BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

Docket No. NG-109

REBUTTAL TESTIMONY OF

JOHN J. SPANOS

ON BEHALF OF

BLACK HILLS NEBRASKA GAS, LLC

October 13, 2020

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EXHIBITS

I. WITNESS IDENTIFICATION AND QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is John J. Spanos and my business address is 207 Senate Avenue, Camp Hill, Pennsylvania.

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

A. I am employed by Gannett Fleming Valuation and Rate Consultants, LLC as President.

Q. PLEASE STATE YOUR QUALIFICATIONS.

A. I have over 34 years of depreciation experience which includes giving expert testimony in over 340 cases before 41 regulatory commissions, including this Commission. These cases have included depreciation studies in the electric, gas, water, wastewater and pipeline industries. In addition to cases where I have submitted testimony, I have supervised over 700 other depreciation or valuation assignments. Please refer to Exhibit No. JJS-1 for my statement of qualifications, which includes further information with respect to my work history, case experience, and leadership in the Society of Depreciation Professionals.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I have Bachelor of Science degrees in Industrial Management and Mathematics from Carnegie-Mellon University and a Master of Business Administration from York College.

Q. DID YOU OFFER ANY DIRECT TESTIMONY IN THIS PROCEEDING?

A. No, however, my Depreciation Studies, Exhibit No. MCC-4 and Exhibit No. MCC-5, were included in the testimony exhibits of Michael C. Clevinger.

Q. ARE YOU SPONSORING ANY EXHIBITS?

A. Yes. Exhibit No. JJS-1 is my Statement of Qualifications

II. PURPOSE AND OVERVIEW OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My rebuttal testimony addresses Nebraska Public Advocate witness William Dunkel's testimony regarding the Public Advocate's proposed adjustments and recommendations regarding the depreciation rates submitted by Black Hills Nebraska Gas, LLC d/b/a Black Hills Energy ("BH Nebraska Gas" or "Company") in this case.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. I am testifying on behalf of BH Nebraska Gas. BH Nebraska Gas is the natural gas utility resulting from the recent internal consolidation of the Nebraska gas utility assets and operations of the two former BHC Nebraska gas utility subsidiaries, Black Hills/Nebraska Gas Utility Company, LLC. ("BH Gas Utility") and Black Hills Gas Distribution, LLC ("BH Gas Distribution").

Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A. My testimony responds to the depreciation related proposals of Nebraska Public Advocate witness, William Dunkel. For most plant accounts, Mr. Dunkel has not challenged the life or net salvage estimates in my study. However, in many

regards, I disagree with the estimates he has challenged. Specifically, my testimony addresses the following:

- The Public Advocate has proposed different service lives for a few property accounts. These accounts are: Account 380, Services and the two subaccounts of Account 383, House Regulators. Mr. Dunkel does not correctly interpret the entire historical data, and proposes lives that are not consistent with the overall life cycle of the asset classes for these accounts.

The Public Advocate has proposed changes to the net salvage estimates for two property accounts. These accounts are: Account 376, Mains and Account 380, Services. In contrast to the recommendations in my study, Mr. Dunkel's proposals for these two accounts only focus on the revised statistical analyses. The adjustments to the 2018 cost of removal were reasonable based the additional information obtained, however, his recommendations for net salvage of the two accounts ignored informed judgment.

Q. PLEASE DEFINE THE CONCEPT OF DEPRECIATION.

A. Depreciation refers to the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes which are known to be in current operation, against which the Company is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the

elements, obsolescence, changes in the art, changes in demand and the requirements of public authorities.

Q. WHAT WAS THE PURPOSE OF YOUR DEPRECIATION STUDY?

A. The purpose of the depreciation study was to estimate the annual depreciation accruals related to gas plant in service for ratemaking purposes and determine appropriate average service lives and net salvage percents for each plant account.

Q. HOW DID YOU DETERMINE THE RECOMMENDED ANNUAL DEPRECIATION ACCRUAL RATES?

A. I did this in two phases. In the first phase, I estimated the service life and net salvage characteristics for each depreciable group, that is, each plant account or subaccount identified as having similar characteristics. In the second phase, I calculated the composite remaining lives and annual depreciation accrual rates based on the service life and net salvage estimates determined in the first phase.

Q. PLEASE DESCRIBE THE FIRST PHASE OF THE DEPRECIATION STUDY, IN WHICH YOU ESTIMATED THE SERVICE LIFE AND NET SALVAGE CHARACTERISTICS FOR EACH DEPRECIABLE GROUP.

A. The service life and net salvage study consisted of compiling historic data from records related to BH Nebraska Gas's plant which included two predecessor companies (BH Gas Distribution and BH Gas Utility); analyzing these data to obtain historic trends of survivor and net salvage characteristics; obtaining supplementary information from BH Nebraska Gas's management, and operating

personnel concerning practices and plans as they relate to plant operations; and interpreting the above data and the estimates used by other gas utilities to form judgments regarding average service life and net salvage characteristics.

Q. WHAT HISTORIC DATA DID YOU ANALYZE FOR THE PURPOSE OF ESTIMATING SERVICE LIFE CHARACTERISTICS?

A. I analyzed the Company's accounting entries that record plant transactions during the period 1998 through 2019. The transactions included additions, retirements, transfers, sales, and the related balances. The Company records also included surviving dollar value by year installed for each plant account as of November 30, 2019.

Q. WHAT METHOD DID YOU USE TO ANALYZE THIS SERVICE LIFE DATA?

A. I used the retirement rate method. This is the most appropriate method when aged retirement data are available, because this method determines the average rates of retirement actually experienced by the Company during the period of time covered by the study.

