BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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IN THE MATTER OF ADVICE LETTER NO. 1857-ELECTRIC OF PUBLIC SERVICE COMPANY OF COLORADO TO REVISE ITS COLORADO PUC NO. 8-ELECTRIC TARIFF TO REVISE JURISDICTIONAL BASE RATE REVENUES, IMPLEMENT NEW BASE RATES FOR ALL ELECTRIC RATE SCHEDULES, AND MAKE OTHER PROPOSED TARIFF CHANGES EFFECTIVE AUGUST 2, 2021	**)**	**PROCEEDING NO. 21AL-_____E**

DIRECT TESTIMONY AND ATTACHMENTS OF DANE A. WATSON

ON

BEHALF OF

PUBLIC SERVICE COMPANY OF COLORADO

July 2, 2021

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO**

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Attachment DAW-2	Dane A. Watson, Appearances Before Regulatory Bodies

GLOSSARY OF ACRONYMS AND DEFINED TERMS

Acronym/Defined Term	Meaning
Alliance	Alliance Consulting Group
ALG	Broad (Average) Life Group
AR	Accounting Release
Burns & McDonnell	Burns & McDonnell Engineering Company, Inc.
CACJA	Clean Air - Clean Jobs Act
Commission	Colorado Public Utilities Commission
COR	Cost of Removal
Depreciation Study	Public Service Electric and Common Utility Plant Depreciation Rate Study
EEI	Edison Electric Institute
FERC	Federal Energy Regulatory Commission
IEEE	Institute of Electrical and Electronics Engineers
OH	Overhead
PE	Professional Engineer
Public Service or Company	Public Service Company of Colorado
TXU	Texas Utilities
UG	Underground
XES	Xcel Energy Services Inc.
Xcel Energy	Xcel Energy Inc.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

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DIRECT TESTIMONY AND ATTACHMENTS OF DANE. A. WATSON

I. INTRODUCTION, QUALIFICATIONS, PURPOSE OF TESTIMONY, AND RECOMMENDATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Dane A. Watson. My business address is 101 E. Park Blvd., Suite 220, Plano, Texas 75074.

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

A. I am the Managing Partner of the Alliance Consulting Group ("Alliance"). Alliance provides consulting and expert services to the utility industry.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THE PROCEEDING?

A. I am testifying on behalf of Public Service Company of Colorado ("Public Service" or the "Company').

Q. PLEASE SUMMARIZE YOUR RESPONSIBILITIES AND QUALIFICATIONS.

A. As the Managing Partner of Alliance, I am responsible for performing and defending depreciation studies for clients across the United States in a variety of regulatory proceedings. My duties include assembling and analyzing historical and simulated data, conducting field reviews, determining service life and net salvage estimates, calculating annual depreciation, presenting recommended depreciation rates to utility management for its consideration, and supporting such rates before regulatory bodies. I have performed more than 275 depreciation studies in my career, appeared in more than 175 cases, and testified before 35 regulatory bodies as an expert witness on the subject of depreciation. A description of my qualifications, duties, and responsibilities is set forth after the conclusion of my Direct Testimony in my Statement of Qualifications.

Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?

A. The purpose of my Direct Testimony is to sponsor and present the Public Service Electric and Common Utility Plant Depreciation Rate Study ("Depreciation Study"), which is Attachment DAW-1 to my Direct Testimony. Alliance performed the Depreciation Study for Public Service to support the depreciation and amortization rates recommended for Public Service's Electric and Common Utility Plant accounts.[1]

In this proceeding, the Depreciation Study supports several components of the overall formula used to derive depreciation rates, including:

[1] Alliance has performed or filed testimony for multiple depreciation studies for the Company in Case No. 06-234-EG, 11AL-947E, 14AL-0660E, and 16A-0231E.

1. the theoretical reserve and reserve reallocation as a component of the overall depreciation reserve balance;

2. the Production plant net salvage amounts, which are supported by the 2020 Fleet Decommissioning Cost Study ("Decommissioning Study") prepared by Burns & McDonnell Engineering Company, Inc. ("Burns & McDonnell") and sponsored by Company witness Mr. Kyle L. Williams;

3. the remaining life calculation for each account within a functional group;

4. the terminal retirement date, interim net salvage and interim average service lives/survivor curve for Production assets;

5. the average service lives, survivor curve and net salvage percentages for Transmission, Distribution, Electric General and Common General assets; and

6. the final depreciation rates and annual accrual amounts.

Q. ARE YOU SPONSORING ANY ATTACHMENTS AS PART OF YOUR DIRECT TESTIMONY?

A. Yes, I sponsor Attachments DAW-1 and DAW-2, which were prepared by me or under my direct supervision. The attachments are as follows:

- Attachment DAW-1 Public Service of Colorado Electric and Common Depreciation Rate Study; and

- Attachment DAW-2: Dane A. Watson, Appearances Before Regulatory Bodies.

Q. HOW IS YOUR DIRECT TESTIMONY STRUCTURED?

A. My Direct Testimony is structured as follows:

In Section II, I explain the instructions the Company provided to me for the Depreciation Study; the property included or excluded from the Depreciation Study; the four-phase approach I used to conduct the Depreciation Study; and the

depreciation system (straight-line method, Broad (Average) Life Group ("ALG") procedure, remaining-life technique) used for the Depreciation Study.

In Section III, I explain how depreciation rates are determined. This portion of my Direct Testimony also explains and fully discusses each portion of the depreciation rate formula that is supported by my Depreciation Study. Section III is broken into the following subparts, which align with the components of the depreciation rate formula that the Depreciation Study supports: (A) Depreciation Rate Formula; (B) Theoretical Reserve and Reserve Reallocation; (C) Net Salvage Amounts and Percentages; (D) Remaining Life Analysis; and (E) Depreciation Rates and Depreciation Accrual Rates.

In Section IV, I discuss the change in depreciation expense as a result of the modified depreciation rates. Specifically, I explain why Public Service's depreciation expense is increasing.

Q. WHAT DEFINITION OF DEPRECIATION HAVE YOU USED FOR THE PURPOSES OF CONDUCTING THE DEPRECIATION STUDY AND PREPARING YOUR DIRECT TESTIMONY?

A. The term "depreciation," as used herein, is considered in the accounting sense – that is, a system of accounting that distributes the cost of assets, less net salvage (if any), over the estimated useful life of the assets in a systematic and rational manner. Depreciation is a process of allocation, not valuation. In other words, depreciation expense allocates the cost of the asset, including any estimated net salvage necessary to remove the asset, as an ongoing cost of operations over the economic life of the asset. However, the amount allocated to any one accounting

period does not necessarily represent an actual loss or decrease in value that will occur during that particular period. The Company accrues depreciation on the basis of the original cost of all depreciable property included in each functional property group. On retirement, the full cost of depreciable property, less the net salvage value, is charged to the depreciation reserve.

Q. PLEASE GENERALLY DESCRIBE THE PURPOSE OF THE DEPRECIATION STUDY.

A. The key functions of the Depreciation Study are to: (1) determine the average service lives for Transmission, Distribution, Electric General and Common General Plant; (2) determine the net salvage amounts for all Production Plant, which are supported by the Decommissioning Study; (3) determine the net salvage percentages for Transmission, Distribution, Electric General and Common General Plant; (4) calculate the theoretical reserve of each property group based on the remaining life of the group, the total life of the group and the estimated net salvage; (5) conduct a depreciation reserve reallocation; and (6) develop depreciation rates, including the annual depreciation accrual.

