. PLEASE SUMMARIZE THE ISSUES REGARDING PUBLIC ADVOCATE'S**
6 **PROPOSED RATE DESIGN.**

7 A. In general, the differences between the rates proposed by the Public Advocate and those
8 proposed by the Company, that I sponsored in my direct testimony, are primarily related to
9 the significant difference between the Company and Public Advocate's proposed revenue
10 requirement rather than the approach and rate structures proposed. I would first like to
11 start with where the Company and the Public Advocate agree and then discuss areas where
12 I differ from Mr. Solganick.

13 **Q. PLEASE SUMMARIZE THE AREAS WHERE THE COMPANY AND PUBLIC**
14 **ADVOCATE ARE GENERALLY IN AGREEMENT REGARDING RATE DESIGN.**

15 A. The following are the areas where the Company and Public Advocate are in agreement:

- 16 1. The current separate rate structures for the legacy BH Gas Utility and BH
17 Gas Distribution should be consolidated into one set of systemwide rates.
- 18 2. The existing Residential customers will be consolidated using the existing
19 BH Gas Distribution rate structure consisting of a monthly customer charge,
20 a first block volumetric charge for the first 20 therms of monthly usage, and
21 a second block volumetric charge for all monthly usage in excess of 20
22 therms.

1 3. The existing Commercial customers will be consolidated using the existing
2 BH Gas Distribution Small Commercial rate structure consisting of a
3 monthly customer charge, a first block volumetric charge for the first 40
4 therms of monthly usage, and a second block volumetric charge for all
5 monthly usage in excess of 40 therms.

6 4. The design of the volumetric charges should recognize competition with
7 electric utilities as has been the past practice for the BH Gas Distribution
8 rate design.

9 5. The level of volumetric charges recommended by both the Company and
10 the Public Advocate are set equal for the Residential and Commercial
11 customers.

12 6. The class revenue requirements should be based on the results of the
13 CCOSS to the extent practical.

14 7. The jurisdictional customers are not subsidizing the non-jurisdictional
15 customers.

16 **Q. PLEASE SUMMARIZE THE AREAS WHERE THE COMPANY AND PUBLIC**
17 **ADVOCATE ARE NOT IN AGREEMENT REGARDING RATE DESIGN.**

18 A. The primary difference between the Company and Public Advocate relates to the Public
19 Advocate's proposed level of customer charges and its rationale for the development of
20 those customer charges. Again, the differences in absolute level of the rates is primarily a
21 function of the differences between the Company and Public Advocate's revenue
22 requirements. Secondly, the Public Advocate does not provide much guidance on how
23 rates should be designed for a revenue requirement that differs from their proposal. With

1 regard to the Public Advocate's recommended customer charges, there are two significant
2 deficiencies:

- 3 1. The Public Advocate's proposal fails to recognize the differences in the cost
4 of service between the residential and commercial classes in its proposed
5 customer charges.
- 6 2. The Public Advocate's discussion of small use customers significantly
7 overstates the risk associated with these customers and fails to recognize the
8 cost of service characteristics of small and large use (residential) customers.
- 9 3. The Public Advocate is proposing a second block rate of \$0.1575 per therm
10 which is higher than what I recommend and which appears to contradict
11 their direct testimony.
- 12 4. The Public Advocate characterization of the Company's proposed
13 residential customer charge as a "rapid" increase is an exaggeration and fails
14 to recognize the legacy BH Gas Utility customers' rates have not increased
15 in over 10 years.

16 I will address these issues below and will also provide guidance to the Commission
17 regarding how rates should be designed for a revenue requirement that is less than what is
18 proposed by the Company.