Q. PLEASE DESCRIBE HOW YOU USED THE RETIREMENT RATE METHOD TO ANALYZE BH NEBRASKA GAS SERVICE LIFE DATA.

A. I applied the retirement rate method to each different group of property in the study. For each property group, I used the retirement rate method to form a life table which, when plotted, shows an original survivor curve for that property group. Each original survivor curve represents the average survivor pattern

experienced by the several vintage groups during the experience band studied. The survivor patterns do not necessarily describe the life characteristics of the property group; therefore, interpretation of the original survivor curves is required in order to use them as valid considerations in estimating service life. The Iowa-type survivor curves were used to perform these interpretations.

Q. WHAT IS AN "IOWA-TYPE SURVIVOR CURVE" AND HOW DID YOU USE SUCH CURVES TO ESTIMATE THE SERVICE LIFE CHARACTERISTICS FOR EACH PROPERTY GROUP?

A. Iowa type curves are a widely used group of generalized survivor curves that contain the range of survivor characteristics usually experienced by utilities and other industrial companies. The Iowa curves were developed at the Iowa State College Engineering Experiment Station through an extensive process of observing and classifying the ages at which various types of property used by utilities and other industrial companies had been retired.

Iowa type curves are used to smooth and extrapolate original survivor curves determined by the retirement rate method. The Iowa curves and truncated Iowa curves were used in this study to describe the forecasted rates of retirement based on the observed rates of retirement and the outlook for future retirements.

The estimated survivor curve designations for each depreciable property group indicate the average service life, the family within the Iowa system to which the property group belongs, and the relative height of the mode. For example, the Iowa 70-R2.5 indicates an average service life of seventy years; a right-moded, or

R, type curve (the mode occurs after average life for right-moded curves); and a moderate height, 2.5, for the mode (possible modes for R type curves range from 1 to 5).

Q. ARE THE FACTORS CONSIDERED IN YOUR ESTIMATES OF SERVICE LIFE AND NET SALVAGE PERCENTS PRESENTED IN EXHIBIT MCC-4?

A. Yes. A discussion of the factors considered in the estimation of service lives and net salvage percents are presented in Part III and Part IV of Exhibit MCC-4.

Q. DID YOU PHYSICALLY OBSERVE BH NEBRASKA GAS'S PLANT AND EQUIPMENT AS PART OF YOUR DEPRECIATION STUDY?

A. Yes. I made a field review of BH Nebraska Gas's property during December 2019 to observe representative portions of plant. Field reviews are conducted to become familiar with Company operations and obtain an understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirements. This knowledge was incorporated in the interpretation and extrapolation of the statistical analyses.

Q. WOULD YOU PLEASE EXPLAIN THE CONCEPT OF "NET SALVAGE"?

A. Net salvage is a component of the service value of capital assets that is recovered through depreciation rates. The service value of an asset is its original cost less its net salvage. Net salvage is the salvage value received for the asset upon retirement

less the cost to retire the asset. When the cost to retire exceeds the salvage value, the result is negative net salvage.

Inasmuch as depreciation expense is the loss in service value of an asset during a defined period, (*e.g.* one year) it must include a ratable portion of both the original cost and the net salvage. That is, the net salvage related to an asset should be incorporated in the cost of service during the same period as its original cost so that customers receiving service from the asset pay rates that include a portion of both elements of the asset's service value, the original cost and the net salvage value.

For example, the full recovery of the service value of a $5,000 regulator will include not only the $5,000 of original cost, but also, on average, $800 to remove the breaker at the end of its life and $50 in salvage value. In this example, the net salvage component is negative $750 ($50 - $800), and the net salvage percent is negative 15% (($50 - $800)/$5,000).

Q. PLEASE DESCRIBE HOW YOU ESTIMATED NET SALVAGE PERCENTAGES.

A. The net salvage percentages estimated in the Depreciation Study were based on informed judgment that incorporated factors such as the statistical analyses of historical net salvage data; information provided to me by the Company's operating personnel, general knowledge and experience of industry practices; and trends in the industry in general. The statistical net salvage analyses incorporate

the Company's actual historical data for the period 2010 through 2019, and considers the cost of removal and gross salvage ratios to the associated retirements during the 10-year period. Trends of these data are also measured based on three-year moving averages and the most recent five-year indications.

III. MASS PROPERTY SERVICE LIVES

Q. HOW ARE SERVICE LIVES ESTIMATED FOR MASS PROPERTY?

A. A mass property account is typically a group of assets for which there will be a range of service lives. For example, some poles will retire at early ages (for example, if hit by a car) and some will survive for much longer. The range of lives for a group of assets is referred to as the "dispersion" of lives or dispersion of retirements. Service lives are estimated for mass property accounts using established survivor curves, which provide an estimate of both an average service life and a dispersion of lives around the average. This concept is discussed in more detail in Part II of Exhibit MCC-4.

Q. WHAT HAS MR. DUNKEL PROPOSED FOR MASS PROPERTY SERVICE LIVES?

A. Mr. Dunkel has proposed different survivor curve estimates for three plant accounts. The plant accounts that Mr. Dunkel selectively uses a different approach than for the other asset classes is Account 380, Services and the combined analysis of Accounts 383.00, House Regulators and 383.71, House Regulators – Farm Taps.

Q. WHAT ARE THE REASONS FOR THE DIFFERENCES IN LIFE ESTIMATES?

A. The primary reason for the life estimates differing from mine is that Mr. Dunkel has selectively interpreted the data. For some accounts, Mr. Dunkel decides that only a portion of the historical data is worth analyzing. There is no basis for this selective approach other than to attempt to reduce depreciation expense. The historical data for Accounts 380, 383 and 383.71 are not any different than the other accounts but more importantly there is no reason to segregate data to artificially extend lives.