Q. BASED ON THE DEPRECIATION STUDY, WHAT CONCLUSIONS DO YOU REACH?

A. I conclude that the depreciation rates developed for the Company's Electric Utility and Common Plant accounts as set forth in the Depreciation Study encompass the best and most recent information for calculating Public Service's depreciation and amortization expense associated with these assets.

Based on life and net salvage parameters developed for actual plant asset balances and depreciation reserves as of December 30, 2020, the depreciation rates in the Depreciation Study will result in an increase in the annual depreciation expense for Public Service's electric utility assets of approximately $49.7 million per year. I calculated that amount by comparing the depreciation expense based on the current depreciation rates to the depreciation expense based on the proposed depreciation rates as of December 31, 2020. This comparison is shown in detail in Appendix B of Attachment DAW-1 and is summarized in Table DAW-D-3, which is presented later in my Direct Testimony.

Q. ARE THERE OTHER ASSETS THAT YOU ANALYZED IN THE DEPRECIATION STUDY?

A. Yes. The Company is adding generation assets that will come on-line in 2021 and 2022. Two solar facilities called Arapahoe 5 Solar Gardens and Valmont 9 & 10 Solar Gardens will go in-service in 2021.[2] The Company is also acquiring the Manchief plant in 2022 from Southwest Generation Operating Company, LLC. The recommended rates for those facilities are shown in the Depreciation Study in Appendix A-3.

[2] These assets are not in base rates. It is my understanding that their costs are recovered through a separate recovery mechanism.

II. PUBLIC SERVICE'S ELECTRIC DEPRECIATION STUDY

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR DIRECT TESTIMONY?

A In this section of my Direct Testimony, I testify to the instructions the Company provided to me for the Depreciation Study; the property included or excluded from the Depreciation Study; the four-phase approach I used to conduct the Depreciation Study; and the depreciation system (straight-line method, ALG procedure, remaining-life technique) used for the Depreciation Study.

Q. DID THE COMPANY GIVE YOU ANY SPECIFIC INSTRUCTIONS FOR CONDUCTING THE DEPRECIATION STUDY?

A. Yes. The Company gave me the following instructions for the Depreciation Study:

1. Use revised terminal retirement dates supplied by the Company's Energy Supply group for generating stations;

2. Use Iowa curves to estimate the remaining life for each generating unit, instead of the interim retirement ratio method used in the last depreciation study;

3. Analyze the average service lives, survivor curves, and net salvage percentages for Electric Transmission, Electric Distribution, Electric General and Common General Plant assets based on historical data as of December 31, 2020;

4. Calculate the theoretical reserves and the recommended depreciation rates, including the annual depreciation accrual, on plant balances as of December 31, 2020;

5. In the reserve reallocation process, fully reserve demolition costs for the Ponnequin wind facility and depreciable land rights at facilities that have been retired. Also, leave the accumulated depreciation reserve at its current level for the following facilities: all Comanche plant units, Cheyenne Ridge Wind Farm, and Rush Creek Wind Farm;

6. Conduct the actuarial analysis for Transmission, Distribution, General, and Common property using historical asset retirement experience

where vintage data is available and sufficient retirement activity is present;

7. Use the Decommissioning Study to determine decommissioning costs associated with dismantling generating units for the Steam, Hydro, and Other Production functions;

8. Retain the current approved average service life of 10 years for Account 370, Automated Meter Reading Equipment, given that the Company is currently developing a plan to deploy an automated meter infrastructure, and such a plan, if approved, would require the current meter equipment to be retired.

Q. WHAT PROPERTY IS INCLUDED IN OR EXCLUDED FROM THE DEPRECIATION STUDY?

A. There are five general classes, or functional groups, of depreciable property that are analyzed in the Depreciation Study: (1) Production Plant, (2) Transmission Plant, (3) Distribution Plant, (4) Electric General Plant, and (5) Common General Plant property. Under Production Plant, there are three different functions of property: Steam, Hydraulic (Hydro) and Other. Steam generation in accounts 310-316 consists of generating units that use fossil fuels. Hydraulic assets in accounts 330-336 consist of generating facilities located at dams. Other Production assets in accounts 340-346 consist of generating units (such as combustion turbines) that use natural gas to produce electricity. Other Production Wind assets consist of Wind Farms that went into service in 2018 and 2020. The Transmission Plant functional group primarily consists of lines and associated facilities used to move power from power plants and outside areas into the distribution system. The Distribution Plant functional group primarily consists of lines and associated facilities used to distribute electricity to customers of Public Service. Electric

General Plant and Common General Plant property is not location specific, but is plant used to support Public Service's overall operations, such as office buildings and software.

Q. PLEASE DESCRIBE YOUR DEPRECIATION STUDY APPROACH.

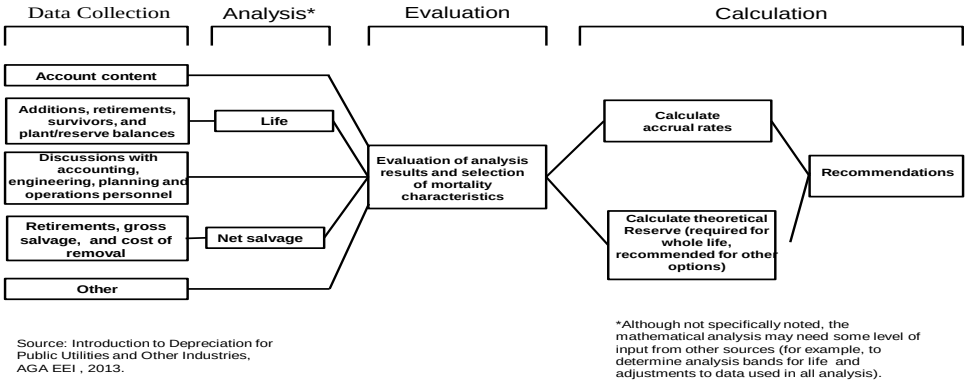
A. With the assistance of my staff, I conducted the Depreciation Study in four phases, as described at pages 16-18 of Attachment DAW-1. The four phases are: Data Collection, Analysis, Evaluation, and Calculation. During the initial phase of the Depreciation Study, I collected historical data through December 31, 2020 to be used in the analysis. After the data was assembled, I performed analyses to determine the lives and net salvage percentages for the different property groups being studied. As part of this process, I conferred with field personnel, engineers, and managers responsible for the installation, operation, and removal of the assets to gain their input into the operation, maintenance, and salvage of the assets. I then evaluated the information obtained from field personnel, engineers and managerial personnel, combined with the Depreciation Study results, to determine how the results of the historical asset activity analysis, in conjunction with the Company's expected future plans, should be applied. In the final phase, I calculated depreciation rates and the theoretical reserve as a component of the reserve reallocation.

The authoritative treatise, DEPRECIATION SYSTEMS, documents the following stages of a depreciation study: statistical analysis, evaluation of statistical analysis, discussions with management, forecast assumptions, and document

recommendations.[3] My approach mirrors this process, and following this approach ensures that Alliance comprehensively and thoroughly projects the future expectations for the Company's assets.

Figure DAW-D-1 demonstrates the four phases of the Depreciation Study.