19 **Q. PLEASE EXPLAIN HOW THE PUBLIC ADVOCATE'S PROPOSED RATE**
20 **DESIGN FAILS TO RECOGNIZE COST DIFFERENCE BETWEEN THE**
21 **RESIDENTIAL AND COMMERCIAL CLASSES.**

22 A. Part of the reason that Public Advocate's proposal fails to recognize the cost difference is
23 due to the fact that Public Advocate's revenue allocation was not based on the revenue

1 allocation that would result from updating the CCROSS to reflect the Public Advocate's
2 proposed revenue requirement as discussed earlier in my rebuttal testimony. Also, the
3 Public Advocate's proposal on residential and commercial customer charges are essentially
4 equal to the existing BH Gas Utility customer charges excluding the current level of riders.
5 As discussed on Page 73 of my Direct Testimony, the customer related cost of service for
6 the Commercial customers is about 2.2 times that of Residential customers and the rates I
7 recommended in my Direct Testimony resulted in a differential of about 2 times.

8 On the other hand, the Public Advocate's recommended customer charges for
9 residential and commercial customers are \$13.50 and \$18.50 per month, respectively
10 (Exhibit HS-3), thus resulting in a differential of 1.37. The Public Advocate's
11 recommended commercial customer charge relative to the residential customer charge is
12 way too low relative to cost.

13 **Q. PLEASE EXPLAIN HOW THE PUBLIC ADVOCATE'S HAS OVERSTATED THE**
14 **RISK ASSOCIATED WITH SMALL USE CUSTOMERS.**

15 A. As stated on Page 11, Line 6 of his direct testimony, Mr. Solganick is:

16 "concerned about the impact of rate design on small use customers. These
17 customers do not have gas space heating equipment but may still have some
18 combination of gas water heating, cooking, and clothes drying. While these
19 customers may have lower bills, they contribute to the support of the Company's
20 costs. If the Customer Charge increases rapidly, these customers are at risk of
21 leaving the system, which would reduce their contribution toward costs to zero and,
22 thus, in the longer term, raise rates for the remaining customers."

23 On Page 12, Line 15 of his direct testimony, Mr. Solganick estimates that the number of
24 low use residential customers (customers not having gas space heating) at 10,500. There
25 are several flaws in Mr. Solganick's analysis that cause him to significantly overstate the
26 risk associated with these customers including:

- 1 1. Most of the cost to serve residential customers is fixed and does not vary
2 significantly with the customer's usage. The combination of the customer
3 charge and higher first block rates proposed by the Company are intended to
4 reflect this and attempt to minimize intraclass subsidies that can exist in rate
5 designs that recover a significant portion of fixed costs through a flat volumetric
6 rate.
- 7 2. If we accept the 10,500 customers as a reasonable estimate, a portion of these
8 customers would be on the legacy BH Gas Distribution system and these
9 customers are currently paying an effective customer charge of \$18.79 per
10 month which is substantially greater than the customer charge the Company is
11 proposing in this case, thus they are receiving a rate decrease under the
12 Company's proposed rates.
- 13 3. Based on my experience, customers who use natural gas but do not have natural
14 gas space heating are choosing gas based on other intangible factors such as a
15 preference for natural gas cooking over electric cooking and/or a desire to have
16 gas log heating in a family gathering space. These customers have made
17 significant incremental investment in the appliances and gas piping are not
18 going to be swayed by relatively small increases in the cost of natural gas.
- 19 4. The cost of energy for the electric appliances that Mr. Solganick lists are
20 significantly higher than the cost of energy for the comparable natural gas
21 appliances. The reason that electric space heating is more competitive with
22 natural gas space heating is because electric heat pumps have coefficients of
23 performance ("COP") that approach 400 to 500 percent thus making the cost of

1 the energy to operate them highly competitive with natural gas space heating.

2 This advantage does not exist for non-space heating appliances.

3 **Q. BASED ON THE RESULTS OF YOUR CLASS COST OF SERVICE STUDY,**
4 **WHAT IS THE FIXED COST TO SERVE A RESIDENTIAL CUSTOMER?**

5 A. Application Exhibit No. 1, Section 4, Exhibit B, Page 9 summarizes the unit cost to serve
6 residential and commercial customers. As shown on Line 24 of that exhibit, the fixed unit
7 cost to serve each customer (regardless of customer size) is \$24.42 per month, or \$293.04
8 per year. The portion of cost that varies with size of customer is \$0.0938 per therm for
9 capacity (Line 26) and \$0.0318 per therm for commodity (Line 28).