Q. PLEASE EXPLAIN THE PROCESS FOR ESTIMATING SERVICE LIVES.

A. The process for estimating service lives is based on informed judgment that incorporates a number of factors, including the statistical analysis of the historical data. The statistical analysis used in the study, which was also used by the Public Advocate, is known as the retirement rate method. I have described this method in Part II of the Depreciation Study. When using the retirement rate method, original life tables are developed from the Company's historical accounting data. The original life tables provide an indication of the percentage of assets that have historically survived to each age for which data is available.

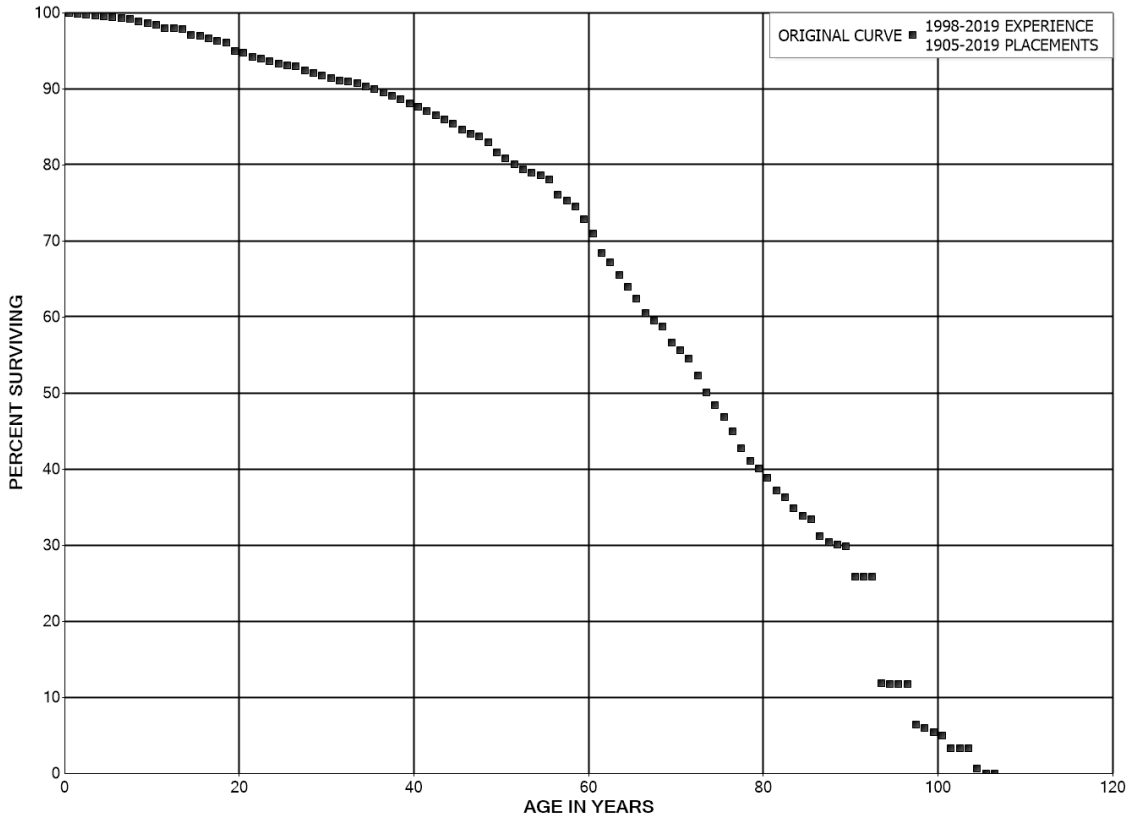
Q. PLEASE PROVIDE AN EXAMPLE OF THIS ANALYSIS FOR A BH NEBRASKA GAS ACCOUNT.

A. I will use as an example Account 376 Mains. The original life table for the overall experience band for this account can be found on pages VII-26 through VII-28 of

the Depreciation Study. The table develops the percentage of installations that have historically survived to each age (the age is shown in the left-most column of the table and the percent surviving is shown in the right-most column).

I have presented all of the data points from the original life table for this account in Figure 1 below. The graph shows the percentage of assets that have historically survived to each age. The percent surviving from the life table is shown on the Y-Axis and the age is shown on the X-Axis. For example, the chart shows that the original life table indicates that about 70 percent of the assets have historically survived to about age 60.

Figure 1: Original Life Table for Account 376



Q. HOW ARE ORIGINAL LIFE TABLES USED TO FORECAST SERVICE LIVES?

A. Iowa survivor curves can be fit to the original life tables developed from the Company's actual experience in order to smooth and extrapolate the historical survivor characteristics for a group of assets. Iowa survivor curves provide a complete indication of the percentage of assets forecast to survive to each age, and average service lives and remaining lives can be derived from a given Iowa curve in order to calculate depreciation expense. Curve fitting or curve matching of Iowa curves to an original life table can be performed either visually or mathematically.

Q. WHAT IS "MATHEMATICAL CURVE FITTING"?

A. When performing mathematical curve fitting, the difference between the smooth survivor curve and the original survivor curve is compared mathematically. This fitting is typically performed using computer software. For mathematical curve fitting I have used a measure of fit called the "residual measure." A lower residual measure indicates a better mathematical fit of the data (and a residual measure of 0.00 would indicate that every data point perfectly matches the fitted Iowa curve).