FIGURE DAW-D-1
Stages to Develop a Depreciation Study



Q. WHAT DEPRECIATION METHOD DID YOU USE FOR THE DEPRECIATION STUDY?

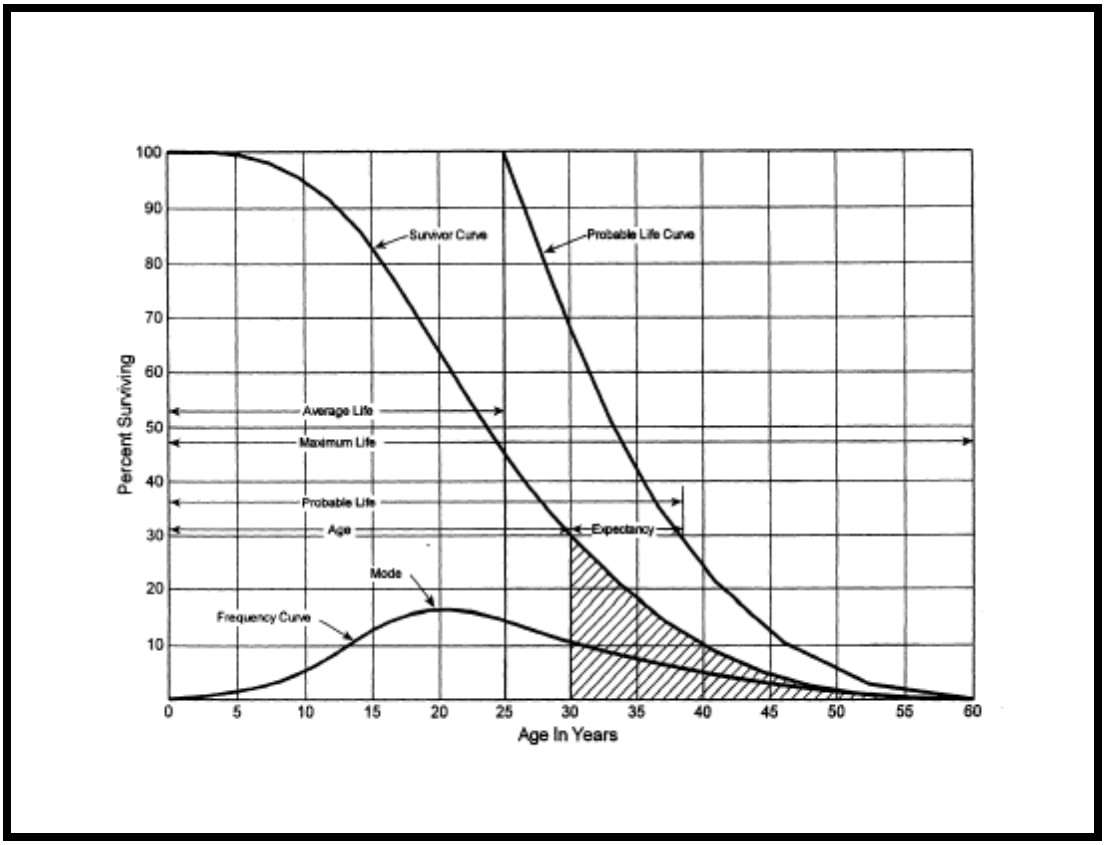
A. I used the straight-line (method), ALG (procedure), remaining-life (technique) depreciation method for this Depreciation Study. This is the same methodology used by Public Service and approved by this Commission for the existing depreciation rates established in the Company's 2019 Electric Phase I rate case in Proceeding No. 19AL-0268E ("2019 Electric Phase I").

[3] W.C. Fitch and F.K. Wolf, DEPRECIATION SYSTEMS, at page 289 (Iowa State Press, 1994).

Q. WHAT IS A SURVIVOR CURVE?

A. A survivor curve represents the percentage of property remaining in service at various age intervals. The Iowa Curves, the predominantly used survivor curve method in the utility industry, are the result of an extensive investigation of life characteristics of physical property made at Iowa State College Engineering Experiment Station in the first half of the prior century. Through common usage, revalidation and regulatory acceptance, the Iowa Curves have become a descriptive standard for the life characteristics of industrial property. An example of an Iowa Curve is shown below in Figure DAW-D-2. For more detail on survivor curves, see pages 9-12 of Attachment DAW-1.

FIGURE DAW-D-2
Survivor Curve



Q. HOW IS A SURVIVOR CURVE USED IN THE DEPRECIATION STUDY?

A. Most property groups can be closely fitted to one Iowa Curve with a unique average service life. By blending of judgment concerning current conditions and future trends with the matching of historical data, the depreciation analyst can make an informed selection of an account's average service life and survivor curve. When selecting an average service life, the analyst also selects a survivor curve. When recommending depreciation rates, the depreciation analyst selects the average service life and survivor curve that are used to compute remaining life, theoretical reserve, and reserve reallocation.

III. DETERMINATION OF THE DEPRECIATION RATES

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR DIRECT TESTIMONY?

A. In this section of my Direct Testimony, I explain how depreciation rates are determined, and I identify the formula for depreciation rates. This portion of my Direct Testimony also explains and fully discusses each portion of the depreciation rate formula that is supported by the Depreciation Study. Section III is broken into the following subparts, which align with the components of the depreciation rate formula that the Depreciation Study supports: (A) The Depreciation Rate Formula; (B) Theoretical Reserve and Reserve Reallocation; (C) Net Salvage Amounts or Percentages; (D) Remaining Life Analysis; and (E) Depreciation Rates and Depreciation Accrual Rates.

A. The Depreciation Rate Formula

Q. HOW ARE THE DEPRECIATION RATES DETERMINED?

A. The formula to derive depreciation rates calculates annual depreciation accrual amounts for each group by dividing the original cost of the asset (gross plant), less allocated depreciation reserve, less estimated net salvage, by the group's respective remaining life. The resulting annual accrual amounts for all depreciable property within an account are accumulated, and the total is divided by the original cost (gross plant) of all depreciable property within the account to determine the depreciation rate.

Q. WHAT PORTION OF THE FORMULA USED TO DERIVE DEPRECIATION RATES IS SUPPORTED BY THE DEPRECIATION STUDY?

A. The Depreciation Study determines several pieces of the overall formula used to derive depreciation rates. The portions of the formula derived by the Depreciation Study are:

- **Depreciation Reserve Balance and Reserve Reallocation**: To calculate depreciation reserve, the Company provided me with the actual gross plant balance amounts and the actual depreciation reserve as of December 31, 2020. Taking that data, I calculated a new depreciation reserve balance that is subtracted from gross plant after the reserve reallocation is conducted. As discussed below, to determine the depreciation reserve, I calculated the theoretical reserve prior to the reserve reallocation. Both of these calculations (theoretical reserve and reserve reallocation) are supported by the Depreciation Study.

- **Net Salvage Amounts or Percentages**: The Depreciation Study supports the overall net salvage percentages, but I rely upon the decommissioning study sponsored by Mr. Kyle Williams for the Production portion of the net salvage amount determination. Specifically, for Public Service's Steam, Hydro, and Other Production Plants, I used estimates reflected in the Decommissioning Study prepared by Burns & McDonnell, which is being sponsored by Mr. Williams. For the other accounts (Transmission, Distribution, Electric General and Common Plant) I calculated the net salvage percentages reflected in the Depreciation Study. For these plant accounts, I calculated salvage and removal cost percentages by dividing the current cost of salvage or removal, as supported by the Depreciation Study, by the original installed cost of the retired asset.

- **Remaining Life**: The Depreciation Study supports the remaining life calculation by determining the appropriate average service lives and retirement survivor curve for each account within a functional group.

- **Resulting Annual Depreciation Accrual and Depreciation Rates**: As discussed above, I calculated the depreciation rates, and I then derived the annual accrual amounts from these rates. The computations of the annual depreciation rates and annual accrual amounts are shown in Appendices A, A-1, A-2, and A-3 of Attachment DAW-1.