10 On Page 13 of his direct testimony, Mr. Solganick provides AGA estimates of gas
11 usage for non-heating appliances. While I do not challenge these figures, it would not be
12 correct to assume that a small use customer on the Company's system is the sum of these
13 figures. In my Direct Testimony (Application Exhibit No. 1, Section Schedule B2), I use
14 23 therms per month for a typical summer bill (April through October) for a residential
15 customer, or 276 therms per year. The annual cost to serve this customer is as follows:

- 16 1. Customer related cost – \$293.04 ($\24.42×12)
- 17 2. Capacity related cost - \$25.89 ($276 \times \0.0938)
- 18 3. Commodity related cost - \$8.78 ($276 \times \0.0318)
- 19 4. Total Cost of Service - \$327.71 per year

20 The margin recovery from a low use residential customer (23 therms per month) based on
21 the Company's proposed rates is \$27.89 per month (as shown in Table 9 below), or \$334.68
22 which is very close to the cost to serve a low use customer. Thus, the Company's proposed
23 rate design achieves the goal of minimizing intraclass subsidization.

1 On the other hand, the margin currently recovered from a legacy BH Gas Utility
2 customer using 23 therms per month is only \$17.99 per month or \$215.88 per year which
3 is substantially below the cost to serve these customers. The rates proposed by the Public
4 Advocate recover \$22.50 per month for a consumption of 23 therms, or \$270.04 per year,
5 again significantly below the cost to serve these customers. Under the existing BH Gas
6 Utility rates and the rates proposed by the Public Advocate, low use customers are
7 subsidized by higher use customers. As indicated in my direct testimony and discussed
8 below, low use customers should not be confused with low income customers.

9 **Q. WHAT PERCENTAGE OF RESIDENTIAL CUSTOMERS ARE ON THE LEGACY**
10 **GAS DISTRIBUTION SYSTEM AND ARE THUS RECEIVING A DECREASE IN**
11 **THEIR CUSTOMER CHARGES UNDER THE COMPANY'S PROPOSED**
12 **RATES?**

13 A. As shown in Mr. Hyatt's billing determinants workpapers, the number of residential
14 customers is 255,678 which is comprised of 68,539 BH Gas Distribution residential
15 customers and 187,139 BH Gas Utility customers. Thus, BH Gas Distribution residential
16 customers constitute about 27 percent of the customers. Thus, of the 10,500 low use
17 customers estimated by Mr. Solganick, we can assume that 27 percent of these customers,
18 or 2,835 are legacy BH Gas Distribution customers who are getting a rate decrease under
19 the Company's proposed rates. The remainder, or 7,665 customers comprising about 3
20 percent of the total residential customers are non-heating customers receiving a higher
21 percentage rate increase than the typical residential customers. But as I indicated above
22 these legacy BH Gas Utility customers are being subsidized by the remaining residential

1 customers and as I discuss below, these customers are not customers that I would consider
2 to be gas price sensitive.

3 On Page 12 of his direct testimony, Mr. Solganick indicates that \$1.7 million to \$2
4 million are at risk due to these low use customers. These numbers are grossly overstated.
5 First, these figures assume all 10,500 customers leave the system due to a relatively small
6 increase in the customer charge. Second, as indicated above, 27 percent of these residential
7 customers are receiving an effective decrease in their customer charge.

8 **Q. PLEASE ELABORATE ON YOUR EXPERIENCE WITH LOW USE**
9 **CUSTOMERS AND WHY THEY ARE NOT AS FUEL PRICE SENSITIVE AS THE**
10 **PUBLIC ADVOCATE SUGGESTS.**

11 A. As indicated in my direct testimony and not challenged by the Public Advocate, low use
12 customers should not be confused with low income customers. Also, it is not the
13 Company's or my intention to downplay the importance of these customers. However, it
14 is important to understand the factors contributing to why a customer may choose to take
15 natural gas service for natural gas fired appliances but not take natural gas service for the
16 larger natural gas space heating load.

