COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE ELECTRONIC APPLICATION OF DUKE ENERGY KENTUCKY, INC., FOR: 1) AN ADJUSTMENT OF THE ELECTRIC RATES; 2) APPROVAL OF NEW TARIFFS; 3) APPROVAL OF ACCOUNTING PRACTICES TO ESTABLISH REGULATORY ASSETS AND LIABILITIES; AND 4) ALL OTHER REQUIRED APPROVALS AND RELIEF.	)))))))	CASE NO. 2024-00354

REBUTTAL TESTIMONY OF

JOHN J. SPANOS

ON BEHALF OF

DUKE ENERGY KENTUCKY

April 9, 2025

TABLE OF CONTENTS

PAGE

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND ADDRESS.

A. My name is John J. Spanos. My business address is 300 Sterling Parkway, Mechanicsburg, Pennsylvania, 17050 (formerly 207 Senate Avenue, Camp Hill, Pennsylvania, 17011).

Q. HAVE YOU PREVIOUSLY SUBMITTED TESTIMONY IN THIS PROCEEDING?

A. Yes. I previously submitted direct testimony on behalf of Duke Energy Kentucky, Inc. (Duke Energy Kentucky or the Company) on December 2, 2024.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. The purpose of my rebuttal testimony is to respond to the direct testimony of the Kentucky Office of the Attorney General (AG) witness Lane Kollen as it relates to the Company's depreciation rates proposed in this proceeding.

Q. WHAT ARE THE SUBJECTS OF YOUR REBUTTAL TESTIMONY?

A. My rebuttal testimony relates to depreciation issues, specifically the appropriate recovery methodology for generating facilities which includes the life span for the East Bend facility and the standard practice of recording decommissioning costs as a component of the depreciation rate.

II. LIFE SPAN OF THE EAST BEND GENERATING FACILITY

Q. HAS MR. KOLLEN PROPOSED A DIFFERENT RETIREMENT DATE FOR THE EAST BEND GENERATING FACILITY THAN WHAT WAS RECOMMENDED IN THE DEPRECIATION STUDY?

A. Yes. He has proposed using a probable retirement date of December 31, 2041, for East Bend instead of December 31, 2038, as recommended in the depreciation study.

Q. DOES MR. KOLLEN'S RECOMMENDED PROBABLE RETIREMENT DATE PROPERLY CONSIDER THE APPROPRIATE LIFE CYCLE OF THE EAST BEND GENERATING FACILITY?

A. No. The purpose of a probable retirement date and the impact on depreciation is to estimate the life cycle of each asset class and to recover the investment over the same time period that the asset will render service. Mr. Kollen chose to ignore this fundamental concept of depreciation (that is, matching recovery to usage) in his proposal by suggesting that, "the recovery of the remaining net book value of East Bend 2 in 2038 should be considered a cost of transitioning to the new capacity and recovered, at least in part, from the generation of customers that well be served by the new capacity."[1] He reasons that, "future customers should bear the remaining cost of the East Bend 2 in exchange for the benefits they will achieve from an earlier transition to lower cost replacement capacity."[2] Not only is this an arbitrary proposal, but more importantly, it is at odds with a fundamental concept of depreciation which is matching recovery to the usage of assets.

[1] Kollen testimony, page 36, lines 3-6.
[2] *Id.*, p. 36, lines 10-12.

Q. WHY IS IT IMPORTANT TO MATCH RECOVERY OF AN ASSET TO THE SAME TIME PERIOD THAT THE ASSET WILL RENDER SERVICE?

A. The matching principle is the underlying concept of depreciation. This is based on the concept that customers that benefit from the service pay for the service equally over the life of the asset systematically and rationally. This is how depreciation rates in the depreciation study were developed but is not the way it is developed by witness Kollen.

Q. DOES MR. KOLLEN PROVIDE ANY ANALYSIS TO SUPPORT HIS PROPOSED 2041 RETIREMENT DATE FOR EAST BEND?

A. No. Mr. Kollen provides no basis for his proposal of a 2041 retirement date, aside from it being the previously estimated date for this facility. In contrast, the Company's proposed 2038 retirement date is supported by the Company's informed judgement of East Bend based on evaluation of various economic considerations. The Company has clearly identified that 2041 is no longer a realistic expectation for the life span of this facility as expressed by other Duke Energy Kentucky witnesses in this case. Additionally, the 2041 probable retirement date initially established by the Company when the asset was placed in service years ago was based on the same concepts as the 2038 probable retirement date in this case. Thus, Mr. Kollen has decided that the basis for information years ago is better than what is known today for generation planning.