I describe in more depth below how the Depreciation Study depicts each component of the formula, as well as the Depreciation Study results for each component.

B. Theoretical Reserve and Reserve Reallocation

Q. WHAT PURPOSE DOES THEORETICAL RESERVE SERVE IN A DEPRECIATION STUDY?

A. The theoretical reserve represents the portion of a property group's cost that would have been accrued as depreciation reserve if current expectations were used throughout the life of the property group for future depreciation accruals. The theoretical reserve for the asset group serves as a point of comparison to the book reserve to determine if the unrecovered investment of the asset and its removal cost are over or under-accrued.

Q. HOW DOES THE DEPRECIATION STUDY DETERMINE THE THEORETICAL RESERVE?

A. In the Depreciation Study, I computed theoretical reserves based on projected plant balances as of December 31, 2020. I calculated the theoretical reserve using a reserve model that relies on a prospective concept relating future retirement and accrual patterns for property, given current life and salvage estimates. More specifically, I determined the theoretical reserve of a property group from the estimated remaining life of the group, the total life of the group, and estimated net salvage. This computation for the straight-line, remaining-life theoretical reserve ratio, which I describe in more detail starting on page 15 of Attachment DAW-1, involves multiplying the vintage balances within the property group by the

theoretical reserve ratio for each vintage. The calculation used in the Depreciation Study is the same calculation the Company used to develop the depreciation rates approved by the Commission in the Company's most recent Phase I Electric Rate Case, which was Proceeding No. 19AL-0268E.

Q. HOW DOES THE THEORETICAL RESERVE RELATE TO THE RESERVE REALLOCATION?

A. As part of the Depreciation Study, I performed a depreciation reserve reallocation, which is based on the theoretical reserves calculated in the Depreciation Study. If the accumulated book depreciation reserve as compared to the theoretical reserve results in some assets being over-recovered (a positive value when subtracting the theoretical reserve from the book reserve) and others being under-recovered (a negative value when subtracting the theoretical reserve from the book reserve) within the functional class or group, then this difference can be used to rebalance the accounts within the functional class or group using the reserve reallocation.

Q. WHAT IS RESERVE REALLOCATION?

A. Reserve reallocation is when the book reserve is realigned among accounts within a functional group based on the theoretical reserve for each account within that function.

Q. DID YOU ALIGN THE COMPANY'S DEPRECIATION RESERVE WITH THE LIFE AND NET SALVAGE CHARACTERISTICS OF THE ASSETS IN EACH FUNCTION?

A. Yes. In the process of analyzing the Company's depreciation reserve, I observed that the depreciation reserve positions of the accounts were generally not in line

with the life and net salvage characteristics found in the analysis of the Company's assets. To allow the relative reserve positions of each account within a function to mirror the life and net salvage characteristics of the underlying assets, I reallocated the depreciation reserves for all accounts within each function. Since the basis of the current depreciation rates incorporates different average service lives and net salvage percentages from the proposed parameters in this case, I believe reserve reallocation is the best approach based upon sound depreciation practice to resolve the differences in reserve position.

Q. DOES THE REALLOCATION OF THE DEPRECIATION RESERVE CHANGE THE TOTAL RESERVE?

A. No, the reallocation of the depreciation reserve does not change the total reserve. The depreciation reserve represents the amounts that have been collected as a systematic allocation of the cost of an asset over its useful life, including any net salvage that may be required to remove that asset from service upon retirement. The reallocation process does not change the total reserve for each function; it simply reallocates the reserve between accounts in the function. The reallocated depreciation reserves agree in total to the projected reserve balances at December 31, 2020 provided to me by Company witness Ms. Laurie J. Wold.

Q. IS DEPRECIATION RESERVE REALLOCATION A SOUND PRACTICE?

A. Depreciation reserve allocation is a sound depreciation practice. The Commission has incorporated that approach in the depreciation rates approved for both the Company and at least one other regulated utility that I am aware of.[4]

The National Association of Regulatory Utility Commissioners endorsed the practice in its 1968 publication of PUBLIC UTILITY DEPRECIATION PRACTICES, explaining that reallocation of the depreciation reserve is appropriate "…where the change in the view concerning the life of property is so drastic as to indicate a serious difference between the theoretical and the book reserve."[5] Additionally, the 1996 edition of PUBLIC UTILITY DEPRECIATION PRACTICES states that "theoretical reserve studies also have been conducted for the purpose of allocating an existing reserve among operating units or accounts."[6]

With respect to the Company, my Depreciation Study demonstrates that there have been significant changes in the life and net salvage characteristics of the property since the current accrual rates were established. These changes have created a significant difference between the theoretical and the book reserve in each functional group, which makes the reallocation of the depreciation reserve appropriate in this instance.

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[4] See Proceeding Nos. 20AL-0049G, 19AL-0268E, 16A-0231E, 14AL-0660E, 12AL-1269ST, 12AL-1268G, 11AL-947E, 09AL-299E, 06AL-234EG for Public Service. See Proceeding No. 15AL-0299G for Atmos Colorado.

[5] Public Utility Depreciation Practices, published by the National Association of Regulatory Utility Commissioners, at page 48 (1968).

[6] Public Utility Depreciation Practices, published by the National Association of Regulatory Utility Commissioners, at page 188 (1996).

Q. WHY IS IT IMPORTANT FOR THE DEPRECIATION RESERVE TO CONFORM TO THE THEORETICAL RESERVE?

A. It is important for the depreciation reserve to conform to the theoretical reserve because this sets the reserve at a level necessary to sustain the regulatory concept of intergenerational equity among the Company's customers, as well as sets the depreciation rates at the appropriate level based on current parameters and expectations.

Q. PLEASE EXPLAIN HOW THE REALLOCATION OF DEPRECIATION RESERVES IS CONDUCTED IN THE DEPRECIATION STUDY.

A. I first computed the total theoretical reserve for asset groups within each function. Then, to reallocate depreciation reserves within each function using the theoretical reserve model, I computed a proration factor by developing a ratio of the total book reserve to the total theoretical reserve by functional class. After each theoretical reserve was computed, I multiplied it by the proration factor to derive the reallocated book reserve of each functional group. After computing the reserve reallocation, I calculated recommended depreciation rates and expense in Appendices A, A-1, and A-2 of Attachment DAW-1 for the Company's plant in service assets.

Q. WERE THERE ANY UNIQUE CIRCUMSTANCES ASSOCIATED WITH THE RESERVE REALLOCATION CONDUCTED FOR THIS STUDY?

A. Yes. The Ponnequin Wind Farm was retired in 2015, but accumulated depreciation expense associated with this unit did not cover the cost of the plant and removal costs. As such, the unrecovered costs were recorded in FERC

Account 108, Accumulated Provision for Depreciation (Depreciation Reserve). The Company instructed that the Depreciation Study address these unrecovered costs for the Ponnequin Wind Farm by including the costs in the reserve reallocation for the Other Production functional class. After the reserve reallocation, the entire unrecovered balance for the Ponnequin Wind Farm is fully accrued for its removal costs.

C. Net Salvage Amounts or Percentages

Q. WHAT IS NET SALVAGE AS DETERMINED FOR ALL THE COMPANY'S PLANT ASSETS?

A. While discussed more fully in the Study itself, net salvage is the difference between the gross salvage (what the asset was sold for) and the COR (cost to remove and dispose of the asset). If the COR exceeds gross salvage, net salvage is negative. Some plant assets can experience significant negative removal cost percentages due to the amount of removal cost and the timing of any capital additions versus the retirement. Salvage and removal cost percentages are calculated by dividing the current cost of salvage or removal by the original installed cost of the assets retired.