17 Low use (non-space heating) customers typically use natural gas out of preference
18 for the appliance, particularly gas cooking. For these customers, the price of natural gas is
19 not the driving factor because these customers are willing to spend a significant amount of
20 investment on the gas piping and the higher cost appliances because they prefer natural
21 gas.

22 Based on my experience developing rates for Florida gas utilities, the price of
23 natural gas is not the primary factor in a customer's decision to take natural gas service. A

1 typical Florida natural gas customer uses little or no natural gas for space heating, yet
2 utilities in Florida are very successful at connecting and retaining customers with rates that
3 are substantially higher than rates we are used to further North. The rates are higher
4 because the cost to serve customers is essentially the same but the usage levels are
5 substantially lower. Florida utilities are successful at connecting and retaining customers
6 because they aggressively market natural gas based on intangible benefits (such as benefits
7 of gas cooking) and they have aggressive rebate programs. On the other hand, these
8 customers generally do not have natural gas space heating because their heating
9 requirements are very low and can be adequately met with electric heat pumps which as I
10 discuss below have efficiency (and thus cost) benefits at temperatures above freezing.

11 Further, as discussed in my direct testimony, the electric utilities in Nebraska price
12 their services to compete for heat load and as discussed below are not competitive for non-
13 heating appliances. However, the electric utilities do provide rebates for these non-heating
14 appliances, thus the competition for these loads can be met adequately through effective
15 and competitive rebate programs.

16 **Q. PLEASE DISCUSS THE DIFFERENCES IN ELECTRIC AND GAS**
17 **COMPETITION FOR NON-HEATING APPLIANCES VERSUS SPACE HEATING**
18 **APPLIANCES.**

19 A. Table TJS-9 shows a comparison of the cost of gas and electric appliances for low-use (i.e.
20 non heating customers).

21 **Table TJS-9 – Comparative Cost of Gas and Electricity for Low-Use Customers**

Appliance	Gas	Electricity
<u>Energy Usage -Per Month</u>	Therms	kWh (1)
Total	23.00	674.08

<u>Proposed Rates</u>	
Customer Charge - \$/month	15.45
First Block - \$/therm	0.5996
Second Block - \$/therm	0.1500
Gas Cost - \$/therm	0.4247
Total Bill - \$/month	37.66
Margin - \$/month	27.89
Equivalent Cost per kWh	0.0559
(1) kWh/Therm	29.308

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As shown in Table TJS-9, the equivalent cost of electricity to operate the non-heating appliances is 5.59 cents per kWh. As shown in Exhibit TJS-4 in my Direct Testimony, the rates charged by Nebraska electric utilities for non-heating electric load are substantially greater than this. For example, Lincoln Electric's non-heating residential rate is 8.01 cents per kWh, Nebraska Public Power's non-heating rate is 8.08 to 10.13 cents per kWh, and Omaha Public Power District's non-heating rate is 7.48 to 9.36 cents per kWh. Thus, the Nebraska electric utility rates cannot compete with natural gas on appliances that operate at approximately 100 percent efficiency for both gas and electricity, which is the case for water heating, cooking and clothes drying. This is why electric utilities offer rebates on these appliances and focus their pricing (rates) on the space heating load.

The reason that price matters on heat load is because electric heat pumps operate at efficiencies substantially greater than 100 percent when temperatures are above freezing. Heat pump efficiency is commonly referred to as the coefficient of performance (COP). The COP of air-to-air heat pumps can reach as high as 400 percent (ground source heat pumps are about 500 percent), whereas the higher efficiency natural gas furnaces are

1 about 98 percent. In other words, on an air-to-air heat pump you can get 4 units of output
2 heat for the price of one unit of input energy (this efficiency benefit declines substantially
3 as temperatures approach freezing). This is why we need to worry about price on heat load
4 but not on base load. The issue on base load is primarily about rebates.