Q. DO UTILITY COMPANIES GENERALLY ESTABLISH FIRM RETIREMENT DATES FOR GENERATING FACILITIES MANY YEARS IN ADVANCE OF THE RETIREMENT?

A. No. First, it is called a probable retirement date because the date is based on all factors that are known that the time. Second, the probable retirement date is no different than many of the other components of a depreciation study in that there are numerous estimates that are based on informed judgment that couples statistical analysis, management plans and general information in the industry. These estimated retirement dates will likely change over time especially as you get closer to the end of the asset's useful life.

Q. WHAT TREND HAVE YOU EXPERIENCED IN THE RETIREMENT OF COAL FIRED GENERATING FACILITIES?

A. In my experience of over 35 years working within the electric industry, I have conducted depreciation studies of hundreds of electric utilities throughout the United States, and I see trends within the industry firsthand. In recent years, there is clearly a trend of increased coal generation retirement, and most, if not all, of the retired facilities are being taken out of service earlier than their estimated retirement dates. Prior to 2015, the most common range of life spans for coal fired generating facilities was between 55 and 65 years. Since 2015, the average age of coal fired generating facilities has been well below 50 years. East Bend will have a life span of 57 years if retired in 2038.

Q. ARE THE OPERATIONAL AND MAINTENANCE COSTS INCURRED EACH YEAR IN MANY CASES REPLACING CAPITAL IMPROVEMENTS?

A. Yes. In most years there are decisions that are required to be made as to whether to spend funds to maintain existing assets or to replace with new assets. As assets age when they near the end of life, the operating and maintenance (O&M) expense amounts are overall a better option than replacement. This is particularly common as assets near end of life and the replacement of new assets would be more expensive and require major changes to the functionality of the facility.

Q. ARE DECISIONS RELATED TO O&M EXPENSE VERSUS CAPITAL COSTS THE ONLY FACTOR FOR GENERATING FACILITIES?

A. No. The O&M versus capital decision must also be reviewed at the same time discussions are made related to generation capacity, such as how will the closure of a generating facility capacity be replaced when retired. The construction of replacement capacity or a conversion of East Bend are all expected to be determined and in place before 2041.

III. TERMINAL NET SALVAGE FOR PRODUCTION

Q. WHAT ARE MR. KOLLEN'S OBJECTIONS TO THE TERMINAL NET SALVAGE ESTIMATES FOR THE EAST BEND GENERATING FACILITY?

A. Mr. Kollen has three primary objections to the development of terminal net salvage estimates in this case. First, he claims decommissioning, or terminal net salvage, should be excluded from the depreciation rate for not only East Bend and Woodsdale generating units, but also for the solar generating units. Alternatively, if

generating unit decommissioning expense is allowed, it should be as a standalone expense and he asserts that the escalation of decommissioning costs to the date of retirement should be reduced to just the test year. None of these claims are correct, and Mr. Kollen provides no evidence to support their merit. Finally, he recommends that estimated end of life materials and supplies be removed from the decommissioning cost estimate and should only be recovered after unit retirement.

Q. DO THE COMPANY'S CURRENT DEPRECIATION RATES, APPROVED BY THE COMMISSION, INCLUDE ESCALATION?

A. No, not the current depreciation rates, however, in the Company's depreciation studies prior to the most recent case, the terminal net salvage estimates include escalation to the date of retirement and were developed in the same manner as in the instant case. The Commission approved the Company's proposals with regard to terminal net salvage:

> The Commission finds Dukes Kentucky's recommendation on the treatment of terminal net salvage value in the computing the depreciation rates for generating units is reasonable in order to avoid intergenerational inequity and should be approved.[3]

Q. WILL MR. KOLLEN'S PROPOSAL TO ELIMINATE ESCALATION PROPERLY ALLOCATE THE COMPANY'S COSTS OVER THE SERVICE LIVES OF THEIR GENERATING FACILITIES?