Q. HOW IS NET SALVAGE DETERMINED IN THE DEPRECIATION STUDY?

A. As discussed above, for the Company's Steam, Hydro, and Other Production Plant, the Depreciation Study uses the decommissioning (cost of removal) estimates reflected in the Decommissioning Study and the currently approved interim net salvage percentages to determine the total net salvage amounts. The

Depreciation Study separately calculates the net salvage percentages for the Transmission, Distribution, Electric General and Common Plant accounts.

Q. HOW DID YOU DETERMINE THE NET SALVAGE PERCENTAGES FOR EACH ASSET GROUP IN TRANSMISSION, DISTRIBUTION, ELECTRIC GENERAL, AND COMMON PLANT?

A. To determine the appropriate net salvage percentages for each account, I started by using an industry-standard method that divides the current cost of salvage or removal by the original installed cost of the assets retired. However, I also applied judgment to select a net salvage percentage that represents the future expectations for each account. To apply this judgment, I compiled historical salvage and removal data by functional group and account to determine values and trends in gross salvage and removal cost. As detailed in the Depreciation Study, for most accounts, data for retirements, gross salvage and COR covered the period from 2000-2020. I calculated moving averages with this data to remove timing differences between retirement and salvage and removal cost; those moving averages are analyzed over periods varying from one to 10 years. These calculations are found in Appendices E-2 and E-3 of Attachment DAW-1.

Q. IS IT SUFFICIENT TO ANALYZE HISTORICAL DATA TO FORM YOUR LIFE AND NET SALVAGE ESTIMATES?

A. No. Historical lives and salvage data are factors to consider in making life and net salvage recommendations, but it is crucial to incorporate future trends, changes in equipment and Company-specific operational information before finally making life and net salvage recommendations. Once all the calculations and data are

prepared, I take into account my judgment, Company expectations and trends to determine the appropriate net salvage percentages. A summary of the proposed net salvage percentages is shown below in Table DAW-D-1.

TABLE DAW-D-1
Comparison of Net Salvage Percentages

		Approved Net Salvage Percentage	Proposed Net Salvage Percentage	Difference in Net Salvage Percentages
	ELECTRIC INTANGIBLE PLANT			
301.00	Organization Costs			
302.00	Franchises and Consents			
303.00	Miscellaneous Intangible Plant			
303.03	Misc Computer Software - 3 Year	0%	0%	0%
303.07	Misc Computer Software - 7 Year	0%	0%	0%
303.10	Misc Computer Software - 10 Year	0%	0%	0%
303.15	Misc Computer Software - 15 Year	0%	0%	0%
	COMMON INTANGIBLE PLANT			
301.00	Organization Costs			
302.00	Franchises and Consents			
303.03	Miscellaneous Computer Software - 3 Year	0%	0%	0%
303.07	Miscellaneous Computer Software - 7 Year	0%	0%	0%
303.10	Miscellaneous Computer Software - 10 Year	0%	0%	0%
303.15	Miscellaneous Computer Software - 15 Year	0%	0%	0%
	PRODUCTION PLANT			
312.20	Coal Cars	0%	0%	0%
	TRANSMISSION PLANT			
350.20	Land Rights	0%	0%	0%
352.00	Structures and Improvements	-5%	-10%	-5%
353.00	Station Equipment	-15%	-20%	-5%
354.00	Towers and Fixtures	-20%	-40%	-20%
355.00	Poles and Fixtures	-40%	-60%	-20%
356.00	OH Conductors and Devices	-25%	-30%	-5%
357.00	UG Conduit	0%	-5%	-5%
358.00	UG Conductors and Devices	0%	-5%	-5%
359.00	Roads and Trails	0%	0%	0%

		Approved Net Salvage Percentage	Proposed Net Salvage Percentage	Difference in Net Salvage Percentages
	DISTRIBUTION PLANT			
360.20	Land Rights	0%	0%	0%
361.00	Structures and Improvements	-5%	-10%	-5%
362.00	Station Equipment	-10%	-20%	-10%
363.00	Energy Storage Equipment	NA	0%	NA
364.00	Poles, Towers and Fixtures	--50%	-60%	-10%
365.00	OH Conductors and Devices	-40%	-50%	-10%
366.00	UG Conduit	-25%	-30%	-5%
367.00	UG Conductors and Devices	-5%	-10%	-5%
368.00	Line Transformers	-10%	-10%	0%
369.00	Services	-30%	-40%	-10%
369.10	Services-Overhead	-30%	-40%	-10%
369.20	Services-Underground	-30%	-40%	-10%
370.00	Meters	0%	0%	0%
370.02	Meters- AGIS- AMI Equipment	NA	0%	NA
370.20	Automated Meter Reading Equipment	0%	0%	0%
371.00	Installation on Customer Premises	-20%	-20%	0%
371.40	Installations on Customers' Premises- EV	NA	0%	NA
373.00	Street Lighting and Signal Systems	-25%	-25%	0%
	ELECTRIC GENERAL PLANT			
389.20	Land Rights	0%	0%	0%
390.00	Structures and Improvements	-5%	-5%	0%
391.00	Office Furniture and Equipment	0%	0%	0%
391.20	Computer Hardware	0%	0%	0%
392.10	Transportation Equipment – Automobiles	10%	10%	0%
392.20	Transportation Equipment - Light Trucks	10%	10%	0%
392.30	Transportation Equipment – Trailers	20%	20%	0%
392.40	Transportation Equipment - Heavy Trucks	10%	10%	0%
393.00	Stores Equipment	0%	0%	0%
394.00	Tools, Shop and Garage Equipment	0%	0%	0%
395.00	Laboratory Equipment	0%	0%	0%
396.00	Power Operated Equipment	15%	30%	15%
397.00	Communication Equipment	0%	0%	0%
398.00	Miscellaneous Equipment	0%	0%	0%
	COMMON GENERAL PLANT			
389.20	Land Rights	0%	0%	0%
390.00	Structures and Improvements	-10%	-10%	0%
390.07	Structures and Improvements - Leasehold Improvements			
390.85	Structures and Improvements - 1800 Larimer			

		Approved Net Salvage Percentage	Proposed Net Salvage Percentage	Difference in Net Salvage Percentages
	COMMON GENERAL PLANT			
391.00	Office Furniture and Equipment	0%	0%	0%
391.04	Computer Hardware	0%	0%	0%
392.10	Transportation Equipment – Automobiles	10%	10%	0%
392.20	Transportation Equipment - Light Trucks	10%	10%	0%
392.30	Transportation Equipment – Trailers	20%	20%	0%
392.40	Transportation Equipment - Heavy Trucks	10%	10%	0%
393.00	Stores Equipment	0%	0%	0%
394.00	Tools and Shop Equipment	0%	0%	0%
395.00	Laboratory Equipment	0%	0%	0%
396.00	Power Operated Equipment	15%	30%	15%
397.00	Communication Equipment	0%	0%	0%
398.00	Miscellaneous Equipment	0%	0%	0%

Q. PLEASE DESCRIBE SOME OF THE CHANGES IN THE NET SALVAGE PERCENTAGES FOR THE VARIOUS ACCOUNTS.

A. The detailed analysis of each account is described fully in Attachment DAW-1, starting at page 93. Net salvage is trending toward higher negative net salvage due to the increased cost of labor, safety, and environmental issues related to retiring utility assets and the longer lives experienced for many assets. For Public Service, 16 accounts decreased (more negative), while only two accounts increased. Examples of some of the changes in net salvage are:

- The most significant decreases (more negative) in net salvage percentages were in: Transmission Account 355, Poles & Fixtures, which decreased from negative 40 to negative 60 percent; Distribution Services (Accounts 369.00, 369.10, and 369.20), which decreased from negative 30 to negative 40 percent and Accounts 362- Station Equipment, 364 Poles Towers and Fixtures, and 365 OH Conductors and Devices, which changed by negative 10 percent. For both the Transmission and Distribution accounts, the most recent five-year and 10-year net salvage percentages generally indicate higher negative percentages, as detailed in the Depreciation Study. In addition, the data

indicates that negative salvage has increased steadily since 2007. In fact, several factors impacting removal costs within the Transmission function are enumerated in the Depreciation Study. See pages 108-110 of Attachment DAW-1.