Q. SHOULD THE DEPRECIATION ANALYST RELY SOLELY ON "MATHEMATICAL CURVE FITTING" RESULTS FOR SERVICE LIFE ESTIMATES?

A. No. The best mathematical fit is not always the most appropriate survivor curve for an account. There are many other factors that go into choosing survivor curves for utility plant accounts. The correct and proper approach to estimating service lives is set forth in highly regarded depreciation texts such as the National Association of Regulatory Utility Commissioners' (NARUC) publication *Public Utility Depreciation Practices.* Mathematical curve fitting is the objective component to estimating service lives, but there is also a subjective component that must be considered. If all relevant factors and information are not considered, then it is difficult for the depreciation analyst to arrive at the most appropriate service life estimate. NARUC makes clear that there must be a subjective component to estimating service lives:

> 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.[1]

Q. WHAT IS "VISUAL CURVE FITTING"?

A. For visual curve fitting, smooth survivor curves (normally Iowa survivor curves) are charted on the same graph as the original curve. By graphing the curves on the same graph, one can visually make a determination as to how close of a match the smooth curve is to the original curve.

Q. FOR ACCOUNT 376, IS YOUR ESTIMATE A GOOD MATCH TO THE HISTORICAL DATA?

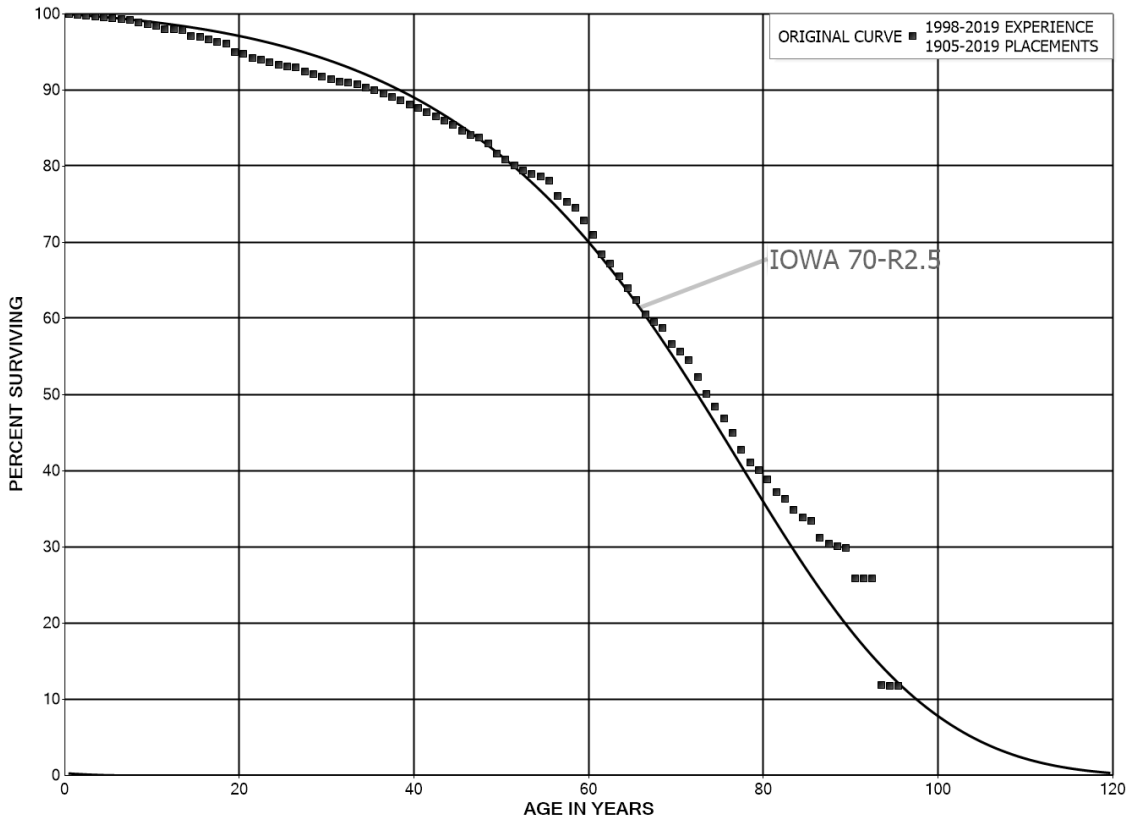
A. Yes. However, the data needs to be properly interpreted to determine the best estimate. For this account, the data exhibits a fairly consistent trend through about age 84. However, after about age 84 the data becomes less consistent. This occurs because there have been relatively few assets that have survived to this age. The older data points are therefore based on smaller levels of exposures, which results in a less consistent trend. For this reason, it is often reasonable to give less consideration to older ages.

To illustrate this concept, Figure 2 below again provides the original life table for this account. The initial, consistent trend through about age 84 is also

[1] National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices*, 1996, p. 111.

illustrated on the graph (with a blue line), as is the less consistent trend beyond this age (with a red line).

Figure 2. Original Life table and Smooth Curve for Account 376



Q. DOES MR. DUNKEL AGREE WITH THIS ESTIMATE?

A. Yes. There is no disagreement with the 70-R2.5 survivor curve or the statistical analysis utilized to be part of the informed judgment for the most appropriate life characteristic for mains. The statistical data base relates to a combination of individual predecessor company data and the combined data after merger.