A. No. The decommissioning study prepared by 1898 & Co. (previously known as Burns and McDonnell) uses costs at current price level. However, the Company's plants will not be retired for many years. The net salvage costs need to be escalated

[3] Order in Case No. 2017-00321, p. 27

so that the correct amounts are allocated over the lives of the plants. Mr. Kollen's proposal to remove escalation to the date of retirement from the decommissioning costs would result in insufficient recovery of the Company's actual costs. As is the case for all assets, full recovery is determined based on the original cost at the time of installation plus the end of life cost (cost of removal minus gross salvage) to retire the asset. If the full cost at the time of retirement, which is in the future, is not determined then full recovery of the service value of the asset is not achieved.

Q. WHAT IS THE IMPACT OF MR. KOLLEN REMOVING ESCALATION FROM THE TERMINAL NET SALVAGE COMPONENT?

A. Based on the depreciation study parameters, removing escalation from the terminal net salvage percentage but maintaining the probable retirement dates of all generation would cause an $11.8M under recovery annually. Additionally, if escalation was excluded and the probable retirement date for East Bend was changed to 2041 then another $4M reduction in recovery would occur.

Q. ARE MR. KOLLEN'S NET SALVAGE PROPOSALS BASED ON ACCEPTED DEPRECIATION PRACTICES?

A. No. It is widely accepted that depreciation should include future net salvage costs, which are recovered on a straight-line basis and that those costs should be based on the expected cost to retire the Company's assets at the time of retirement or removal. This applies not only to decommissioning costs but to the costs of all plant assets.

Q. SHOULD NET SALVAGE BE BASED ON THE FUTURE COSTS EXPECTED TO BE INCURRED, NOT ON TODAY'S COSTS?

A. Yes. Because net salvage must be based on future costs, decommissioning costs for net salvage must also be estimates of the future cost at the time of decommissioning. For this reason, if decommissioning estimates are developed using the cost to decommission a plant today, then these costs must be escalated to the time period in which they are expected to be incurred to achieve adequate recovery.

Q. SHOULD NET SALVAGE BE RECOVERED IN TODAY'S COST (THAT IS, THE COST IN TODAY'S DOLLARS)?

A. No. 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 the plant is retired. 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 FEDERAL ENERGY REGULATORY COMMISSION'S UNIFORM SYSTEM OF ACCOUNTS (FERC USOA)?

A. Yes. The FERC USOA 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 amount of money actually paid 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 USOA specifies cost of removal, as part of net salvage, must be recovered through depreciation expense and is the actual amount 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. 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. DO ANY AUTHORITATIVE DEPRECIATION TEXTS SUPPORT THAT THE NET SALVAGE AMOUNT SHOULD REPRESENT THE FUTURE COST?

A. Yes. Two preeminent depreciation texts are the National Association of Regulatory Utility Commissioners' Public Utility Depreciation Practices (typically referred to

as "NARUC4") and *Depreciation Systems* by Wolf and Fitch (Wolf and Fitch5). Both texts are clear that net salvage should be included in depreciation as a future cost. NARUC states the following:

> [U]nder presently accepted concepts, the amount of depreciation to be accrued over the life of an asset is its original cost less net salvage. Net salvage is difference between the gross salvage that will be realized when the asset is disposed of and the cost of retiring it.[6] (Emphasis added)

NARUC also explains that:

> 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.[7] (Emphasis added)

Wolf and Fitch explain that:

> The matching principle specifies that all cost incurred to produce a service should be matched against the revenue produced. Estimated future costs of retiring an asset currently in service must be accrued and allocated as part of the current expenses.[8]

4 National Association of Regulatory Utility Commissioners, *Public Utility Depreciation Practices* (1996).
5 Frank K. Wolf and W. Chester Fitch, *Depreciation Systems* (1994).
[6] NARUC Manual at 18.
[7] NARUC Manual at 18.
[8] Wolf and Fitch, p. 7.

Q. CAN YOU FURTHER DISCUSS WHY MR. KOLLEN'S CALCULATIONS FOR CREATING A STANDALONE TERMINAL NET SALVAGE COMPONENT ARE INAPPROPRIATE FOR ALL THE GENERATING FACILITIES?