5 **Q. PLEASE ADDRESS THE VOLUMETRIC RATES PROPOSED BY THE PUBLIC**
6 **ADVOCATE.**

7 A. On Page 14, Lines 4-5 of his Direct Testimony, Mr. Solganick states: “A lower Customer
8 Charge results in an increase in the volumetric charge to achieve the same revenue
9 requirements.” This is not exactly what is shown in Public Advocate’s recommended rates
10 in Exhibit HS-3. In this exhibit, the Public Advocate is actually proposing to decrease the
11 first tier volumetric rate from the existing BH Gas Distribution first tier rate of \$0.4675
12 (please note there is a typographical error in Exhibit HS-3) and the Company’s proposed
13 first tier rate of \$0.59960 to \$0.4256 per therm and to increase the second tier rate from the
14 existing BH Gas Distribution second tier rate of \$0.13380 per therm and the Company’s
15 proposed second tier rate of \$0.1500 per therm, to \$0.1575 per therm. The following are
16 the significant problems with the Public Advocates proposed rates:

- 17 1. The Public Advocate is proposing an increase to the second tier rate of
18 almost 18 percent while essentially proposing a decrease to the effective
19 customer charges paid by all customers. The Company proposed a 12
20 percent increase to the second tier as discussed in my Direct Testimony.
- 21 2. The Public Advocate is essentially increasing the real competitive risk on
22 245,000 space heating customers in order to address an exaggerated risk on
23 approximately 7,500 low-use customers.

1 3. As discussed previously, the Public Advocate’s rate design produces a
2 subsidy of small use customers by large use customers.

3 4. The Public Advocate’s proposed rates fail to properly balance the pricing
4 risk that the Company faces by shifting risk and cost to the 245,000 space
5 heating customers.

6 Based on these factors, the Public Advocate’s proposed rate design is not reasonable. Later
7 in my testimony, I offer a more balanced approach to setting rates should the Commission
8 approve a revenue requirement lower than that proposed by the Company that recognizes
9 that the primary competitive risk faced by the Company is electric utility price competition
10 on heating load.

11 **Q. IS THE PUBLIC ADVOCATE’S IMPLICATION THAT THE COMPANY’S**
12 **PROPOSED RATES RESULT IN A RAPID INCREASE IN CUSTOMER**
13 **CHARGES ACCURATE?**

14 A. No. On Page 11, Lines 10 and 11, of his Direct Testimony, Mr. Solganick states: “If the
15 Customer Charge increases rapidly, these customers are at risk of leaving the system...”
16 This is an exaggeration of the Company’s proposal. As discussed on Pages 69 through 70
17 of my Direct Testimony, the current BH Gas Utility residential customers pay an effective
18 customer charge (base customer charge plus riders billed on a per customer basis) of \$14.15
19 per month and the current BH Gas Distribution customers currently pay \$18.79 per month.
20 For the BH Gas Utility residential customers, the proposed customer charge of \$15.45
21 represents an increase of \$1.30 per month. This can hardly be characterized as “rapid”
22 when the current BH Gas Utility customers’ last rate case was based on test year of July
23 31, 2009 (over 11 years ago).

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Q. IF THE COMMISSION APPROVES A REVENUE REQUIREMENT LOWER THAN THAT PROPOSED BY THE COMPANY, WHAT CRITERIA SHOULD THE COMMISSION USE TO DESIGN RATES?

A. In my direct testimony I outline the specific criteria that should be used in the design of the Company’s residential and commercial rates on Pages 61 and 62. The following are how the specific levels of each of the rate components should be determined for a revenue requirement lower than that proposed by the Company:

1. Revenue deficiency and class revenue allocations should be based on running the revenue requirement through the CCOSS.
2. As discussed earlier, the Public Advocate and I agree that the Residential and Commercial volumetric rates should be equal.
3. The Commercial customer charge should be set at a level approximately two times that of the Residential rate. This is consistent with the results of the CCOSS.
4. The Residential customer charge should be no lower than the current BH Gas Utility Residential customer charge including riders which is \$14.15 per month. This would equate to a \$28.30 per month customer charge consistent with the criteria listed above.
5. Due to price competition the second block of the Residential and Commercial rates should be no higher than \$0.1500 per therm. This represents a 12.1 percent increase above the current BH Gas Distribution second block rate of \$0.13380 per therm.
6. Any reduction in the overall revenue requirement should primarily focus on lowering the first block volumetric rate while maintaining the Company original

1 proposed customer charges and second block rate in order to achieve the class
2 revenue requirement. This gives some recognition to the concerns expressed by
3 Mr. Solganick, since a reduction in the first block would be most beneficial (on a
4 percentage basis) to lower use bills.