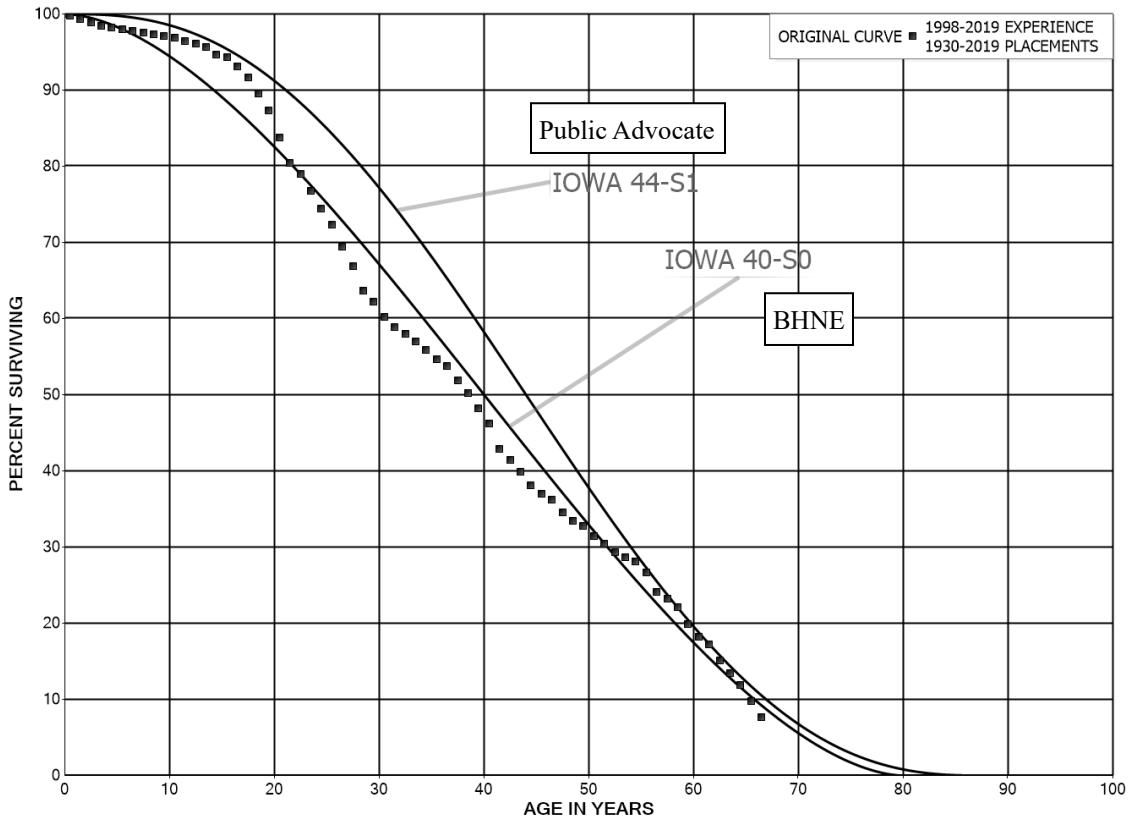
Q. CAN YOU SHOW AN ACCOUNT WHERE MR. DUNKEL SELECTS A DIFFERENT CURVE?

A. Yes. Figure 3 below sets forth the historical data for Account 380, Services with both my recommended 40-S0 survivor curve and Mr. Dunkel's 44-S1 survivor curve.

Q. HOW DOES YOUR ESTIMATE COMPARE TO MR. DUNKEL's FOR THIS ACCOUNT?

A. Figure 3 below provides a comparison of both estimates. The figure illustrates that my estimate fits the overall data well through about age 68, and in particular, fits the portion below 80% surviving through about age 68. It is important to note that the statistical analysis compares the longer historical analysis than Mr. Dunkel's selective analysis of just recent years.

Figure 3: Comparison of BH NEBRASKA GAS and PUBLIC ADVOCATE Survivor Curves and Historical Data



Q. IS THE HISTORICAL DATA THE ONLY CONSIDERATION IN ESTIMATING SERVICE LIVES?

A. No. It is imperative that informed judgment is used that incorporates not only the statistical analysis of historical data, but other relevant factors, such as the mortality characteristics of the property studied and Company-specific information. These factors also support my estimate over that of Mr. Dunkel. As can be observed in Figure 3 above, Mr. Dunkel's estimate of 44-S1 is not a good fit of the overall data experience band. His survivor curve does not intersect with

the original data curve until age 58. As was discussed regarding Account 376, the data at this point in the original curve is less reliable than data recorded at younger ages because there are more assets exposed to retirement in the younger age ranges. Also, using visual curve fitting, it can be seen that the overall shape of the original curve has a lower mode than the S1 that Mr. Dunkel is proposing. The S0 mode curve is more flat than the S1, and fits the overall shape of the original curve better than the S1 curve type.

Q. ARE THERE OTHER COMPONENTS THAT MR. DUNKEL HAS NOT CONSIDERED COMPLETELY?

A. Yes**.** First, Mr. Dunkel does not consider all the historical information available to analyze. There were two predecessor companies that were merged together with data of various transactional periods, however, the individual data is important to understand the life cycle of the asset classes. It also should be clear this is the same data for all asset classes not restricted to Account 380 and the two subaccounts of Account 383. Second, Mr. Dunkel does not consider the current life estimates of the predecessor companies if he is going to disregard the data that was utilized to determine the current life estimates. For example, the current life estimates for Account 380 has average lives of 35 and 40 years. Mr. Dunkel's argument for only using the 2013-2019 experience band is to analyze data that is more representative of the merged data of both prior companies. It seems odd that by conducting his analysis in this fashion he would come up with a service life estimate that is 9 and 4 years longer than either of the individual companies'

current service life estimate. Third, when comparing to other estimates in the industry it is important to know how assets in other companies in the industry are recorded to make sure an apples to apples comparison is made. For example, what is typical service line footage where the segregation between main and service affects the retirement unit in each account. This understanding will also allow for proper informed judgment with regards to life cycles, mortality curves and understanding of the data being analyzed. This understanding is critical for interpreting data when merging two companies when some assets may be recorded differently. Finally, it is important for the depreciation expert to distinguish between life estimation and life analysis. Life estimation relates to establishing the future life characteristics of an asset class not to only determine what has happened historically.