A. Yes. First, as mentioned above, the terminal net salvage should be included in the depreciation rate based on all authoritative guidance. Second, the development of the weighted net salvage includes both interim and terminal net salvage which is based on the plant in service forecasted to be in place up to the date of retirement. Therefore, the amount that is equitably included in the depreciation rate is determined based on both the interim survivor curve and the decommissioning cost as a percentage of the assets in service each year up to the date of retirement. Thus, it is both expected and appropriate that the decommissioning costs will increase if the original cost increases. Mr. Kollen's proposal to segregate the decommissioning expense and base it on a calculation performed at a single point in time (in this case, December 31, 2023) would significantly underestimate the full cost of decommissioning at the end of the facility's life. Not only does Mr. Kollen's proposed method of segregating decommissioning from the calculation of depreciation deviate from industry practice, but it can also lead to a departure from the matching principle that is a fundamental depreciation concept.

Q. PLEASE EXPLAIN WHY THE RETIREMENT OF EAST BEND WILL BE TREATED DIFFERENTLY FROM A GROUP DEPRECIATION PERSPECTIVE AS IT RELATES TO ANY UNDEPRECIATED REMAINING PLANT AT ITS RETIREMENT.

A. East Bend is the only remaining steam-production plant remaining in that account. The Company's Woodsdale and solar units are in different accounts in accordance with the FERC Uniform System of Accounts (USoA). It is highly unlikely that Duke Energy Kentucky will replace East Bend with another coal-fired generating unit or that any new unit would be added that would be classified in steam production plant per the USoA used for East Bend generating facility. Therefore, there would be no related account or assets that any remaining undepreciated plant for East Bend could be assigned upon East Bend's retirement. A separate regulatory asset would need to be created or else the Company would be facing an enormous and financially damaging write-off.

Q. IS THERE ANY REASON THAT DECOMMISSIONING COSTS SHOULD BE RECOVERED ANY DIFFERENTLY THAN MASS PROPERTY NET SALVAGE?

A. No. Decommissioning costs as well as the mass property net salvage (cost of removal and gross salvage) are all end of life costs. Each, by definition, are part of the recovery of the full service value of the asset over the entire life of the assets. Additionally, the percentages that are established based on informed judgment that includes statistical information and estimates of the future. Therefore, the decommissioning (terminal net salvage) component should be included in the

depreciation rate just like all other net salvage percentages for each of the other asset classes.

Q. IS IT REASONABLE TO INCLUDE THESE MATERIALS AND SUPPLIES INVENTORIES AS PART OF DECOMMISSIONING COSTS RECOVERED THROUGH DEPRECIATION EXPENSE?

A. Yes. Disposing of remaining inventory is just as much a part of decommissioning a station as disposing of other equipment and plant components. It must be safely sold, moved to other locations, or scrapped. In fact, the warehouse, or other portions of the plant where the supplies are held cannot be demolished until the inventory is safely removed.

A level of inventory is required to be maintained at each site in order to achieve appropriate reliability of the plants and to facilitate routine maintenance on the facilities. The value of this inventory that cannot be reclaimed through sale or scrap of the inventory is directly related to the retirement of the facility. If the facility were to remain in service, this inventory would retain its value to the plant. However, when the plant is retired, the value of this inventory is reduced to the value it has as salvage or scrap. This reduction in value of the inventory is a cost associated with net salvage rates associated with retirement and demolition of the facility.

IV. CONCLUSION

Q. DOES THIS CONCLUDE YOUR PRE-FILED REBUTTAL TESTIMONY?

A. Yes.

VERIFICATION

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF CUMBERLAND)

The undersigned, John J. Spanos, President of Gannett Fleming Valuation and Rate Consultants, LLC, being duly sworn, deposes and says that he has personal knowledge of the matters set forth in the foregoing rebuttal testimony and that it is true and correct to the best of his knowledge, information and belief.

John J. Spanos, Affiant

Subscribed and sworn to before me by John J. Spanos on this 27th day of March, 2025.

NOTARY PUBLIC

Commonwealth of Pennsylvania - Notary Seal
Cheryl Ann Rutter, Notary Public
Cumberland County
My commission expires February 20, 2027
Commission number 1143028
Member, Pennsylvania Association of Notaries

My Commission Expires: February 20, 2027