- The two accounts with more positive net salvage are Electric General and Common General Accounts 396 for power-operated equipment. The Depreciation Study indicates that the Company is receiving higher net salvage proceeds in recent years for assets in these accounts. The data I have reviewed, along with my judgment, indicates moving to a positive 30 percent net salvage from 15 percent.

D. Remaining Life Analysis

Q. DOES THE DEPRECIATION STUDY CONDUCT LIFE ANALYSIS FOR PRODUCTION UNITS?

A. Yes. Revised terminal retirement dates, which the Company provided to me, are inputs used in the Depreciation Study to derive the average remaining life depreciation rate for generation. As noted by Ms. Wold, the dates are consistent with current operating expectations, environmental legislation, and resource plans.

It should be noted, however, that the Depreciation Study does treat one group of assets within Steam Production uniquely. Coal cars, within Account 312, are modeled somewhat differently than other assets within Steam Production since these assets are not tied to any particular generating station. As such, I used Company history to develop a service life recommendation. The Depreciation Study recommends a 24-year life for this account.

Q. CAN YOU EXPLAIN INTERIM RETIREMENT PROJECTIONS AND WHAT PURPOSES THEY SERVE IN THE DEPRECIATION STUDY?

A. Yes. As detailed in the Depreciation Study, I used interim retirement Iowa curves to model the retirement of individual assets within primary plant accounts for each

generating unit prior to the terminal retirement of the facility. The life span procedure assumes all assets are depreciated (straight-line) for the same number of periods and will retire at the same time (the terminal retirement date). Adding interim retirement curves to this procedure reflects the fact that some of the assets at a power plant will not survive to the end of the life of the facility and should be depreciated (straight-line) more quickly and retired earlier than the terminal life of the overall facility. By applying interim retirements, the Depreciation Study recognizes that generating units will have retirements of depreciable property before the end of their lives. For purposes of the Depreciation Study, the Company asked me to change from using interim retirement ratios to an interim retirement Iowa curve to estimate interim retirement activity. The Xcel Energy operating companies in other jurisdictions use Iowa curves, and Public Service wishes to align its methodology for its production assets with the methodology used in other Xcel Energy jurisdictions. In addition, in my experience the Iowa curve methodology is the mainstream and more accurate approach used across the utility industry. The proposed interim retirement Iowa curves and lives recommended for production accounts are shown in Attachment DAW-1 at Appendix C-1.

Q. IS NET SALVAGE ACCOUNTED FOR SEPARATELY FOR THESE INTERIM RETIREMENTS?

A. Yes. I calculated an interim net salvage percentage that represents the estimated removal cost for interim retirements that will occur annually over the remaining life of each generating unit. The selection of interim retirement curves goes with the

selection of interim net salvage percentages. Both should be considered in setting depreciation accrual rates. Most of the interim net salvage percentages remain the same as approved in the Company's 2019 Electric Phase I. The proposed interim retirement net salvage percentages are shown in Appendix C-1, and a detailed history is shown in Appendix E-1.

Q. WHAT METHOD DOES THE DEPRECIATION STUDY USE TO ANALYZE HISTORICAL DATA FOR TRANSMISSION, DISTRIBUTION, ELECTRIC GENERAL, AND COMMON PLANT TO DETERMINE LIFE CHARACTERISTICS?

A. For the Depreciation Study, I analyzed all Transmission, Distribution, Electric General, and Common Plant accounts using actuarial analysis (retirement rate method) to estimate the life of the property in each account. In much the same manner as human mortality is analyzed by actuaries, depreciation analysts use models of property mortality characteristics that have been validated in research and empirical applications. The current and proposed net salvage percentages are shown in Appendix C-2, and a detailed history is shown in Appendix E-2 and E-3 of Attachment DAW-1.

Q. HOW DID YOU DETERMINE THE AVERAGE SERVICE LIVES FOR TRANSMISSION, DISTRIBUTION, ELECTRIC GENERAL, AND COMMON PLANT?

A. As noted above, I used actuarial analysis to determine the appropriate average service lives for each account in Transmission, Distribution, Electric General, and Common. Graphs and tables supporting the actuarial analysis and the chosen Iowa Curves used to determine the average service lives for analyzed accounts appear in the "Determination of the Lives" section of Attachment DAW-1, pages 23-92. A summary comparison of the depreciable lives is shown in Table DAW-D-2 below.

TABLE DAW-D-2
Comparison of Depreciable Lives

Account Number	Description	Approved Average Service Life	Proposed Average Service Life	Difference in Average Service Life
	ELECTRIC INTANGIBLE PLANT			
301.00	Organization Costs			
302.00	Franchises and Consents			
303.00	Miscellaneous Intangible Plant			
303.03	Misc Computer Software - 3 Year	3	3	0
303.07	Misc Computer Software - 5 Year	7	7	0
303.10	Misc Computer Software - 10 Year	10	10	0
303.15	Misc Computer Software - 15 Year	15	15	0
	COMMON INTANGIBLE PLANT			
301.00	Organization Costs			
302.00	Franchises and Consents			
303.03	Miscellaneous Computer Software - 3 Year	3	3	0
303.07	Miscellaneous Computer Software - 7 Year	7	7	0
303.10	Miscellaneous Computer Software - 10 Year	10	10	0
303.15	Miscellaneous Computer Software - 15 Year	15	15	0

Account Number	Description	Approved Average Service Life	Proposed Average Service Life	Difference in Average Service Life
	PRODUCTION PLANT			
312.20	Coal Cars	24	24	0
	TRANSMISSION PLANT			
350.20	Land Rights	100	100	0
352.00	Structures and Improvements	88	60	-28
353.00	Station Equipment	58	58	0
354.00	Towers and Fixtures	81	81	0
355.00	Poles and Fixtures	62	62	0
356.00	OH Conductors and Devices	70	75	5
357.00	UG Conduit	60	65	5
358.00	UG Conductors and Devices	50	50	0
359.00	Roads and Trails	92	92	0
	DISTRIBUTION PLANT			
360.20	Land Rights	90	100	10
361.00	Structures and Improvements	65	62	-3
362.00	Station Equipment	57	56	-1
363.00	Energy Storage Equipment	NA	10	NA
364.00	Poles, Towers and Fixtures	54	57	3
365.00	OH Conductors and Devices	50	56	6
366.00	UG Conduit	70	73	3
367.00	UG Conductors and Devices	47	51	4
368.00	Line Transformers	47	49	2
369.00	Services	50	56	6
369.10	Services-Overhead	50	56	6
369.20	Services-Underground	50	56	6
370.00	Meters	24	24	0
370.02	Meters-AGIS-AMI Equipment	NA	20	NA
370.20	Automated Meter Reading Equipment	10	10	0
371.00	Installation on Customer Premises	25	25	0
371.40	Installations on Customer's Premises-EV	NA	10	NA
373.00	Street Lighting and Signal Systems	41	28	-13
	ELECTRIC GENERAL PLANT			
389.20	Land Rights	60	60	0
390.00	Structures and Improvements	45	45	0
391.00	Office Furniture and Equipment	20	20	0
391.20	Computer Hardware	6	6	0
392.10	Transportation Equipment - Automobiles	12	7	-5
392.20	Transportation Equipment - Light Trucks	12	7	-5
392.30	Transportation Equipment - Trailers	25	15	-10
392.40	Transportation Equipment - Heavy Trucks	14	10	-4
393.00	Stores Equipment	30	30	0