Q. HAS MR. DUNKEL ANALYZED ALL AVAILABLE COMPANY DATA WHEN DETERMINING HIS SERVICE LIFE ESTIMATES?

A. No. Mr. Dunkel has decided to omit 15 years of company data, and instead only analyze the most recent 7 years of data. His justification for this is that analysis should only be done for years of data in which data was available for both prior companies.[2] He provides no actual evidence that the 1998-2012 Aquila company data would not be representative of the combined company data, other than the fact that the older data shows a shorter life than the more recent data. Analyzing

[2] Dunkel: p. 32, 11:12

only 7 years of data, when 22 years of data is available is not justifiable, especially when dealing with longer-lived assets. Absent any specific reason that the older data is not representative of the current assets, or that the old data is tainted in some way, this data should be used to analyze historical retirements and inform an analyst's decision when estimating the service lives of the BH Nebraska Gas assets. Using Mr. Dunkel's logic, if we were to run a two-year experience band of 2018-2019, and that were to show a longer life than the 2013-2019 experience band, then we should rely solely on 2 years of data. To quote NARUC from Mr. Dunkel's own testimony:

> Banding is the compositing of a number of years of data in order to merge them into a single data set for further analysis. Often several bands are analyzed.[3]

There is a reason that multiple years of data are banded together to analyze service lives. Service lives show trends throughout years of data. The same account could have a shorter service life trend one decade, and then a longer service life trend the next decade. That is why we refer to it as AVERAGE service life. It is not an exact life developed from only the most recent data available, but rather an estimate of the average service life over as many years of data that are available to analyze coupled with informed judgment to come up with the most accurate possible estimate.

[3] Dunkel, p. 43, 13;14

Q. IS IT APPROPRIATE TO ONLY USE 7 YEARS OF DATA WHEN 22 YEARS OF DATA ARE AVAILABLE?

A. No. Mr. Dunkel severely misinterprets the NARUC quote that he presents on page 48 of this testimony. The misinterpretation occurs relative to the sentence, "Bands of three to five years are often chosen for rolling or fixed bands."[4] Mr. Dunkel interprets this to mean that NARUC is supporting using only 7 years of data instead of 22 years because bands of three to five years can be used for rolling or fixed band analysis. Nowhere in the quote does it say that one 7-year band is an appropriate data set for analysis; especially considering the fact there are 22 years of data available. When using rolling or fixed bands for analysis, it is intended that there are numerous bands being analyzed. For example, if Mr. Dunkel had utilized all 22 years of data available, then he could potentially use rolling and fixed bands of three to five years for the entire 22 years period to try to develop service life trends. Rolling and fixed bands are a tool used when many years of experience are available to try to break the data into smaller pieces to discover trends. The NARUC quote was not intended to support exclusively using only one band of 7 years and only matching mathematical results to this one short band.

[4] Dunkel, p. 48, 12:13

Q. DOES MR. DUNKEL MAKE A CONVINCING ARGUMENT REGARDING OLDER SERVICES BEING OMITTED FROM THE AQUILA SERVICE LIFE DATA?

A. No. Mr. Dunkel quotes a BH Nebraska Gas discovery response which states that some older services were booked to the mains account. I believe his point to making this argument is that the exclusion of this data means that the Aquila data is not representative of the overall data for the newly merged company, and thus the data should not be used. However, he makes no quantitative or substantive argument to support his point. For example, he does not present what the Aquila data would show if this data was included in the services account. How much of an overall impact to the service life data, and thus service life estimation process, would the inclusion of this data create? He has no proof that suggests that if the data for the older services was included that the 1998-2012 Aquila data would show a service life longer than 35 years.

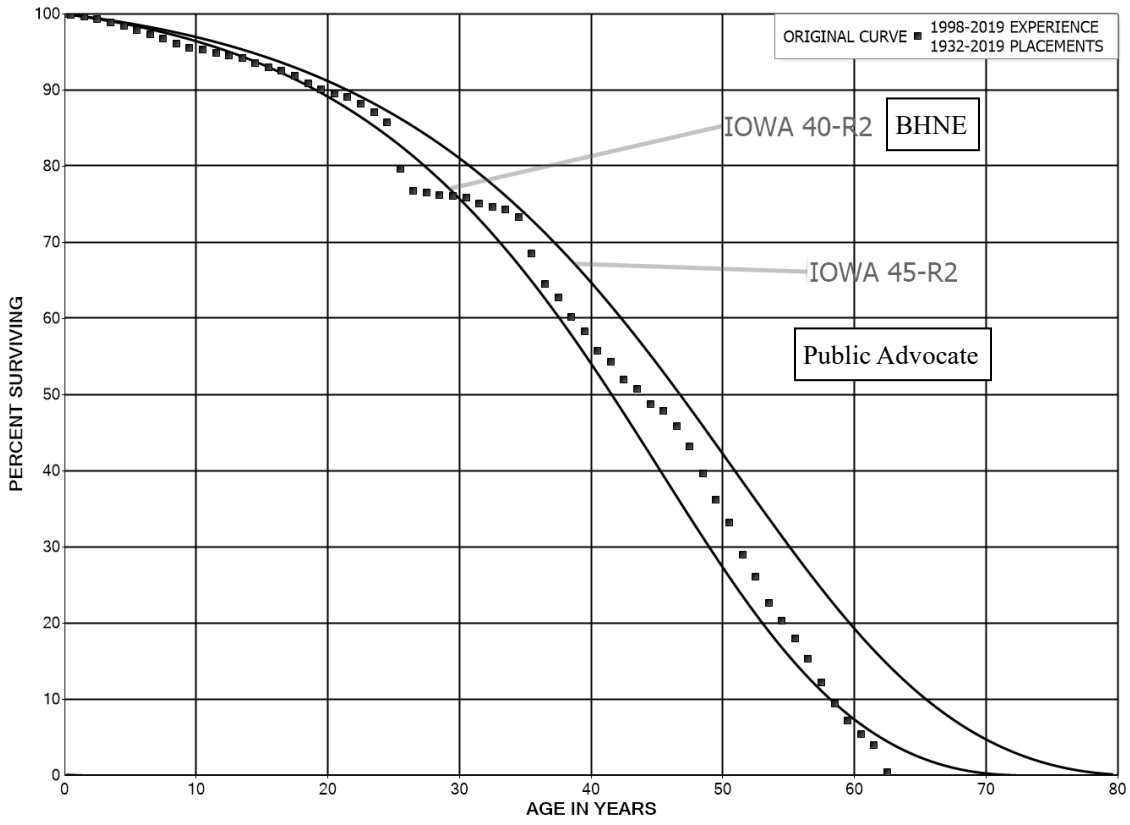
Further, if Mr. Dunkel's position is that this data is incorrectly trending the service life estimate for services shorter, then it should follow that he believes the service life estimate for the mains account would be too long. If he believes the data is impactful enough to seriously skew the services data, and these older retirements were included in the mains accounts instead of the services account, then I would expect him to propose a shorter average service life than the data suggests for the mains account. However, he does not do this which leads me to