- 5 7. In order to tie out to each customer classes' revenue requirement, there many need
6 to be some slight variation in the level of customer charges.

7 In the next section of my testimony, I provide a demonstration of how these criteria can be
8 applied when I discuss the rates based on the Company's updated CCOSS.

9
10 **IV. UPDATED CLASS COST OF SERVICE STUDY AND RATE DESIGN**

11 **Q. IS THE COMPANY PROPOSING ANY CHANGES TO ITS REVENUE**
12 **REQUIREMENT?**

13 A. Yes. As discussed in the rebuttal testimony of Mr. Clevinger, the Company is proposing
14 several adjustments to its filed revenue requirement. In addition, as pointed out by Mr.
15 Solganick, there was a small error in the Company weather normalization calculation.

16 **Q. HAVE YOU PREPARED AN UPDATED CLASS COST OF SERVICE STUDY TO**
17 **REFLECT THESE CHANGES AND CORRECTIONS?**

18 A. Yes, I have. It is provided as Revised Application Exhibit No. 1, Section 4, Exhibits A and
19 B. This exhibit reflects the updated revenue requirement sponsored by Mr. Clevinger and
20 corrected weather normalization adjustment sponsored by Mr. Hyatt. There are no other
21 changes to the study including no changes to any of the allocation bases except correcting
22 the volumes to reflect the corrected weather normalization adjustment.

1 **Q. PLEASE SUMMARIZE THE RESULTS OF THE REVISED CLASS COST OF**
2 **SERVICE STUDY.**

3 A. In Table TJS-10 below I summarize the jurisdictional class revenue deficiencies in the filed
4 case and the revised jurisdictional class revenue deficiencies based on the updated CCOSS.

5 **Table TJS-10 Comparison of Filed and Revised Jurisdictional Class Revenue Deficiencies**

Jurisdictional Class	Revenue Deficiency – As Filed	Revenue Deficiency – Revised
Residential	\$13,687,737	\$12,594,851
Commercial	\$ 3,607,756	\$3,060,039
Total	\$17,295,841	\$15,654,890

11

12 **Q. HAVE YOU DEVELOPED A REVISED SET OF RATES REFLECTING THESE**
13 **UPDATED JURISDICITONAL CLASS REVENUE DEFICIENCIES?**

14 A. Yes, I have. They are provided in Revised Exhibit TJS-7. These rates are developed on
15 the same criteria established in my direct testimony and reflect the additional discussion in
16 the prior section of my rebuttal testimony where I focused any reduction in the Company's
17 filed revenue requirement towards reducing the first volumetric block of the Residential
18 and Commercial rates. The rates in Revised Exhibit TJS-7 are based on the following:

- 19 1. Same Residential customer charge of \$15.45 as proposed in the Company's
20 original filing.
- 21 2. A Commercial customer charge of \$30.30 per month which is slightly lower
22 than the customer charge originally proposed. This was necessary in order

1 to maintain the same volumetric rates for the residential and commercial
2 rates and recover each classes' cost of service.

3 3. No change to the second tier volumetric rate of \$0.1500 as originally
4 proposed.

5 4. A first tier volumetric rate of \$0.57800 per therm which is lower than the
6 \$0.59960 per therm in the Company's original filing.

7 **Q. HAVE YOU DEVELOPED A REVISED SET OF BILL IMPACTS**
8 **REFLECTING THIS REVISED RATES?**

9 A. Yes, I have. They are provided in Revised Application Exhibit No. 1, Section 1, Schedule
10 B2. Consistent with the lower revenue requirement and thus lower overall level of rates,
11 the bill impacts are slightly less than those shown in the original filed schedules.