Account Number	Description	Approved Average Service Life	Proposed Average Service Life	Difference in Average Service Life
394.00	Tools, Shop and Garage Equipment	25	15	-10
395.00	Laboratory Equipment	10	10	0
396.00	Power Operated Equipment	14	14	4
397.00	Communication Equipment	15	15	0
398.00	Miscellaneous Equipment	20	20	0
	COMMON GENERAL PLANT			
389.20	Land Rights	0	60	60
390.00	Structures and Improvements	45	45	0
390.07	Structures and Improvements - Leasehold Improvements			
390.85	Structures and Improvements - 1800 Larimer			
391.00	Office Furniture and Equipment	20	20	0
391.04	Computer Hardware	6	6	0
392.10	Transportation Equipment - Automobiles	12	7	-5
392.20	Transportation Equipment - Light Trucks	12	7	-5
392.30	Transportation Equipment - Trailers	25	15	-10
392.40	Transportation Equipment - Heavy Trucks	14	10	-4
393.00	Stores Equipment	30	30	0
394.00	Tools and Shop Equipment	25	15	-10
395.00	Laboratory Equipment	10	10	0
396.00	Power Operated Equipment	14	10	-4
397.00	Communication Equipment	15	15	0
398.00	Miscellaneous Equipment	20	20	0

Q. PLEASE DESCRIBE SOME OF THE CHANGES IN THE AVERAGE SERVICE LIVES FOR THE VARIOUS TRANSMISSION, DISTRIBUTION, ELECTRIC GENERAL, AND COMMON GENERAL ACCOUNTS?

A. For the 52 Electric Transmission, Distribution, Electric General, and Common General accounts, there are 13 accounts with increasing lives, 15 accounts with decreasing lives, and 24 accounts that stayed the same.[7] Examples of some of

[7] The 51 accounts do not include any Electric Intangible Plant, Common Intangible Plant, Production Plant, or any newly created accounts.

the significant changes in average service lives for Electric Transmission, Distribution, and Electric General Plant are as follows:

- The largest increases in life were in: Transmission Account 365, Overhead ("OH") Conductors & Devices, which increased by 6 years; Electric Distribution Services (369.00, 369.10, 369.20), which increased by 6 years; Transmission Account 356, OH Conductors and Devices, which increased by 5 years; and Transmission Account 357 UG Conduit, which increased by 5 years. The Depreciation Study explains the increase for each account.

- The largest decreases in life were: Transmission Account 352, Structures and Improvements, which decreased by 28 years; and Electric Account 373, Street Lighting and Signal Systems, which decreased by 13 years. The Depreciation Study explains the decrease for each account.

Q. IS THERE A SEPARATE METHODOLOGY USED IN THE DEPRECIATION STUDY TO ACCOUNT FOR THE REMAINING LIFE FOR CERTAIN ACCOUNTS?

A. Yes**.** The Company proposes to continue Vintage Group Accounting for Electric General and Common General Accounts 391-398. Vintage Group Accounting is described in FERC Accounting Release 15 ("AR 15"), commonly referred to as General Plant Amortization, Vintage Year Accounting For General Plant Accounts, dated January 1, 1997. AR 15 allowed utilities to use a simplified method of accounting for General Plant assets, excluding structures and improvements (referred to as "General Plant"). The AR 15 release allowed high-volume, low-cost assets to be amortized over the associated useful life, eliminated the need to track individual assets, and allowed a retirement to be booked at the end of the depreciable life. This method is often referred to as "amortization of General Plant.**"**

Q. WHAT LEVEL OF DETAIL IS MAINTAINED IN THE ACCOUNTING RECORDS PURSUANT TO AR 15?

A. Since the Company adopted AR 15 many years ago, the level of detail maintained in the asset records has changed from prior periods, when items were tracked separately. Now, the plant asset balances are maintained by vintage installed, with the retirement being recorded when book depreciation has been completed. The empirical retirement data for actuarial or semi-actuarial analysis is no longer available; however, the determination of useful life can be made appropriately with the use of manufacturer expected lives, technological obsolescence, business operations and practices, known causes of retirement, and changes in expected future utilization, as well as judgment based on lives experienced for similar assets across the industry. More details related to AR 15 appear on page 88 of the Depreciation Study in Attachment DAW-1.

Q. PLEASE DESCRIBE THE RESULTS OF THE VINTAGE GROUP DEPRECIATION RATES COMPUTED FOR ACCOUNTS 391-398 IN ELECTRIC GENERAL AND COMMON GENERAL PLANT.

A. These computations are shown in shown on Appendix A-1 and A-2 of Attachment DAW-1. The Company is including any depreciation reserve difference between the actual and theoretical reserve in the amortization accrual for each account.

E. Depreciation Rates and Depreciation Accrual Rates

Q. HAVING DETERMINED THE THEORETICAL RESERVE, CONDUCTED THE RESERVE REALLOCATION, CALCULATED NET SALVAGE AND DETERMINED THE REMAINING LIVES THROUGH THE DEPRECIATION STUDY, PLEASE DESCRIBE THE FINAL STEPS, CALCULATION OF THE DEPRECIATION RATES AND ACCRUAL RATES?

A. The Depreciation Study calculates the depreciation accrual rates using the same methodology (with the exception of the production interim retirement calculations for Production as discussed earlier) used in developing the depreciation rates approved by the Commission in the Company's 2019 Electric Phase I. The computations of accrual rates are shown in Appendix A of Attachment DAW-1.

IV. CHANGE IN DEPRECIATION EXPENSE AS A RESULT OF THE MODIFIED DEPRECIATION RATES

Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR DIRECT TESTIMONY?

A. In this section of my Direct Testimony, I discuss the change in depreciation expense as a result of the modified depreciation rates. Specifically, I explain why Public Service's depreciation expense is increasing.

Q. PLEASE SUMMARIZE THE DEPRECIATION STUDY RESULTS WITH RESPECT TO DEPRECIATION CHANGES IN DEPRECIATION AND AMORTIZATION EXPENSE.

A. Based on the revised depreciation rates indicated in the Depreciation Study, as applied to projected plant balances as of December 31, 2020, the overall change in annual depreciation and amortization expense is an increase of $49.5 million. As shown below in Table DAW-D-3, this increase reflects an increase of $28.6 million in Production, an increase of $5.2 million in Transmission, an increase of $6.6 million in Distribution, an increase of $6.8 million in Electric General, and an increase of $2.3 million for Common General. Detailed Production rates by plant and account are shown in Appendix A, Appendix A-1 (General Amortized), and Appendix A-2 (Common General) of Attachment DAW-1. Rates by account for Transmission, Distribution, Electric General and Common General are shown in Appendix A of Attachment DAW-1.

TABLE DAW-D-3
Change in Depreciation Expense due to Proposed Changes in Depreciation Rates by Functional Class

Functional Class	Projected Plant 1/1/2020	Approved Rates Depreciation Expense	Proposed Rates Depreciation Expense	Difference Depreciation Expense
	$	$	$	$
Electric Intangible	171,807,113	17,415,635	17,415,635	0
Steam Production	3,151,855,493	95,845,385	114,639,560	18,794,175
Hydro Production	156,048,107	5,345,172	8,640,944	3,295,772
Other Production	1,969,172,841	51,500,383	61,254,206	9,753,822
Wind Production	1,552,295,622	67,369,630	64,083,964	-3,285,666
Total Production	6,829,372,062	220,060,571	248,618,674	28,558,103
Transmission	2,886,692,046	55,276,278	60,477,708	5,201,430
Distribution	5,728,859,142	133,984,942	140,597,496	6,612,554
Electric General	412,554,590	24,042,508	30,855,980	6,813,472
Total Transmission, Distribution, and General	9,028,105,777	213,303,728	231,931,184	18,627,456
Total Electric	16,029,284,953	450,779,933	497,965,493	47,185,559
Common Intangible	385,366,955	44,944,403	44,944,403	0
Common General	510,468,803	37,112,365	39,441,843	2,329,478
Common Total	895,835,758	82,056,768	84,386,246	2,329,478
Total PSCO Electric and Common	16,925,120,711	532,836,701	582,351,739	49,515,038

Each of these components has been analyzed, evaluated, and incorporated into the depreciation rates calculated in Attachment DAW-1, Appendices A through A-3. Appendix D provides the proposed retirement dates for the Company's generating assets and Appendix F shows a comparison of the reserve reallocation within each function. Appendix G provides the terminal (dismantling cost) net salvage amounts by plant and unit and the source for those amounts. A more detailed discussion of net salvage for Production Plant can be found in Attachment DAW-1, starting at page 94.

Q. WHY IS PUBLIC SERVICE'S DEPRECIATION EXPENSE INCREASING?

A. The most significant change in depreciation expense, an increase of $28.6 million, is related to Production Plant, and primarily to the $18.8 million increase for Steam Production Plant. As discussed by Ms. Wold, changes in depreciation expense related to Production Plant include the average remaining life depreciation rates associated with the current terminal retirement dates, plant balances, reserve position, and the incorporation of new decommissioning cost estimates for all Production assets. Another factor that impacts depreciation expense is additional investment for Company assets since the existing depreciation rates were established. If the terminal retirement of a generating unit does not change between cases, any incremental investment added must be recovered over a shorter period. Please refer to Ms. Wold's Direct Testimony for a discussion of other factors affecting changes in depreciation expense.

Q. WHAT IS THE CHANGE IN DEPRECIATION EXPENSE FOR THE TRANSMISSION, DISTRIBUTION, ELECTRIC GENERAL, AND COMMON PLANT ACCOUNTS?

A. The increase in annual depreciation expense shown in Table DAW-D-3 shows increases for each function. The proposed lives for many accounts have lengthened as discussed above, but the increase in annual depreciation expense is primarily due to changes in net salvage in the various accounts. The existing net salvage percentages, which were established in the 2016 Depreciation Study in Proceeding No. 16A-0231E, do not necessarily conform to current net salvage

experience as discussed earlier and more fully in the Depreciation Study report (Attachment DAW-1).

V. CONCLUSION

Q. DO YOU HAVE ANY CONCLUDING REMARKS?

A. Yes. The Depreciation Study and analysis performed under my supervision fully supports setting depreciation rates at the level I have indicated in my Direct Testimony. The Company should continue to periodically review the annual depreciation rates for its property. In fact, the industry norm is to perform a depreciation study every three to five years, unless there are other factors influencing the life and net salvage expectations of assets. Performing depreciation studies on a regular basis and receiving approval of the recommended depreciation rates softens intergenerational inequities for customers. In this way, the Company's depreciation expense will more accurately reflect its cost of operations, and the rates for all customers will include an appropriate share of the capital expended for their benefit. The Depreciation Study for Public Service's electric and common depreciable property for actual plant assets as of December 31, 2020, describes the extensive analysis performed and the resulting rates that are now appropriate for Company property.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes, it does.

Statement of Qualifications

Dane A. Watson

I hold a Bachelor of Science degree in Electrical Engineering from the University of Arkansas at Fayetteville and a Master's Degree in Business Administration from Amberton University.

The Society of Depreciation Professionals (“the Society”) has established national standards for depreciation professionals. The Society administers an examination and has certain required qualifications to become certified in this field. I met all requirements and have become a Certified Depreciation Professional (“CDP”).

Since graduation from college in 1985, I have worked in the area of depreciation and valuation. I founded Alliance Consulting Group in 2004 and am responsible for conducting depreciation, valuation and certain accounting-related studies for utilities in various industries. My duties related to depreciation studies include the assembly and analysis of historical and simulated data, conducting field reviews, determining service life and net salvage estimates, calculating annual depreciation, presenting recommended depreciation rates to utility management for its consideration, and supporting such rates before regulatory bodies.

My prior employment from 1985 to 2004 was with Texas Utilities (“TXU”). During my tenure with TXU, I was responsible for, among other things, conducting valuation and depreciation studies for the domestic TXU companies. During that time, I served as Manager of Property Accounting Services and Records Management in addition to my depreciation responsibilities.

I have twice been Chair of the Edison Electric Institute ("EEI") Property Accounting and Valuation Committee and have been Chairman of EEI's Depreciation and Economic Issues Subcommittee. I am a Registered Professional Engineer in the State of Texas and a Certified Depreciation Professional. I am a Senior Member of the Institute of Electrical and Electronics Engineers ("IEEE"), and have held numerous offices in the Dallas Section, Region 5,, National and Worldwide Boards and Committees of IEEE. I have served as President of the Society of Depreciation Professionals twice, most recently in 2015.

A list of my testimony appearances before various regulatory bodies is provided in Attachment DAW-2.

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF COLORADO

* * * * *

IN THE MATTER OF ADVICE LETTER NO. 1857-ELECTRIC OF PUBLIC SERVICE COMPANY OF COLORADO TO REVISE ITS COLORADO PUC NO. 8-ELECTRIC TARIFF TO REVISE JURISDICTIONAL BASE RATE REVENUES, IMPLEMENT NEW BASE RATES FOR ALL ELECTRIC RATE SCHEDULES, AND MAKE OTHER PROPOSED TARIFF CHANGES EFFECTIVE AUGUST 2, 2021	)	**PROCEEDING NO. 21AL-_____E**

AFFIDAVIT OF DANE A. WATSON
ON BEHALF OF
PUBLIC SERVICE COMPANY OF COLORADO

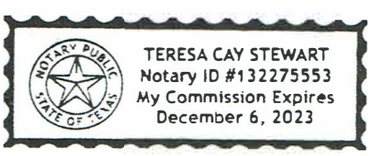
I, Dane A. Watson, being duly sworn, state that the Direct Testimony and attachments were prepared by me or under my supervision, control, and direction; that the Direct Testimony and attachments are true and correct to the best of my information, knowledge and belief; and that I would give the same testimony orally and would present the same attachments if asked under oath.

Dated at Frisco, Texas, this 23rd day of June 2021.

Dane A. Watson
Dane A. Watson
Managing Partner

Subscribed and sworn to before me this 23 day of June, 2021.

Teresa C. Stewart
Notary Public



My Commission expires 12/6/23