believe he is making this argument to simply increase service lives, and thus decrease depreciation expense, regardless of if his reasons are valid.

Q. DO THE OTHER ESTIMATES MADE BY MR. DUNKEL HAVE SIMILAR ISSUES TO THOSE DISCUSSED ABOVE?

A. Yes. Mr. Dunkel selectively uses a subset of the historical data and no apparent informed judgment in his recommendation for a life estimate for Accounts 383, House Regulators and 383.71, House Regulators – Farm Taps. The 40-R2 survivor curve is clearly a better statistical fit for the two subaccounts of house regulators when considering all the historical data and within the commonly utilized life for other gas companies. Figure 4 below sets forth the historical data for the combined Account 383, House Regulators, and Account 383.71, House Regulators – Farm Taps, along with my 40-R2 type curve along with Mr. Dunkel's 45-R2 type curve.

Figure 4. Comparison of BH NEBRASKA GAS and PUBLIC ADVOCATE Survivor Curves and Historical Data



IV. NET SALVAGE

Q. WHAT IS NET SALVAGE?

A. Net salvage, as used in depreciation, is defined as gross salvage less cost of removal. When an asset is retired it may have scrap or reuse value, which is gross salvage. There is also a cost to retire the asset. For example, the retirement of a gas service typically requires a multiple person crew and heavy equipment to retire the service. This can include cost to remove and dispose but, in many cases, just

cost to abandon in place. The net salvage needs to consider likelihood of both. All of these costs associated with the retirement are cost of removal.

Most types of utility property typically experience negative net salvage, meaning that cost of removal exceeds gross salvage. This is true of many of the BH Nebraska Gas assets. The actual experience of BH Nebraska Gas demonstrates that for many types of assets there are significant costs to retire the assets and that these costs generally exceed any gross salvage value.

Q. HOW IS NET SALVAGE ESTIMATED?

A. Net salvage estimates are expressed as a percentage of the original cost retired. For example, if an account has a net salvage estimate of negative 50%, then a $1,000 asset would be expected to, on average, cost $500 to retire, net of any gross salvage. Net salvage is estimated in different ways depending on the type of property. For mass property, net salvage estimates are developed in a similar manner to the service life estimates and are based on a combination of statistical analysis of historical data as well as informed judgment that incorporates other factors.

Q. IS NET SALVAGE TO BE RECOVERED IN TODAY'S COST (I.E. THE COST IN TODAY'S DOLLARS)?

A. No. As I discussed earlier, in order to recover the service value of the Company's assets, net salvage must be determined at the cost that will be incurred in the future. When using the straight-line method of depreciation, these costs are recovered ratably, or in equal amounts each year, over the life of the Company's plant.

Q. IS RECOVERING THE FUTURE COST OF NET SALVAGE CONSISTENT WITH THE UNIFORM SYSTEM OF ACCOUNTS?

A. Yes. The USofA specifically defines net salvage as follows:

> 19. Net salvage value means the salvage value of property retired less the cost of removal.

Cost of removal is defined as:

> 10. Cost of removal means the cost of demolishing, dismantling, tearing down or otherwise removing electric plant, including the cost of transportation and handling incidental thereto. It does not include the cost of removal activities associated with asset retirement obligations that are capitalized as part of the tangible long-lived assets that give rise to the obligation. (See General Instruction 25).

Finally, cost is defined as (emphasis added):

> 9. Cost means the <u>amount of money actually paid</u> for property or services. When the consideration given is other than cash in a purchase and sale transaction, as distinguished from a transaction involving the issuance of common stock in a merger or a pooling of interest, the value of such consideration shall be determined on a cash basis.

Read together, it should be clear from these definitions that the USofA specifies that cost of removal, which as part of net salvage must be recovered through depreciation expense, is the actual amount that is paid at the time of the transaction. Because net salvage will occur in the future, it is an estimate of the future cost that must be included in depreciation rates.

Q. DO GENERALLY ACCEPTED DEPRECIATION CONCEPTS SUPPORT THAT THE NET SALVAGE IN DEPRECIATION SHOULD BE INCLUDED AT THE COST THAT WILL BE INCURRED?

A. Yes. Including the future cost of net salvage for plant accounts is consistent with established depreciation concepts. Again, depreciation is a cost allocation concept, in which the full cost of an asset (original cost less net salvage) is allocated on a straight-line basis over the period of time an asset will be in service.

Q. HOW IS NET SALVAGE ESTIMATED IN A DEPRECIATION STUDY?

A. The method of estimation depends on the type of property. For mass property accounts such as transmission and distribution accounts, net salvage estimates are based in part on statistical analyses of historical net salvage data. In this analysis, net salvage (as well as its components of gross salvage and cost of removal) are expressed as a percentage of retirements. This approach, which is widely-accepted in the industry and supported by depreciation textbooks, is referred to as the traditional method.

Q. DOES NARUC EXPLAIN HOW NET SALVAGE SHOULD BE ESTIMATED AND INCLUDED IN DEPRECIATION?

A. Yes. In the section titled "Salvage Considerations," NARUC states:

> Under presently accepted accounting concepts, the amount of depreciation to be accrued over the life of an asset is its original cost less net salvage. Net salvage is the difference between the gross salvage that will be realized when the asset is disposed of and the cost of retiring it. Positive net salvage occurs when gross salvage exceeds cost of retirement, and negative net salvage occurs when cost of retirement exceeds gross salvage. Net salvage is

> expressed as a percentage of plant retired by dividing the dollars of net salvage by the dollars of original cost of plant retired. The goal of accounting for net salvage is to allocate the net cost of an asset to accounting periods, making due allowance for the net salvage, positive or negative, that will be obtained when the asset is retired. This concept carries with it the premise that property ownership includes the responsibility for the property's ultimate abandonment or removal. Hence, if users benefit from its use, they should pay their pro rata share of the costs involved in the abandonment or removal of the property and also receive their pro rata share of the benefits of the proceeds received.[5]

Thus, NARUC supports the method of net salvage that I have utilized. Additionally, NARUC is clear that net salvage are the amounts "that will be obtained when the asset is retired." That is, the net salvage amount is the future cost to be incurred at the time of retirement.

Q. HAS MR. DUNKEL RECOMMENDED DIFFERENT NET SALVAGE PERCENTAGES FOR SOME ACCOUNTS?

A. Yes. Mr. Dunkel has recommended different net salvage percentages for Account 376, Mains and Account 380, Services. Mr. Dunkel recommends a change from negative 30% net salvage to negative 25% net salvage for Account 376 and a change from negative 40% net salvage to negative 20% net salvage for Account 380, Services.

[5] National Association of Regulatory Utility Commissioners, Public Utility Depreciation Practices, 1996, p. 18. (Emphasis added)

Q. WHAT IS THE BASIS FOR HIS CHANGE FOR THESE TWO ACCOUNTS?

A. In 2018, BH Nebraska Gas experienced a reserve reclassification which was identified as a cost of removal adjustment. During the conduct of the depreciation study, the 2018 entries were identified as cost of removal related to retirements in earlier years with the exception of Account 383. However, during discovery further research was done to identify that the majority of the 2018 cost removal reserve was not true cost of removal. Therefore, Mr. Dunkel has properly excluded the amount from the net salvage analysis.

Q. IS THE ADJUSTMENT TO THE NET SALVAGE DATA THE ONLY FACTOR THAT SHOULD BE CONSIDERED IN DETERMINING A NET SALVAGE PERCENTAGE?

A. No. Similar to life estimation, there is more to determining the most appropriate net salvage percentage for each account than just a statistical calculation. Informed judgment is needed for net salvage as well.

Q. IS MR. DUNKEL'S NET SALVAGE PERCENTAGE REASONABLE FOR ACCOUNT 376, MAINS?

A. Based on the revised statistical analysis, estimates of other gas companies, the current estimate for the two predecessor companies and the Company's plan for expected cost of removal activities in the future, the negative 25% is somewhat reasonable.

Q. WHAT INFORMATION SUPPORTS THE BH NEBRASKA GAS ESTIMATE OVER THAT OF MR. DUNKEL?

A. Company personnel have indicated that in recent years there has been a re-assessment towards allocating more cost of removal dollars to the mains account in order to more accurately capture the effort of cost of retiring assets related to this account. This shift in accounting procedure can be seen when looking at the last 5 years of data. The 5-year average for net salvage is negative 28% and the most recent two years is averaging over negative 40%. This average is closer to the BH Nebraska Gas estimate of negative 30% than Mr. Dunkel's negative 25%. When considering the fact that the company is making an effort to record more cost of removal dollars, I would expect these percentages to become much more negative in future years.

Q. IS MR. DUNKEL'S NET SALVAGE PERCENTAGE REASONABLE FOR ACCOUNT 380, SERVICES?

A. Based on the revised statistical analysis and comparable factors discussed for mains and for other accounts, Mr. Dunkel's recommended net salvage change is not necessarily the most appropriate percentage for future expectations. The revised statistical analysis does support the negative 20% net salvage for the entire 2010-2019 period, however, when considering the industry range of negative 25% to negative 150% and the trend to more negative net salvage in recent years, a level closer to negative 30% would be more representative of net salvage level going forward.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

STATE OF PENNSYLVANIA)

) SS

COUNTY OF CUMBERLAND)

I, John J. Spanos, 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.

John J. Spanos

John J. Spanos

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

(SEAL)

Commonwealth of Pennsylvania - Notary Seal
MEGAN LYNN ECKRICH - Notary Public
Cumberland County
My Commission Expires Sep 16, 2023
Commission Number 1264513

Megan Lynn Eckrich

Notary Public

My Commission Expires: September 16, 2023