12 **Q. WHAT RATES ARE YOU RECOMMENDING THAT THE COMMISSION**
13 **APPROVE?**

14 A. I am recommending that the Commission approve the rates contained in Revised Exhibit
15 TJS-7.

16 **V. CONCLUSION**

17 **Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.**

18 A. My rebuttal testimony addresses the areas of jurisdictional class cost of service and rate
19 design; the following is a summary of the specific issues I address related to the Public
20 Advocate's and Company's positions on those issues:

21 1. The Public Advocates adjusted jurisdictional revenue requirement is
22 incorrect because the Public Advocate failed to fully reflect the impact of
23 their proposed adjustments on allocations within the development of the

1 Total Nebraska revenue requirements as discussed by Mr. Clevinger and
2 the resulting allocations within the CCOSS because the Public Advocate
3 did not run their proposed adjustments fully through the revenue
4 requirement model nor the CCOSS.

5 2. If the errors in the Public Advocates determination of the jurisdictional
6 revenue requirement are corrected, the resulting deficiency (excess) is
7 \$1,444,066 rather than the (\$1,789,234) as shown in the Public Advocate's
8 direct testimony.

9 3. Since the Public Advocate did not update the CCOSS to reflect their
10 proposed adjustments, their determination of the class revenue allocation
11 is also incorrect. The correct jurisdictional class revenue deficiencies
12 (excesses) based on the Public Advocates proposed adjustments are as
13 follows:

14 Residential - \$2,315,463

15 Commercial – (\$871,397)

16 4. The Public Advocates proposes no changes to the CCOSS other than
17 correcting the billing determinants to correct an error in the Company's
18 weather normalization calculation.

19 5. The differences between the Public Advocate's and Company's positions
20 are rate design are primarily related to the significant difference between
21 the Company and Staff's proposed revenue requirement.

- 1 6. The Company and Public Advocate agree that the legacy BH Gas Utility
2 and BH Gas Distribution rates should be consolidated into one set of
3 system-wide rates.
- 4 7. The Public Advocate agrees with the rate structures proposed by the
5 Company.
- 6 8. The Public Advocate and Company agree that the rate design and rate
7 structure should recognize the competition from electric utilities.
- 8 9. The Public Advocates proposed adjustments to the rates to reflect their
9 proposed revenue requirement significantly overstates the impacts that the
10 proposed rates have on low use (non-space heating) customers and fails to
11 reasonably recognize the cost of service and competitive issues for these
12 customers.
- 13 10. The Public Advocates proposed rate design is not reasonable because it
14 maintains a subsidy for approximately 7,500 customers by increasing the
15 competitive risk for 245,000 customers.
- 16 11. If the Commission approves a revenue requirement lower than that
17 proposed by the Company, that revenue requirement should be run
18 through the CCOSS to determine the proper revenue requirement for the
19 jurisdictional customer classes.
- 20 12. If the Commission approves a revenue requirement lower than that
21 proposed by the Company, the rate design should focus on reducing the
22 first block of the proposed rates. This will address some of the concerns

1 expressed by the Public Advocate regarding low-use customers while
2 reflecting both cost of service and competition with electric utilities.

3 13. In its rebuttal case, the Company proposes to update (reduce) their
4 proposed revenue requirement as discussed in Mr. Clevinger's rebuttal
5 testimony. The overall jurisdictional revenue deficiency is reduced from
6 \$17.3 million to \$15.7 million by reflecting these updates.

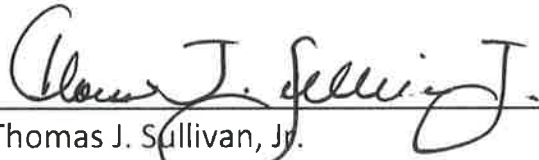
7 14. The jurisdictional rates resulting from this revised revenue requirement are
8 presented in Revised Exhibit TJS-7. These are the rates that the Company
9 requests that the Commission approve.

10 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

11 A. Yes.

STATE OF NEBRASKA)
) SS
COUNTY OF LANCASTER)

I, Thomas J. Sullivan, Jr., 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.



Thomas J. Sullivan, Jr.

Subscribed and sworn to before me this 9th day of October, 2020.

(SEAL)





Notary Public

My Commission Expires:

