

BEFORE THE CORPORATION COMMISSION OF OKLAHOMA

IN THE MATTER OF THE APPLICATION OF)
OKLAHOMA GAS AND ELECTRIC COMPANY)
FOR AN ORDER OF THE COMMISSION)
AUTHORIZING APPLICANT TO MODIFY ITS)
RATES, CHARGES, AND TARIFFS FOR RETAIL)
ELECTRIC SERVICE IN OKLAHOMA)

CAUSE NO. PUD 201500273

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CORPORATION COMMISSION
OF OKLAHOMA

Rebuttal Testimony

of

John J. Spanos

on behalf of

Oklahoma Gas and Electric Company

April 11, 2016

John J. Spanos
Rebuttal Testimony
INTRODUCTION

1 **Q. Please state your name and address.**

2 A. My name is John J. Spanos. My business address is 207 Senate Avenue, Camp Hill,
3 Pennsylvania 17011.

4
5 **Q. Are you associated with any firm?**

6 A. Yes. I am associated with the firm of Gannett Fleming Valuation and Rate Consultants, LLC
7 (Gannett Fleming).

8
9 **Q. Are you the same John J. Spanos that previously filed direct testimony in this
10 proceeding?**

11 A. Yes, I am.

12
13 **Q. What is the purpose of your rebuttal testimony in this proceeding?**

14 A. I am responding to the direct testimonies filed by Public Utility Division (“PUD”) witness,
15 David Garrett; Oklahoma Industrial Energy Consumers (“OIEC”) witness, Jacob Pous; and
16 Federal Executive Agencies witness, Brian Andrews on deprecation related issues.
17 Specifically, the issues relate to terminal net salvage, life spans of generating facilities, life
18 characteristics of various accounts and the net salvage percentages. Each party challenges
19 the terminal net salvage component with Messrs. Pous and Andrews recommending 0
20 percent and Mr. Garrett recommending a discounted amount. PUD and OIEC have
21 recommended longer life spans for wind production, but only FEA recommends alternative
22 life spans for generating facilities as all others are in agreement. PUD, OIEC and FEA have
23 recommended different service life estimates for mass property accounts. Only OIEC
24 challenges a few mass property net salvage percentages.

1 Q. Please summarize your testimony.

2 A. The first part of my testimony presents a general discussion of the depreciation study process.
3 I will discuss the objective of depreciation in allocating the full costs of the Company's
4 assets (original cost less net salvage) over their service lives. I then will discuss the process
5 and judgments involved in estimating service lives and net salvage. As I will explain in
6 detail, the depreciation study and the evidence supporting it are consistent with depreciation
7 studies conducted across the country and the study is consistent with accepted practices in the
8 industry.

9 In contrast, the other parties' proposals are in many cases not consistent with accepted
10 depreciation practices. For example, rather than incorporating the proper informed
11 judgment, the mass property service lives recommended by PUD Witness Garrett are only
12 based on mathematical curve matching. Another example is that despite the fact that OIEC
13 Witness Pous has recommended terminal net salvage estimates for production plant facilities
14 in many other cases, he has in this case recommended an estimate of no terminal net salvage
15 in this case. The benefit of site visits and discussions with Company personnel are vital in
16 conducting a depreciation study.

17 After the general section, I will address in more detail the specific adjustments and
18 criticisms to the depreciation study that each witness proposes. These include:

19 • Terminal net salvage for production plant accounts. In order to recover the full cost
20 (original cost less net salvage) of the Company's assets, the net salvage estimates for
21 production plant accounts should include a component for terminal net salvage, or the
22 decommissioning of the facilities. While all parties agree that it would be preferable to
23 have a site specific decommissioning study, such a study is not available at this time.
24 However, this should not mean that nothing is estimated for terminal net salvage, as
25 OIEC and FEA have proposed. I have recommended estimates that are consistent with
26 others used in the industry, and as I will explain, are also consistent with estimates from
27 other cases in which OIEC's witness has been involved. Given that there will be costs
28 incurred upon the retirement of the Company's facilities, terminal net salvage costs
29 should be included in depreciation, and the depreciation study incorporates reasonable
30 estimates of these costs.

- 1 • Wind production plant life spans. The life spans for wind production plant recommended
2 in my depreciation study are 25 years, which is the same estimate currently used for wind
3 for OG&E. This estimate is consistent with those of others in the industry. PUD and
4 OIEC have recommended longer 30 year life spans. However, as I will explain, their
5 estimates are based on how long the plants could last, and do not properly incorporate
6 other factors that could result in the retirement of wind facilities at an earlier age.
- 7 • Mass property life analysis. PUD, FEA and OIEC have recommended different service
8 life estimates for certain mass property accounts. The process of estimating service lives
9 for mass property (e.g. transmission and distribution plant accounts) incorporates
10 statistical life analysis but must also incorporate proper judgment. Authoritative
11 depreciation sources are clear that judgment must be employed so that the resulting
12 service lives are reflective of the property being studied.

13 PUD and FEA have estimated the changes to the largest number of accounts.
14 PUD's estimates are inappropriately based solely on mathematical curve matching. FEA
15 also appears to incorporate nothing more than mathematical curve matching into their
16 recommendations. As a result, both parties' estimates are unreasonable and unrealistic
17 for the property studied. For example, Mr. Garrett has estimated that a portion of the
18 Company's overhead transmission poles account will remain in service for more than **150**
19 **years.** Given that Mr. Garrett's process has resulted in what amounts to very
20 unreasonable estimates, his recommendations should not be adopted by the Commission.

21 OIEC has only recommended adjustments to the service life estimates I have
22 made for four accounts. As I will explain, OIEC's estimates are not as reasonable
23 forecasts of future service life characteristics as my estimates.

- 24 • Mass property and interim net salvage. PUD and FEA have not recommended any
25 changes to the Company's net salvage estimates for either mass property or interim net
26 salvage for production plant accounts. OIEC has recommended adjustments to the net
27 salvage estimates for four transmission plant accounts, one general plant account, and for
28 the interim net salvage estimates for steam production plant accounts. As I will explain,
29 in making his estimates Mr. Pous chooses to ignore the Company's actual experience and
30 propose estimates that deviate significantly from the historical data. Strangely, Mr. Pous

1 is also critical of my study for doing the type of analyses he had argued was necessary in
2 the Company's previous study. Mr. Pous' recommendations are for net salvage estimates
3 that are far below the Company's actual experience and as a result his analysis produces
4 estimates that are far less negative than appropriate.

- 5 • Holding Company depreciation and amortization of software for electric plant. Mr. Pous
6 recommends changes to holding company depreciation. Not only has there not been a
7 study performed for these assets, which would be necessary to change depreciation rates,
8 but Mr. Pous' recommendations are not based on the actual specifics of holding company
9 assets. Instead, he has simply made speculative changes to service lives. Similarly, his
10 recommendation for electric plant software is not consistent with the facts.

11 **II. THE DEPRECIATION STUDY PROCESS**

12 **Q. What is the issue in this section of your testimony?**

13 A. Based on the testimonies and recommendations of other parties, it is important to explain
14 both the objective of depreciation and the process for a depreciation study in more detail. In
15 particular, it is important to explain that depreciation is intended to recover the costs of a
16 company's assets over the actual period of time they will be in service. It is also necessary to
17 explain the process for estimating or forecasting service lives and net salvage.
18

19 **Q. Why do you believe it is important to explain these concepts?**

20 A. There are two main reasons. The first reason is that Mr. Garrett's (PUD) and Mr. Andrews'
21 estimates of service lives are based too much on mechanical curve matching and does not
22 incorporate proper judgment. As a result their approaches produce results for many accounts
23 that are unreasonable. Second, Mr. Pous (OIEC) makes a number of allegations regarding
24 the support and justification for the estimates provided in the depreciation study. I want to
25 make clear that not only is he incorrect in his claim that the study is not adequately
26 supported, but because judgment is required in making service life and net salvage estimates
27 my study is superior to Mr. Pous' due to the fact that I have actually observed the Company's
28 assets and met with Company experts on their assets.
29

1 **Q. What is depreciation?**

2 A. Depreciation is defined in the FERC Uniform System of Accounts:

3 12. Depreciation, as applied to depreciable electric plant, means the loss in service
4 value not restored by current maintenance, incurred in connection with the
5 consumption or prospective retirement of electric plant in the course of service from
6 causes which are known to be in current operation and against which the utility is not
7 protected by insurance. Among the causes to be given consideration are wear and
8 tear, decay, action of the elements, inadequacy, obsolescence, changes in the art,
9 changes in demand and requirements of public authorities.

10

11 **Q. What is the objective of depreciation?**

12 A. The objective of depreciation is to allocate, in a systematic and rational manner, the full cost
13 of an asset (original cost less net salvage) over its service life. The USofA requires this in
14 General Instruction 22-A:

15 Method. Utilities must use a method of depreciation that allocates in a systematic and
16 rational manner the service value¹ of depreciable property over the service life of the
17 property.

18 Thus, the USofA confirms that depreciation represents the allocation of the full costs of a
19 company's assets (original cost less any net salvage) over their service lives – that is, over the
20 period of time the assets are providing service. Costs are allocated over the service lives of
21 the assets so that customers pay for the costs of the assets that provide them service. Current
22 customers should not pay for the costs of assets that have already been retired. Similarly
23 future customers should not have to pay for the costs of assets that are no longer in service
24 because current customers pay too little for their service.

25

26 **Q. Can you explain the process for estimating service lives and net salvage?**

27 A. A depreciation study requires the estimation of events that will happen many years in the
28 future. For example, the average service lives for the Company's assets such as transmission
29 poles and transmission conductors are fifty years or more. Many individual assets will live

¹ The USofA defines service value as the original cost less net salvage

1 longer than the average. Thus, the depreciation study must predict what will occur over the
2 next fifty years or more. There are tools available to aid in forecasting service lives and net
3 salvage, such as the statistical analyses of historical data. However, the Commission should
4 not lose sight of the fact that depreciation is necessarily a forward looking process in which
5 uncertain events are being forecast many years into the future.

6 Because depreciation is a process of forecasting the future, it is impossible to predict
7 what will occur with 100% precision. The statistical tools available by definition consist of
8 imperfect information, because the Company's assets have only lived for a fraction of their
9 lives. Therefore estimation requires extrapolation and judgment, which must incorporate the
10 knowledge and experience of the depreciation professional performing the study. For
11 example, the curve fitting process for life analysis may result in a wide range of average
12 service live estimates that could be supported by the data alone. The judgment of the
13 depreciation professional making the estimate is therefore required to differentiate between
14 these possible estimates.

15
16 **Q. Do any authoritative sources recognize the necessity of judgment in a depreciation**
17 **study?**

18 A. Yes. The National Association of Regulatory Utility Commissioners ("NARUC") 1996
19 publication *Public Utility Depreciation Practices* (referred to as the "NARUC Manual") is a
20 well-regarded, authoritative depreciation text. The NARUC Manual has an entire section
21 dedicated to "informed judgment." NARUC defines "informed judgment" as:

22 [A] term used to define the subjective portion of the depreciation study
23 process. It is based on a combination of general experience, knowledge of
24 the properties and a physical inspection, information gathered throughout the
25 industry, and other factors which assist the analyst in making a
26 knowledgeable estimate.²

27 NARUC also notes that "the use of informed judgment can be a major factor in
28 forecasting"³ and explains that "[t]he analyst's judgment, comprised of a combination of

² *Public Utility Depreciation Practices*, National Association of Regulatory Utility Commissioners, 1996, p. 128

³ *Ibid.*

1 experience and knowledge, will determine the most reasonable estimate.”⁴

2
3 **Q. In addition to the statistical life and net salvage analyses, have you utilized informed**
4 **judgment related to OG&E’s Depreciation Study?**

5 A. Yes. As is the typical practice for depreciation studies performed by my firm, I have
6 conducted field reviews and met with operations and engineering management for OG&E.
7 These reviews and meetings provide valuable insight into the operations of the Company’s
8 assets and the plans and outlook for the assets as only Company management would
9 understand. Information obtained from these field reviews and meetings is invaluable.

10 Further, over the course of my career I have performed hundreds of depreciation
11 studies, and have conducted similar field reviews and management meetings. These have
12 provided a wealth of knowledge and experience as it pertains to the operations and life and
13 net salvage characteristics for utility property. All of this knowledge informs my judgment
14 and contributes to reasonable estimates of service lives and net salvage.

15
16 **Q. Can you provide an example of why judgment must be used when estimating service**
17 **lives?**

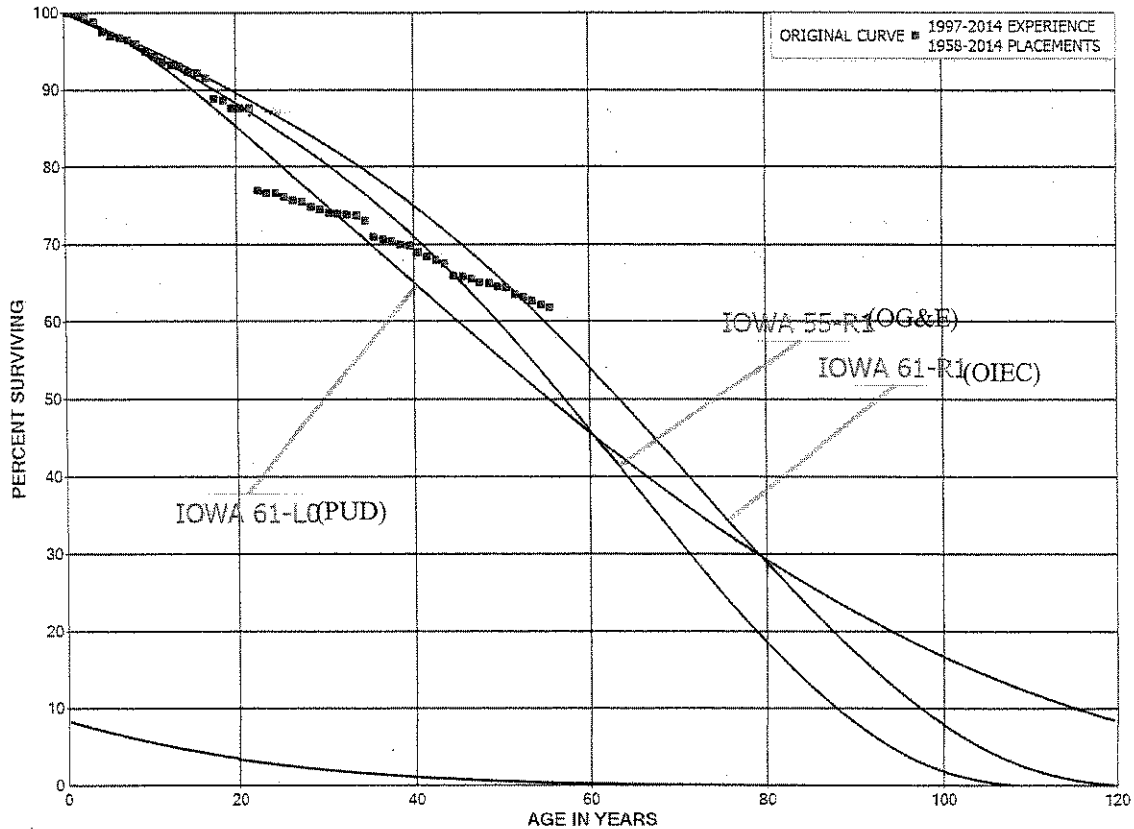
18 A. Yes. I will use Account 355, Poles and Fixtures as an example. Figure 1 below provides a
19 graph of the Company’s historical data (black squares on the graph), as well as the estimates
20 for OG&E, OIEC and PUD⁵. It should be noted that OIEC witness Pous states that he
21 proposes a 61-R1 curve for this account. However, throughout his testimony he actually
22 appears to use a 65-S-.5. Because Mr. Pous’ testimony is unclear on this account, the 65 year
23 average service life was considered an error so was not included in the graph. The statistical
24 life analysis for the study consists of fitting or matching smooth Iowa survivor curves to the
25 Company’s historical data. For OG&E, there are 18 years of data and the historical data for
26 this account is not definitive in terms of estimating a service life. The OG&E, OIEC and
27 PUD curves shown on the graph all fit different portions of the historical data. Each could

⁴ Ibid., p. 129

⁵ FEA has also made a recommendation for this account. In order to keep the chart in Figure 1 from being too complicated, I have only shown my estimate and those of PUD and OIEC. However, the discussion here applies to FEA’s approach as well.

1 represent a possible candidate for the service life estimate. Because each matches different
2 portions of the curve, judgment is required to select the most appropriate estimate from
3 possible candidate curves.

Figure 1



4 **Q. What observations do you have for this account that inform your judgment in**
5 **selecting the most appropriate survivor curve estimate?**

6 A. The first item to note on the graph is that the historical data does not provide a full indication
7 of the service life characteristics for this account, since the black squares do not extend to
8 zero percent surviving (instead the squares only go to a little more than 65% surviving). This
9 is a common occurrence when conducting a depreciation study, as data for the full life cycle
10 of an account is normally not available. Therefore, it is necessary to extrapolate the
11 remaining portion of the curve. For this account, the original data only goes as far as about
12 60-65% surviving, and so more than 60% of the retirement experience for this account needs
13 to be extrapolated. That is, there is no meaningful experience for most of the life cycle of the

1 account.

2 The second item to note is that for the portion of the graph for which there is data –
3 that is, up until about age 57 – OG&E’s, OIEC’s and PUD’s could be considered matches of
4 some portion of the historical data, although none match particularly well. However, the
5 biggest differences between the three curves are due to the extrapolation of the curve, and not
6 to the historical data or the degree to which the curves fit the actual historical data. That is,
7 the portion beyond the available historical data is where the three curves are most different.

8
9 **Q. Given that there is incomplete data and all three curves are similar fits of the data, how**
10 **does one differentiate between the curves?**

11 A. This is where judgment comes in to play. For example, PUD’s 61-L0 estimate forecasts very
12 long lives for a large portion of the assets in this account. For example, PUD forecasts that
13 about over 15% percent of the assets in this account will last more than 100 years and that
14 almost 10% will last more than 120 years. In my judgment this is an unreasonable
15 expectation, as the Company cannot provide reliable electric service with so many very old
16 overhead transmission wires.

17 Mr. Pous’ estimate and mine are more similar, but in my judgment the 55-R1 is a
18 better representation of the mortality characteristics for this account. I will explain these
19 considerations in more detail later in my testimony where I discuss specific accounts in
20 detail.

21
22 **Q. Mr. Pous opines that the depreciation study “lacks adequate explanation, and most**
23 **certainly is not justified and supported.” Can you address the issues Mr. Pous raises?**

24 A. Yes. Mr. Pous’ assertion is incorrect. The combined evidence in the depreciation study; the
25 decommissioning study; my direct testimony and the testimony of other witnesses; and the
26 responses to numerous data requests provides adequate support for the results of the
27 depreciation study. The study and its support are consistent with depreciation practices used
28 for utilities and accepted by commissions across the country, including this Commission.

1 **Q. Are Mr. Pous' criticisms valid?**

2 A. No. For example, Mr. Pous states that "Mr. Spanos' depreciation testimony, depreciation
3 study, depreciation exhibits, and depreciation workpapers fail to fully discuss, present,
4 support, or justify the Company's request at anything other than a very high-generalized
5 level."⁶ The Commission should be cautious in reading too much into statements such as
6 this from Mr. Pous. Not only has sufficient support been provided in the depreciation study
7 and associated workpapers, but through numerous discovery responses I have explained in
8 detail the reasoning for the estimates I have made in the study. Mr. Pous' statement is
9 worded so as to ignore this information.

10

11 **Q. Have you previously performed depreciation studies that have been accepted in
12 Oklahoma?**

13 A. Yes. I have performed a number of studies for OG&E. These studies were conducted in a
14 similar manner and the support for those studies was not significantly different from what
15 has been provided in OG&E's current Cause. The Commission has accepted the studies I
16 have performed for OG&E. For example, in Cause No. 200500151 the Commission stated
17 that "[t]he Commission adopts Staff's proposal to accept OG&E's depreciation study
18 results..."

19

20 **Q. Has Mr. Pous made similar criticisms of previous depreciation studies in Oklahoma?**

21 A. Yes. For a recent fully litigated rate case for Public Service Company of Oklahoma⁷
22 ("PSO"), regarding the net salvage analysis Mr. Pous made a very similar recommendation to
23 what he has proposed in this case:

24 I recommend that the Commission order PSO to perform and present a "cause
25 of retirement" analysis as part of its support for its proposals in the next case.

26 The analyses should include, at a minimum, what level of the historical
27 retirement data was associated with the emergency situations and the net
28 salvage differences that occurred due to such situation. The study should also
29 address the relationships between the type of investment reflected in

⁶ Direct Testimony of Jacob Pous, p. 9, lines 12-15

1 historical data compared to the remaining plant in service so as to establish
2 whether a realistic and appropriate connection exists. The Company must
3 also be ordered to justify its allocation of costs between cost of removal and
4 the cost of a replacement installation when replacement activity occurs.
5 These types of presentations are required in order for the Commission to have
6 a better record upon which to render its decisions.⁸
7

8 **Q. Did the Commission accept Mr. Pous' recommendation regarding the "cause of**
9 **retirement" analysis?**

10 A. No. The Commission instead stated:

11 The Commission makes no requirement regarding the reporting methodology
12 concerning depreciation that was recommended by the AG [Mr. Pous] for the
13 next rate case.⁹
14

15 **Q. Does Mr. Pous provide any justification as to why he believes the Commission's ruling**
16 **in PUD 2008000144 was incorrect?**

17 A. No. Mr. Pous instead repeats the same claims.
18

19 **Q. Do any authoritative depreciation texts comment on the type of analysis Mr. Pous**
20 **suggests is necessary for net salvage?**

21 A. Yes. The NARUC Manual explains that "most analysts are of the opinion that reasonable
22 salvage and cost of removal estimates and forecasts can be made by trending experience and
23 applying informed judgment," and that "in any case it would not be economically justifiable
24 for any utility, regardless of size, to produce in-depth forecasts for all categories of plant."¹⁰
25 That is, the NARUC Manual supports the methods I have employed in the depreciation
26 study.

⁷ Cause No. 200800144, Direct Testimony Jacob Pous, pp. 3 and 4.

⁸ Cause No. 200800144, Direct Testimony of Jacob Pous, p. 3, line 44 to p. 4 line 11.

⁹ Cause No. 200800144, Final Order, p. 26 of 45.

¹⁰ *Public Utility Depreciation Practices*, NARUC, 1996, pp. 159-160

1 **Q. Mr. Pous claims that “things have changed since” the NARUC manual was published¹¹.**
2 **Is his argument convincing?**

3 A. No. To the contrary, Mr. Pous’ statements demonstrate very little other than that he fails to
4 understand the effort involved in the type of analysis he claims to be necessary. While
5 utilities do have large fixed asset and enterprise software systems, review of transactions to
6 the level of detail Mr. Pous suggests should be required is still a very manual process.
7 Utilities such as OG&E process thousands of work orders each year, and thus analyzing the
8 type of data Mr. Pous prefers would necessarily involve the individual review of thousands
9 of work orders. Indeed, this type of analysis may be more challenging today than it was
10 when the NARUC Manual was published because many companies process more work
11 orders today than they did twenty years ago. Thus, a “cause of retirement” analysis is still a
12 very costly and time-consuming undertaking.

13 Just as important, this type of analysis would likely produce little benefit in terms of
14 changes to net salvage estimates. As NARUC noted, most depreciation professionals are of
15 the opinion that the historical data, as well as the judgment and experience of the person
16 performing the study, will result in reasonable estimates.

17 The second argument Mr. Pous makes is that the revenue requirement impact of net
18 salvage is larger than during the 1990s. While the overall size of utilities’ plant in service,
19 and therefore the overall amount of future net salvage, has grown since the 1990s, there was
20 still a significant revenue requirement impact of net salvage at the time. NARUC’s opinion
21 should not be discarded simply because utilities are larger now than they were in the 1990s.

22
23 **Q. Please summarize the depreciation study process.**

24 A. The depreciation study I have performed has been conducted in accordance with industry
25 standards and incorporates the proper judgment in making service life and net salvage
26 estimates. Unlike the other parties in this cases, I have observed OG&E’s property and have
27 discussed service life and net salvage expectations with OG&E management. The study has
28 been supported in the filing and in numerous discovery responses. I will address the issues
29 each party raises in this testimony.

¹¹ Direct Testimony of Jacob Pous, p. 81, lines 1-3.

1 **III. PRODUCTION PLANT NET SALVAGE**

2 **Q. What will you discuss in this section of your testimony?**

3 A. In this section I will discuss the component of net salvage for production plant related to the
4 decommissioning of the Company's power plants, also referred to as terminal or final net
5 salvage. In a later section I will discuss the component of net salvage related to interim
6 retirements.

7
8 **Q. What is terminal net salvage?**

9 A. Certain types of depreciable property are referred to as "life span" property, which means that
10 a large percentage of the property at a facility is expected to be retired concurrently. Power
11 plants are textbook examples of life span property. While many of the components of a plant
12 will be replaced throughout the plant's life, upon the retirement of the entire plant all
13 remaining assets will be retired concurrently. The retirements at the end of the life of the
14 plant are referred to as "terminal" or "final" retirements, while the retirements that occur
15 before this final retirement are referred to as "interim" retirements. Similarly, net salvage
16 that occurs at the end of the life of the plant is "terminal" or "final" net salvage and salvage
17 that occurs with interim retirements is "interim" net salvage. For power plants, terminal net
18 salvage is normally related to decommissioning costs.

19
20 **Q. Do both types of net salvage need to be recovered over the life of a power plant?**

21 A. Yes, they do. Consistent with the FERC Uniform System of Accounts and authoritative
22 depreciation texts, the service value of a power plant (or any asset) must be recovered
23 equitably over its service life. The service value is the original cost less net salvage, and
24 therefore contains both interim and final net salvage. No party appears to disagree with the
25 concept that net salvage should be recovered through depreciation rates, but both Mr. Pous
26 and Mr. Andrews have recommended zero terminal net salvage for production facilities.
27 Regardless of any disagreements about the actual amounts that should be estimated for
28 terminal net salvage, it is certain that an estimate of zero is incorrect. Indeed, Mr. Pous has
29 recommended much higher estimates of terminal net salvage for PSO in a recent case.
30 Further, there should be no argument that the Company will incur costs upon the retirement

1 of its power plants. For example, as a result of the EPA's solid waste management and
2 disposal rules or requirements for asbestos removal, companies across the country may have
3 to spend significant dollars once units are retired. These costs should be recovered over the
4 life of the power plants.

5 Mr. Garrett's recommendation of half the proposed costs is more reasonable at least
6 in the sense that he recognizes that there will be costs upon the retirement of these facilities.
7 However, as I will discuss, his estimates are too conservative and will not recover the
8 terminal net salvage costs over the lives of the Company's plants.

9
10 **Q. What is the basis for your estimates of terminal net salvage?**

11 A. Because the Company has not yet performed a site specific decommissioning study, I based
12 the terminal net salvage estimates on typical estimates for each type of facility used by others
13 in the industry. For each type of production plant the estimates are made on a dollar per
14 kilowatt basis. By using a value per kilowatt, larger plants will have a larger
15 decommissioning cost estimate and smaller plants will have a smaller decommissioning cost
16 estimate.

17
18 **Q. What are the estimates per kilowatt for each type of plant?**

19 A. For steam production plants, the estimate is that decommissioning will cost \$40 per kW. For
20 other production plant, excluding wind, the estimate is \$10 per kW. For wind production
21 plant the estimate is \$5 per kW.

22
23 **Q. Mr. Pous, Mr. Garrett and Mr. Andrews each recommends that the Company should
24 perform a site specific decommissioning study for its next rate case. Do you agree that
25 a site specific decommissioning study would be appropriate?**

26 A. Yes. This is an area of agreement between all parties. A site specific decommissioning
27 study typically provides the best estimate of terminal net salvage costs for a power plant, so I
28 would also prefer to incorporate the results of such studies into depreciation.

29 However, just because OG&E has not yet been able to perform site specific studies
30 does not mean that the estimates for terminal net salvage should be zero, as Mr. Pous and Mr.

1 Andrews have proposed. As I will explain in more detail, terminal net salvage costs should
2 be expected for the Company's power plants. Failing to include any costs for terminal not
3 salvage will not only result in current customers paying too little for these costs, but will
4 result in an even sharper increase in rates once a decommissioning study is performed.

5
6 **Q. Have any other utilities in Oklahoma submitted dismantlement studies to support
7 terminal net salvage costs?**

8 A. Yes. PSO has submitted dismantlement studies in its recent depreciations studies.
9

10 **Q. How do PSO's estimates compare to those used by OG&E?**

11 A. PSO's estimates for dismantlement filed in their depreciation study in Cause No. PUD
12 201500208 are not directly comparable to those of OG&E. This is because PSO did not
13 include Asset Retirement Obligations (AROs) in the depreciation study, and instead recovers
14 the AROs through a different mechanism. Thus, the proper comparison between PSO and
15 OG&E would be to compare PSO's total terminal net salvage costs - dismantlement
16 estimates plus their ARO amounts - to the estimates for OG&E.
17

18 **Q. Are OG&Es total terminal net salvage estimates in the same range as those established
19 for PSO?**

20 A. Yes. However, as stated above, there are some differences between how the terminal net
21 salvage is determined between PSO and OG&E. For steam facilities, the OG&E estimate is
22 \$40/KW while the range for PSO which had decommissioning studies performed is \$18/KW
23 to \$60/KW before escalation. Once again it should be noted that the decommissioning
24 studies for PSO did not include any ARO costs.
25

26 **Q. What is an ARO?**

27 A. An ARO represents the costs associated with the retirement of long-lived assets for which a
28 Company has a legal obligation to incur the costs. Both PSO and OG&E have legal
29 obligations associated with the retirement of portions of many of their power plants.
30 Currently, OG&E's primary AROs relate to wind assets, but there are some amounts at

1 Muskogee for remediation of coal ash ponds and some asbestos at various sites. While PSO
2 has included the recovery of these costs in rates through a separate mechanism, typically
3 AROs for power plants represent a portion of the total terminal net salvage costs included in
4 depreciation rates.

5
6 **Q. Does OG&E have asset retirement obligations for its power plants?**

7 A. Yes. OG&E does have asset retirement obligations for its power plants. These have been
8 provided as of June 30, 2015 in the response to OIEC 15-19, and demonstrate that at a
9 minimum there will be some level of terminal net salvage costs. Additionally, AROs have
10 been established since June 30, 2015 for the Muskogee coal ash ponds.

11
12 **Q. You indicated that PSO included terminal net salvage in its most recent cause. Were
13 any witnesses in OG&E's current case involved in that case?**

14 A. Yes. Both Mr. Pous and Mr. Garrett were witnesses in Cause No. PUD 201500208.

15
16 **Q. Did either witness include terminal net salvage in their depreciation proposals in that
17 case?**

18 A. Yes. While both made some adjustments to the terminal net salvage estimates in PSO's
19 depreciation study, both witnesses included terminal net salvage in their recommended
20 depreciation rates. Further, because neither party challenged PSO's AROs, both effectively
21 included these additional terminal net salvage costs as well.

22
23 **Q. Given that both witnesses have recognized decommissioning costs for other Oklahoma
24 power plants, is Mr. Pous recommendation of no terminal net salvage appropriate?**

25 A. No. Given that Mr. Pous has recognized that there will be costs to retire generating facilities,
26 his estimate of \$0 terminal net salvage is not appropriate.

1 **Q. You indicated above that the estimates used in the study were for \$40 per kW for steam**
2 **production, \$10 per kW for other production plant, excluding wind, and \$5 per kW for**
3 **wind production. Have either Mr. Garrett or Mr. Pous been involved in cases where**
4 **similar estimates have been used?**

5 A. Yes. In addition to the PSO case discussed above, Mr. Pous has been involved in a number
6 of cases in which terminal net salvage costs were much higher than the zero percent he
7 proposes. One example is for Rocky Mountain Power Company in Utah (Utah Docket No.
8 13-035-02). In that case the Company proposed \$40 per kW for steam, \$20 for other
9 production (excluding wind) and \$9 per kW for wind. The estimates that are currently used
10 by Rocky Mountain Power (they were approved through a stipulation) are similar.¹² The
11 support in that case was similar to what has been provided in the current OG&E case.

12

13 **Q. Given the similarities between the two cases, did Mr. Pous also recommend \$0 for**
14 **terminal net salvage in the Rocky Mountain Power case?**

15 A. No. While he did recommend adjustments to Rocky Mountain Power's estimates, Mr. Pous'
16 proposals in the Rocky Mountain Power case were much higher than \$0. In the Rocky
17 Mountain Power Case Mr. Pous recommended \$30 per kW for steam, \$8 per kW for other
18 production excluding wind and \$5 per kW for wind production. Thus, Mr. Pous' estimates
19 in the Rocky Mountain Power case were much closer to my estimates in OG&E's case than
20 his \$0 estimate. This should provide further evidence that the \$0 terminal net salvage
21 estimate is unreasonable.

22

23 **Q. Can you provide an example of any other cases that Mr. Pous was involved in that**
24 **would support your estimates?**

25 A. Yes. One example is a case for Nevada Power Company. Nevada owns both coal fired
26 generation and gas other production (primarily combined cycle plants). Thus, many of its
27 plants are comparable.

¹² Steam facilities are \$40/kW, other production are \$15/kW and wind is \$9/kW.

1 **Q. What are the approved decommissioning estimates for Nevada Power?**
 2 A. I have presented the approved decommissioning estimates in a \$/kW basis for each of
 3 Nevada Power's plants in Table 1 below. These estimates were based on site specific
 4 decommissioning studies and are the approved estimates from a fully litigated proceeding.
 5 The estimates shown in Table 1 for coal plants range from \$41.4/kW to \$91.7/kW, and are
 6 all higher than the Company's estimate in this proceeding. They are obviously much higher
 7 than Mr. Pous' estimate of \$0. The Sunrise plant, which is not a coal unit, has an estimate of
 8 \$33.7 / kW, which is also higher than Mr. Pous' estimate of \$0. For the combined cycle
 9 plants, the estimates range from \$8.6 / kW to \$20.5 /kW (and to \$69.3 \$/kW if the older
 10 Clark plant is included). Thus, the Nevada Power estimates provide support that the
 11 estimates I have made for OG&E are consistent with those from more detailed
 12 decommissioning studies as approved by a commission.

Table 1: Approved Decommissioning Estimates for Nevada Power Company

<u>Plant</u>	<u>Cost/kW</u>
Steam Production Plants	
Clark	69.3
Reid Gardner 1-3	90.4
Reid Gardner 4	91.7
Sunrise 1	33.7
Navajo	41.4
Combined Cycle Plants	
Clark 5-8	69.3
Harry Allen 5, 6, 7	18.3
Higgins	20.5
Lenzie	11.9
Silverhawk	8.6
Other Plants	
Clark 4	5.1
Clark 11 to 22	6.9
Goodsprings	107.3
Harry Allen 3, 4	14.2
Sunrise 2	33.7

1 **Q. Mr. Pous also presents an argument that there is the possibility of the sale of**
2 **generating facilities. Is this a reasonable possibility?**

3 A. No, it is not. Mr. Pous' presentation in this regard is very misleading. He states that "[s]ince
4 the late 1990s, over 1,000 generating units that were previously owned by regulated electric
5 utilities were sold for substantial positive levels of net salvage even though many utilities had
6 recovered funds from customers in anticipation for dismantlement costs relating to such
7 facilities."¹³ None of these are applicable to OG&E. As Mr. Pous acknowledges¹⁴, almost
8 all of these sales were related to implementation of deregulation in many states. In these
9 instances utilities were required to sell their generating facilities. Therefore, the situation
10 was quite different from OG&E – sales of utilities well before the end of their useful life is
11 obviously quite different from the retirement of a facility at the end of its life.

12 Mr. Pous does cite two plants that were sold for reasons other than deregulation.
13 Based on his testimony, these appear to be the only two facilities he is aware of in which a
14 sale has occurred. Again, the circumstances of these facilities are not at all applicable to
15 OG&E's current fleet of power plants. The Centralia units were sold at ages 29 and 30.
16 Therefore the plant was sold prior to the end of its useful life. Similarly, the RS Nelson units
17 appear to have been part of a cogeneration facility and were sold to the Nelson Industrial
18 Steam Company in 1988 before the end of the facility's useful life (at age 30). Thus, the RS
19 Nelson units appear to be a sale from one owner to the other which is not the same as sales to
20 outside parties, and certainly not the same as selling a facility once it has been retired at the
21 end of its useful life.

22
23 **Q. Given the circumstances of the sale of any of these facilities, are they applicable to**
24 **OG&E's generating fleet?**

25 A. Absolutely not. Not only are OG&E's plants expected to be retired at the end of their useful
26 lives (when they will have no value for sale), but the conditions that existed when these
27 facilities were sold were quite different than today. Deregulation was obviously a unique
28 occurrence, but there are also much more strict environmental regulations than was the case
29 in when the Centralia and RS Nelson units were sold. Mr. Pous' representation that any of

¹³ Direct Testimony of Jacob Pous, p. 22, lines 26-29

1 these sales are applicable to OG&E is irresponsible and misleading.

2
3 **Q. Mr. Pous also presents a summary of information from a deposition from a previous**
4 **case for Entergy Texas. Can you address this information?**

5 A. Yes. Mr. Pous cites a deposition related to a study of decommissioning costs that was used
6 in a case for Entergy Texas. I should first be clear that the study discussed by Mr. Pous was
7 not the basis of my estimates in this case. Additionally, Mr. Pous' implication appears to be
8 that because I did not personally meet the individual that performed the study and that I did
9 not actually use the data behind the study its results would somehow be invalid. He is
10 incorrect, as just because I did not personally do the study does not mean that its results were
11 inaccurate.

12 Indeed, I would expect that a study performed over 20 years ago would produce
13 decommissioning costs that are likely to be lower than what utilities should actually expect to
14 incur. Not only have prices generally increased over twenty years, but that particular study
15 (and the decommissioning studies used for that study) was performed prior to current
16 environmental rules or retirement obligations.

17
18 **Q. Mr. Pous also implies that this example demonstrates that you “do not have”**
19 **decommissioning studies or that you have used “inconsistent practices.”¹⁵ Is Mr. Pous’**
20 **claim accurate?**

21 A. No. First, as noted above, Mr. Pous appears to base this argument on an older study that was
22 not used in OG&E's study. Second, his implication that I do not have information on
23 decommissioning studies of other utilities is incorrect. As noted above, Mr. Pous is well
24 aware of at least two of such studies (PSO and Nevada Power) as he was a witness in both
25 cases. Further, the Nevada Power case was fully litigated and the decommissioning costs
26 established by the Nevada Public Utilities Commission support the estimates I have used in
27 this case.

28 Finally, as I have demonstrated it is Mr. Pous that uses inconsistent practices.
29 Despite that he has regularly estimated terminal net salvage costs in other cases (for example,

¹⁴ Direct Testimony of Jacob Pous, p. 22, line 29 to p. 23, line 23.

1 PSO and Nevada Power), he has recommended \$0 for terminal net salvage in this
2 proceeding. Mr. Pous surely knows that \$0 is inappropriate, but instead of attempting to
3 make a reasonable estimate he has ignored the concept of terminal net salvage completely.
4 Not only is his approach incorrect, but it is inconsistent with what he has done elsewhere.
5

6 **Q. What do you conclude regarding terminal net salvage?**

7 A. All parties agree that the preferred approach is for OG&E to perform a site specific
8 decommissioning study. This study can provide the basis for terminal net salvage in future
9 depreciation studies. However, while OG&E has not been able to prepare such a study at this
10 point in time, there is still the need to incorporate terminal net salvage in depreciation.
11 Decommissioning costs will occur, and therefore they must be incorporated into depreciation
12 expense today so that current customers pay their fair share and so that future customers do
13 not bear an undue burden.

14 Absent a site specific study, I have recommended estimates for each facility that are
15 consistent with those used by others in the industry. These estimates are in my judgment
16 reasonable to establish terminal net salvage costs for this proceeding, and can be revised in
17 future studies when a site specific decommissioning study is available. Mr. Pous and Mr.
18 Andrews estimates of \$0 terminal net salvage are without a doubt incorrect. The Company
19 should be expected to incur terminal net salvage costs, as Mr. Pous has acknowledged in
20 other proceedings.

21 Mr. Garrett's proposal is to incorporate half of the terminal net salvage costs
22 requested by OG&E. This is clearly more reasonable than the proposals of Mr. Pous and Mr.
23 Andrews. However, for reasons set forth above, Mr. Garrett's proposal does not allow for
24 enough terminal net salvage costs and will instead defer too much cost to future customers.
25 Thus, the estimates in the depreciation study represent the most reasonable estimates of
26 terminal net salvage.

¹⁵ Direct Testimony of Jacob Pous, p. 27, lines 17-20

1 **IV. WIND PRODUCTION PLANT LIFE SPANS**

2 **Q. What is the issue in this section of your testimony?**

3 A. In this section I will address the recommendation of Mr. Garrett and Mr. Pous to increase the
4 life span for wind facilities from 25 years to 30 years.

5
6 **Q. What is the current life span estimate for wind facilities?**

7 A. The current estimate is 25 years.

8
9 **Q. What basis do Mr. Garrett and Mr. Pous use to justify increasing the life for wind
10 plants?**

11 A. Because wind production, and in particular modern wind generators, are a relatively new
12 technology there is limited actual experience on which a life span can be based. Most
13 facilities are well under 25 years of age, and thus there is uncertainty as to how long wind
14 facilities will provide service – the actual life spans for most facilities will be unknown for
15 many years. Therefore Mr. Garrett and Mr. Pous' recommendations to increase the life spans
16 are not based on actual experience but based on their expectations.

17
18 **Q. Have either Mr. Garrett or Mr. Pous discussed the outlook for wind facilities with
19 OG&E management?**

20 A. No, or if they have, neither references any discussions with OG&E in their testimonies.
21 Given that neither has had any discussions with OG&E personnel, neither Mr. Garrett nor
22 Mr. Pous has incorporated the outlook of the actual operators of the facilities into their
23 estimates.

24
25 **Q. Is a thirty year life span common in the industry?**

26 A. No. While there are a few of utilities that have used a thirty year life span, shorter life spans
27 are far more common. Life spans of 20 to 25 years are most common.

1 **Q. What arguments do Mr. Garrett and Mr. Pous use to support increasing the life span**
2 **for wind?**

3 A. Both use arguments regarding how long wind could be in service from a physical standpoint
4 to support a longer service life. However, the life span established for depreciation is not a
5 reflection of how long an asset could physically last, but instead must incorporate all possible
6 causes of retirement to estimate the most probable life span. Additionally, Mr. Pous attempts
7 to support his position by including within a data response a study that shows wind facilities
8 will need to be reconditioned in order to last 30 years. However, the study does not address
9 the cost benefit of reconditioning turbines or gear boxes. This process will require larger
10 units which in turn will require rebuilding the tower and foundation.

11
12 **Q. Please explain what you mean by causes of retirement?**

13 A. The retirement of an asset such as a power plant does not necessarily occur at the point when
14 the plant can no longer physically operate. Instead, retirement typically occurs when it
15 becomes more economical to replace the plant with newer technology generation. This may
16 occur for a variety of reasons, such as environmental regulations, the cost of operation, new
17 technology or changing needs within the electric system.

18 Both Mr. Pous and Mr. Garrett¹⁶ have raised the analogy of a car and the life of a car.
19 To elaborate on this analogy, a car can theoretically operate for many years. However, in
20 order to do so the owner would typically be required to invest a significant amount of money
21 into repairs for both minor and major parts. Further, these costs tend to increase over time as
22 the parts of a car age. Thus, most car owners reach a point where it is economical to replace
23 their car – even though the car could theoretically operate for much longer if enough
24 investments were made in the car.

25 The same is true of power plants. Just as the life of the car should not be based on
26 how long it could theoretically last, the life span of a power plant should consider more than
27 just how long the plant physically could remain in service. Other factors must also be
28 considered.

¹⁶ Direct Testimony Jacob Pous, p. 33 and Direct Testimony of David Garrett p. 14.

1 **Q. What other factors should be considered?**

2 A. One major factor, especially for newer technologies, is the pace of technological
3 improvements. As wind plants age and become less efficient and more costly to operate (for
4 example, as items such as gearboxes fail and need to be replaced), it will become more
5 economical to repower the facility with newer, more efficient wind turbines.
6

7 **Q. Has there been any experience of this type of repowering?**

8 A. Yes. Many of the earliest generation of wind farms (constructed in the 1970s and 1980s)
9 were repowered with more modern technology. Further, although Mr. Pous and Mr. Garrett
10 imply that major components such as the turbines could be replaced while other assets
11 remained, this is generally not the case. The replacement of wind turbines at 25 years of age
12 (which both seem to acknowledge is reasonable¹⁷) will likely also result in the replacement of
13 assets such as foundations and towers. When a company makes a significant investment to
14 replace 25 year old turbines, it will likely be economical to replace them with modern, and
15 much more efficient, turbines with higher output. Newer, larger turbines will require larger
16 towers and stronger foundations. Thus, it is likely that the retirement of turbines after 25
17 years will result in the rebuilding and repowering of most of the assets at the site. Indeed,
18 this has occurred with older generations of wind farms. For example, the Cameron Ridge
19 wind project had a commercial operation date of 1984. The site was repowered in 1999 at 15
20 years of age with newer, more efficient generating units.
21

22 **Q. On page 32 of his testimony Mr. Pous cites a document that he claims represents a wind
23 turbine manufacturer “toting the advancement in technology and longer expected life.”**

24 **Can you address this claim?**

25 A. Yes. Mr. Pous provided the document he cites in discovery.¹⁸ This document does not
26 actually support that wind turbines have a longer life, but instead is marketing material for a
27 program being sold to extend the life of existing wind facilities. The “Life Extension
28 Program” cited in the document would require an investment by the utility, and as noted
29 above Mr. Pous has provided no evidence that it would be economical to invest in this

¹⁷ Direct Testimony of Jacob Pous, p. 34 and Direct Testimony of David Garrett, p. 20.

1 program. Instead, it may be more economical to repower the facility with newer more
2 efficient wind turbines than to spend money on a life extension program.

3 The document provided by Mr. Pous actually identifies that absent investments in a
4 life extension program, the operating costs for wind turbines are expected to increase
5 significantly after 20 years (see page 4 of the attachment to OIEC's response to OGE-2-5).
6 These operating characteristics support the 25 year life span currently used by the Company,
7 as absent major investments the costs to operate the facilities should be expected to increase
8 significantly after age 20.

9
10 **Q. Mr. Pous advances an argument that the industry has a "continuous practice of**
11 **underestimating initial life spans for generating facilities."**¹⁹ **Please address this**
12 **argument.**

13 A. While Mr. Pous notes that many generating facilities may have exceeded their initial life
14 spans, what he omits is that in recent years many plants have been (or are planned to be)
15 retired prior to their estimated life spans. For example, many coal fired power plants are
16 being retired earlier than was anticipated in depreciation rates. This issue creates stranded
17 costs and intergenerational inequity.

18 Additionally, factors that allowed fossil and nuclear generating facilities to exceed
19 their initial life spans may not apply to newer, renewable forms of generation. With the pace
20 of technology change, improvements in efficiency, output and availability factors for wind
21 production make it more likely that it will be economical to repower the facilities after 25
22 years.

23
24 **Q. What is your recommendation for wind production?**

25 A. My recommendation is to continue to use the current estimate of 25 years for wind
26 production. This is supported by all studies relating to wind generation by Energy industry
27 personnel as presented when the Centennial Wind Farm was constructed by OG&E. It would
28 not be appropriate at this time to increase the life span based on Mr. Garrett and Mr. Pous'
29 opinions that the plants might be able to last longer, in particular because neither have

¹⁸ OIEC and OER response to OGE-2-5.

1 discussed the outlook for these facilities with OG&E management.

2
3 **V. MASS PROPERTY SERVICE LIVES**

4 **Q. Can you summarize the proposals for mass property service lives?**

5 A. Yes. For mass property service lives, OG&E, PUD, OIEC and FEA have estimated survivor
6 curves for various plant accounts. Iowa survivor curves are used by each party to estimate or
7 forecast the average service life and retirement dispersion pattern. Each party has also
8 incorporated statistical analyses using the retirement rate method of analysis. However, Mr.
9 Garrett, Mr. Pous and Mr. Andrews have reached different conclusions for the service lives
10 of various electric transmission and distribution plant accounts. Because each party has
11 incorporated the same statistical analyses, the differences in estimates are due to different
12 judgments as to what the best estimates of future life expectations are for each accounts. As I
13 will explain, the judgments of Mr. Pous, Mr. Garrett and Mr. Andrews result in estimates
14 that are not as reasonable for the types of assets studied as those I have recommended in the
15 depreciation study.

16
17 **Q. What are the differences between the process of estimation you have used and those of**
18 **Mr. Garrett, Mr. Pous and Mr. Andrews?**

19 A. Each takes a different approach, although both Mr. Garrett and Mr. Andrews have used a
20 similar methodology. Both Mr. Garrett and Mr. Andrews have proposed changes to most of
21 the accounts studied, and their approach is to use very little judgment and instead rely on the
22 mechanical results of the statistical life analysis²⁰. As a result, neither has performed what
23 should be considered a full depreciation study. As I will explain, the approach to life
24 estimation involves much more than just mathematical results, and the absence of judgment
25 can produce very unreasonable and unrealistic results. Both Mr. Garrett and Mr. Andrews
26 have proposed service lives that are for many accounts well outside the range of reasonable
27 expectations for the property studied, and as a result each of their estimates should be

¹⁹ Direct Testimony of Jacob Pous, p. 32, lines 5-6.

²⁰ For example, on page 21 of his testimony Mr. Garrett states “[i]n my opinion, the curves I selected for the Company’s mass accounts provide a better mathematical and/or visual fit to the observed data.” On page 14 of his testimony Mr. Andrews states “[a]ll of my recommendations result in survivor curves that are mathematically and statistically fit OGE data better”. Neither discuss the use of judgment or any other factors in their estimates.

1 rejected.

2 Mr. Pous has proposed fewer adjustments, recommending changes to only four
3 accounts. While Mr. Pous devotes a number of pages of his testimony to general criticisms
4 of my approach to life estimation, his discussion for each account provides no legitimate
5 reason to differ from my estimates. While Mr. Pous does discuss a handful of other
6 considerations, most of his discussion and support in his testimony also relates primarily to
7 the mechanical matching of curves to the historical data.

8 Because Mr. Pous only disagrees with my recommendations for four accounts, I will
9 address each account individually. While Mr. Pous' recommendations are not as extreme as
10 those of Mr. Garrett or Mr. Andrews, and while Mr. Pous does incorporate some degree of
11 judgment, I will explain that Mr. Pous' estimates are not as reasonable as my estimates based
12 on both the historical data and other factors.

13
14 **Q. You have indicated that each witness emphasizes the statistical analysis to support their**
15 **estimates. Are there any reasons specific to the OG&E study as to why considerations**
16 **external to the statistical analysis would be more important?**

17 A. Yes. The historical data available for the statistical analysis only spans an eighteen year
18 period, from 1997 through 2014. Because many of the assets studied have lives of 40 to 50
19 years (or longer), an eighteen year span is a relatively short period of time when compared to
20 the overall life cycles of the assets. In order to put as much emphasis on the statistical results
21 as Mr. Garrett, Mr. Andrews and Mr. Pous have done, ideally one would want a longer
22 period of data. However, only eighteen years of data are available, and thus factors other
23 than the statistical analysis must be given more consideration.

24
25 **Q. Can you first address Mr. Garrett's and Mr. Andrews' recommendations?**

26 A. Yes. Mr. Garrett's proposals appear to be based on little more than simply selecting
27 mathematical best fitting curves from the statistical analysis. In discovery he was asked to
28 provide explanations of the judgment in estimating service lives. His response makes clear
29 that he did not incorporate informed judgment into his analysis, but instead relied on the
30 mechanical results of the statistical analysis. For example, for Account 355 Mr. Garrett

1 states:

2 Mr. Garrett primarily relied on the historical plant data provided by the
3 Company and the empirically-derived Iowa curves in conducting his
4 statistical analysis, rather than his personal beliefs as to the remaining life of
5 any account. As illustrated on p. 305 of his responsive testimony on
6 depreciation, the Iowa 61-L0 curve provides a reasonable fit to the
7 Company's historical data for this account.²¹

8 Similarly, Mr. Andrews only focus appears to be the degree of mathematical fitting of
9 various survivor curves. This is not an accepted approach to estimating service lives.
10 Instead, judgment must be used to ensure that the study produces reasonable and realistic
11 estimates of service life.

12
13 **Q. Do any authoritative depreciation texts support your assertion that a comprehensive
14 depreciation study should incorporate factors other than statistical analysis?**

15 A. Yes, all depreciation texts are clear that service life estimates are forecasts of future
16 expectations. It is widely understood by depreciation professionals that sole reliance on the
17 statistical analysis of historical data is inappropriate for life estimation.

18 As I have discussed previously, the NARUC Manual is one of the most widely
19 recognized authoritative depreciation texts. Chapter VIII of the NARUC Manual discusses
20 life analysis.

21
22 **Q. Does the NARUC manual support PUD's and FEA's dependence on only the
23 mathematical analysis for their service life estimates?**

24 A. No. To the contrary, the NARUC Manual specifically states that "depreciation analysts
25 should avoid becoming ensnared in the mechanics of the historical life study and relying
26 solely on mathematical solutions."²² That is, the NARUC Manual clearly states that service
27 lives should not be estimated in the manner Mr. Garrett and Mr. Andrews have utilized.

28 The NARUC Manual goes on to explain that "several factors should be considered in
29 estimating property life. Some of these factors are:

²¹ Response to OGE-PUD-2-1, part b.

- 1 1. Observable trends reflected in historical data;
- 2 2. Potential changes in the type of property installed;
- 3 3. Changes in the physical environment;
- 4 4. Changes in management requirements;
- 5 5. Changes in government requirements; and
- 6 6. Obsolescence due to the introduction of new technologies.”²³

7
8 **Q. You have also referred to “judgment” or “informed judgment” as being necessary to a**
9 **proper depreciation study. Does the NARUC manual discuss that subject?**

10 A. Yes, it does. The NARUC Manual discusses the use of “informed judgment” in detail on
11 page 128, explaining that “the use of informed judgment can be a major factor in
12 forecasting.” It goes on to explain that:

13 Judgment is not necessarily limited to forecasting and is used in situations
14 where little current data are available. The analysis gathers what is known
15 about a particular situation and modifies and refines the data to reflect the
16 actual circumstances. The analyst’s role in performing the study is to review
17 the results and determine if they represent the mortality characteristics of the
18 property. Using judgment, the analyst considers such things as personal
19 experience, maintenance policies, past company studies, and other company
20 owned equipment to determine if the stub curve represents this class of
21 property.

22 The Company’s depreciation study incorporated these considerations. Mr. Garrett and Mr.
23 Andrews did not do so. As a result, their studies produce unrealistic results that do not
24 represent the mortality characteristics of the property studied.

25
26 **Q. Can you provide an example of an account for which Mr. Garrett’s approach produces**
27 **inappropriate results?**

28 A. Yes. One example is Account 368, Line Transformers. Mr. Garrett’s estimate, as well as
29 mine, is shown in Figure 2 below. Mr. Garrett has proposed an average service life of 44
30 years for this account. In comparing the two curves you can see that both start out as very
31 similar fits for the actual historical data shown in the graph (the historical data is shown as

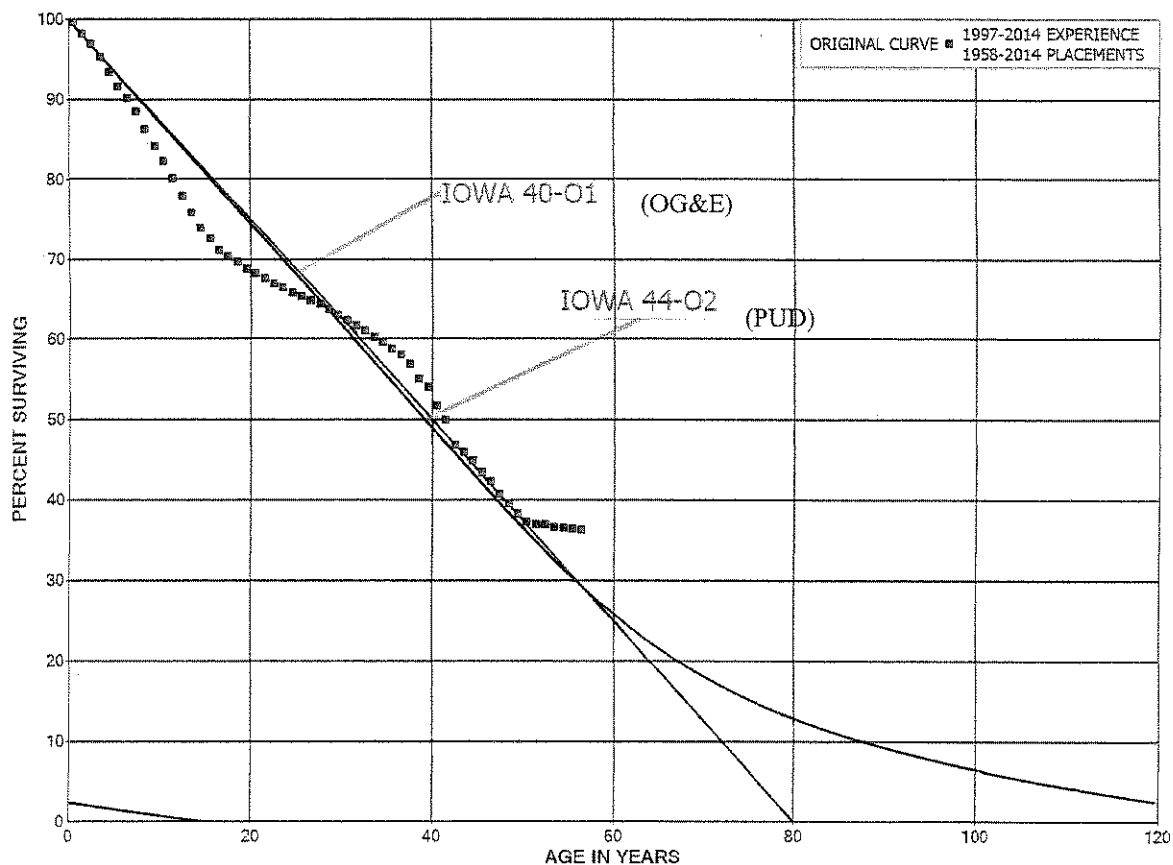
²² NARUC, Public Utility Depreciation Practices, 1996, p. 126

²³ NARUC, Public Utility Depreciation Practices, 1996, p. 129

1 black squares). Indeed, the two curves are nearly indistinguishable for the ages in which the
2 historical data is shown (i.e., through about age 56).

3 However, the two curves differ dramatically after this age. My estimate, the 40-O1,
4 projects that retirements will continue at the same rate as they have through age 56.
5 However, Mr. Garrett's use of the O2 curve negates the fact that future retirements will
6 continue at the same rate. Instead, his estimate assumes that after about age 60 the rate of
7 retirements will slow dramatically. He projects that only about a quarter of the assets in the
8 account will be in service for 60 years, but then inexplicable projects that a high percentage
9 of those that make it to 60 years will remain in service over 100 years. This is not a
10 reasonable expectation for the type of property in this account

Figure 2



1 **Q. Is the O2 curve a commonly used curve for utility property?**

2 A. No. The O2 curve is rarely, if ever used for utility property. This is because of the
3 retirement pattern described above and shown in Figure 2, in which a portion of the assets in
4 the account survive much, much longer than the remainder of the account. The lack of
5 judgment in Mr. Garrett's analysis is even more apparent in the fact that the curve I have
6 estimated, the 40-O1, is very similar to his estimate for the ages in which there is
7 representative historical data.

8
9 **Q. Do PUD's estimates for other accounts suffer from the same issues?**

10 A. Yes. PUD has used the same inappropriate approach to life estimation for each account. As
11 a result, each of PUD's estimates suffer from the same problems as this account.

12
13 **Q. Do FEA's estimates have similar issues to those of PUD?**

14 A. Yes. Although Mr. Andrew's estimates are not as extreme as the example presented in
15 Figure 2 above, the only consideration he discusses in his testimony is that his estimates are
16 better mathematical fits of the data. He does not appear to have incorporated any other
17 information, in particular Company specific information, and as a result his estimates
18 produce service lives that are too long in many cases for the property studied.

19
20 **Q. You have addressed PUD's and FEA's estimates. Can you also address OIEC's
21 recommendations?**

22 A. Yes.

23
24 **Q. How does Mr. Pous' process for life estimation differ from yours?**

25 A. While Mr. Pous devotes a number of pages of his testimony to criticizing the process of
26 estimating survivor curves I have used, a review of the discussion of his actual estimates
27 reveals that his overall approach is not dramatically different from mine. Both of us
28 recognize that judgment is required in both the curve fitting and life estimation process.
29 However, there are a couple of important differences to our approaches and judgments that
30 result in Mr. Pous' estimates being less reasonable forecasts of future service life

1 characteristics. I will address some of his comments initially and then will discuss each
2 account for which he has proposed a different service life estimate.

3 **Q. Can you address Mr. Pous' criticisms that you have "reduced [your] reliance on the**
4 **visual curve-fitting of the OLTS"**²⁴?

5 A. Yes. First I should point out that in these criticisms Mr. Pous has not only mischaracterized
6 my approach but has also selectively quoted authoritative texts and has omitted portions that
7 contradict his opinion. His initial statement that I have "reduced" my "reliance on visual
8 curve-fitting" is incorrect – I continue to follow the same approach as I always have. Mr.
9 Pous does not seem to understand that judgment is required in both the estimation process
10 but also in the curve fitting process because the historical data is rarely definitive. As I have
11 explained previously in this testimony, often many curves can be considered similar "fits" of
12 the data, so judgment is required to differentiate these curves even before other external
13 factors are considered.

14 Additionally, as I explained previously, there is not a very long history of data
15 available. For this reason, factors other than the curve matching process need to be given
16 more emphasis.

17
18 **Q. What types of factors should be considered?**

19 A. One of the key factors to consider is the mortality characteristics of the assets that are being
20 studied. The term "mortality characteristics" refers to the dispersion of lives that are forecast
21 by a survivor curve, and would include not only the average service life but also maximum
22 lives and the percentage of assets that survive to various ages. If a survivor curve forecasts
23 service lives that are unreasonable, then it is not a good representation of the mortality
24 characteristics of the property studied – whether or not it is a "better" or "best" fit of the
25 historical data. This approach is consistent not only with common sense but also with
26 authoritative depreciation texts.

²⁴ Direct Testimony of Jacob Pous, p. 52, lines 8-9.

1 Q. Mr. Pous states that your approach is not consistent with “depreciation literature.”²⁵
2 Do you agree?

3 A. No. It is surprising to see Mr. Pous make this claim, since I presented various passages of
4 the NARUC Manual supporting my approach in the testimony he has cited²⁶ to attempt to
5 make this point. However, Mr. Pous would not even need to go through the trouble of
6 reading that testimony to confirm that my approach is supported by depreciation literature.
7 Instead he would only need to read the full section of the NARUC Manual that he selectively
8 cites on page 55 of his testimony. The full, unedited portion of this text states (I have
9 underlined the sections omitted by Mr. Pous):

10 The projection life is a projection, or forecast, of the future of the property.
11 Historical indications may be useful in estimating a projection life curve.
12 Certainly the observations based on the property’s history are a starting point.
13 Trends in life or retirement dispersion can often be expected to continue.
14 Likewise, unless there is some reason to expect otherwise, stability in life or
15 retirement dispersion can be expected to continue, at least in the near term.

16 Depreciation analysts should avoid becoming ensnared in the mechanics of
17 the historical life study and relying solely on mathematical solutions. The
18 reason for making an historical life analysis is to develop a sufficient
19 understanding of history in order to evaluate whether it is a reasonable
20 predictor of the future. The importance of being aware of circumstances
21 having direct bearing on the reason for making an historical life analysis
22 cannot be understated. These circumstances, when factored into the analysis,
23 determine the application and limitations of an historical life analysis.

24 These sections should make clear that judgment must be used to determine whether statistical
25 results are reasonable. NARUC cautions that “[d]epreciation analysts should avoid
26 becoming ensnared in the mechanics of the historical life study” and explains that “[t]he
27 importance of being aware of circumstances having direct bearing on the reason for making
28 an historical life analysis cannot be understated.” Further, as I have noted previously,
29 NARUC then explains on page 128 (emphasis added):

30 The analyst’s role in performing the study is to review the results and
31 determine if they represent the mortality characteristics of the property.
32 Using judgment, the analyst considers such things as personal experience,
33 maintenance policies, past company studies, and other company owned

²⁵ Direct Testimony of Jacob Pous, p. 54, lines 14-15.

²⁶ Mr. Pous has cited my rebuttal testimony from Docket D.P.U. 14-150 in Massachusetts.

1 equipment to determine if the stub curve represents this class of property.

2 Therefore NARUC is clear that the depreciation professional performing a depreciation study
3 must review the statistical results to determine that the statistical indications (i.e. survivor
4 curves from the statistical analysis) represent the “mortality characteristics of the property.”
5 Mortality characteristics would include both the average service life as well as concepts such
6 as the maximum life.

7
8 **Q. Can you discuss further the judgment regarding the fitting of survivor curves to the
9 historical data?**

10 A. Yes. When fitting a survivor curve – either visually or mathematically – not all points in the
11 historical data should be given the same consideration. Mr. Pous does agree with the concept
12 that not all points have the same value in the analysis. However, he tends to exclude
13 meaningful information from his analysis. In his testimony, he opines that “it is more
14 important to match a standard Iowa Survivor curve with the middle and upper portion of an
15 OLT than the tail portion, depending on the dollar level of exposures at issue.”²⁷

16 Mr. Pous’ opinion of the most important portion of the original life table is incorrect
17 and is not supported by authoritative depreciation texts. As a result, his judgment regarding
18 the best fitting survivor curves – which forms one of the primary bases for his estimates – is
19 also incorrect. While it is true that the dollar level of exposures is an important consideration
20 in determining which portion of the original curve is most representative of future life
21 expectations, the dollar level of exposures is only one consideration. It is just as important to
22 recognize which portions of the curve provide the most information about the retirement
23 pattern for a group of assets. For this reason, Mr. Pous’ emphasis on the top (and to a lesser
24 extent the “upper portions of the mid-range”) tends to ignore data points that provide an
25 important indication of the survivor curve.

26
27 **Q. Do authoritative sources support Mr. Pous judgment to focus on the upper portions of
28 the survivor curve?**

29 A. No. Contrary to Mr. Pous’ assertion, the academic literature on survivor curves indicates that

²⁷ Direct Testimony of Jacob Pous, p. 56, lines 29-31

1 the most representative portion of the survivor curve is the middle portion of the curve,
2 generally the portion between 80 percent and 20 percent surviving. The reason that this
3 portion is most representative is because the middle portion of the curve is where the
4 majority of retirements occur. There are relatively few retirements at the “head” of the curve,
5 and relatively few at the “tail.”

6 In the development of survivor curves in Bulletin 125 of the Iowa Engineering
7 Experiment Station, Robley Winfrey (who developed the Iowa Survivor curves) provides
8 analysis showing that when fitting Iowa curves to the original life table, the emphasis should
9 be placed not on the first 20 percent of the curve or the last 20 percent but rather on the
10 information in the middle years. Mr. Winfrey’s analysis is based on the probable error
11 involved in fitting a smooth survivor curve to an observed life table with varying percentages
12 surviving. He concludes:

13 When survivor curves are to be classified according to the 18 types and the probable
14 average life to be determined, it is recommended that more weight be given to the
15 middle portion of the survivor curve, say that between 80 and 20 percent surviving,
16 than to the forepart or extreme lower end of the curve. This inner section is the result
17 of greater numbers of retirements and also it covers the period of most likely the
18 normal operation of the property.²⁸

19 Thus, Mr. Pous’ contention that the head and upper mid portion of the curve are the most
20 important portions of the survivor curve is not supported by the literature. To the contrary,
21 the upper portions of the curve generally have percents surviving that exceed 80 percent.

22
23 **Q. Are there other criticisms made by Mr. Pous that you would like to address?**

24 **A.** Yes. He claims that I “declined to provide adequate specifics regarding the selection of life
25 or net salvage parameters based on judgmental considerations when specifically requested to
26 do so in discovery.”²⁹ This is incorrect. I have described considerations for each account he
27 has challenged in responses to discovery.³⁰

²⁸ Bulletin 125, Iowa Engineering Experiment Station, Winfrey, Robley, 1935, p. 91.

²⁹ Direct Testimony of Jacob Pous, p. 58-59, lines 30-31,1-1.

³⁰ For example, see the responses to OIEC 4-7, OIEC 4-25, OIEC 4-26, and OIEC 5-1.

1 **Q. What are the four transmission accounts that Mr. Pous has proposed different lives**
2 **than your study?**

3 A. Mr. Pous has proposed changes to Account 350.2, Land Rights; Account 353.0, Station
4 Equipment; Account 355.0, Poles and Fixtures; and Account 356.0, Overhead Conductors
5 and Devices.

6
7 **Q. Please address Account 350.2, Land Rights.**

8 A. The current estimate for Account 350.2, Land Rights, is a 75-R4 survivor curve. There has
9 been very little change in the type of assets in the account over time. Land Rights should
10 have an overall life cycle similar to the assets that utilize the land rights such as substation
11 equipment, poles, towers, and conductor. With all related assets considered, the overall life
12 cycle of these assets is approximately 110 years when using the life characteristics in the
13 study. The 75-R4 survivor curve has an overall life cycle of 110 years.

14 Consistent with the current estimate, and the estimate of many other utilities, I have
15 recommended a 75-R4 survivor curve. Mr. Pous has decided to propose a 100-R4 survivor
16 curve even though there is little change to the type of assets in the account. Thus, he has
17 proposed a 25-year increase in average service life since the last approved case.

18

19 **Q. Please address Account 353, Station Equipment.**

20 A. The current estimate for Account 353, Station Equipment, is the 55-R2 survivor curve. I have
21 proposed to increase this estimate to the 60-R2 survivor curve. Mr. Pous has proposed the
22 63-R2 survivor curve.

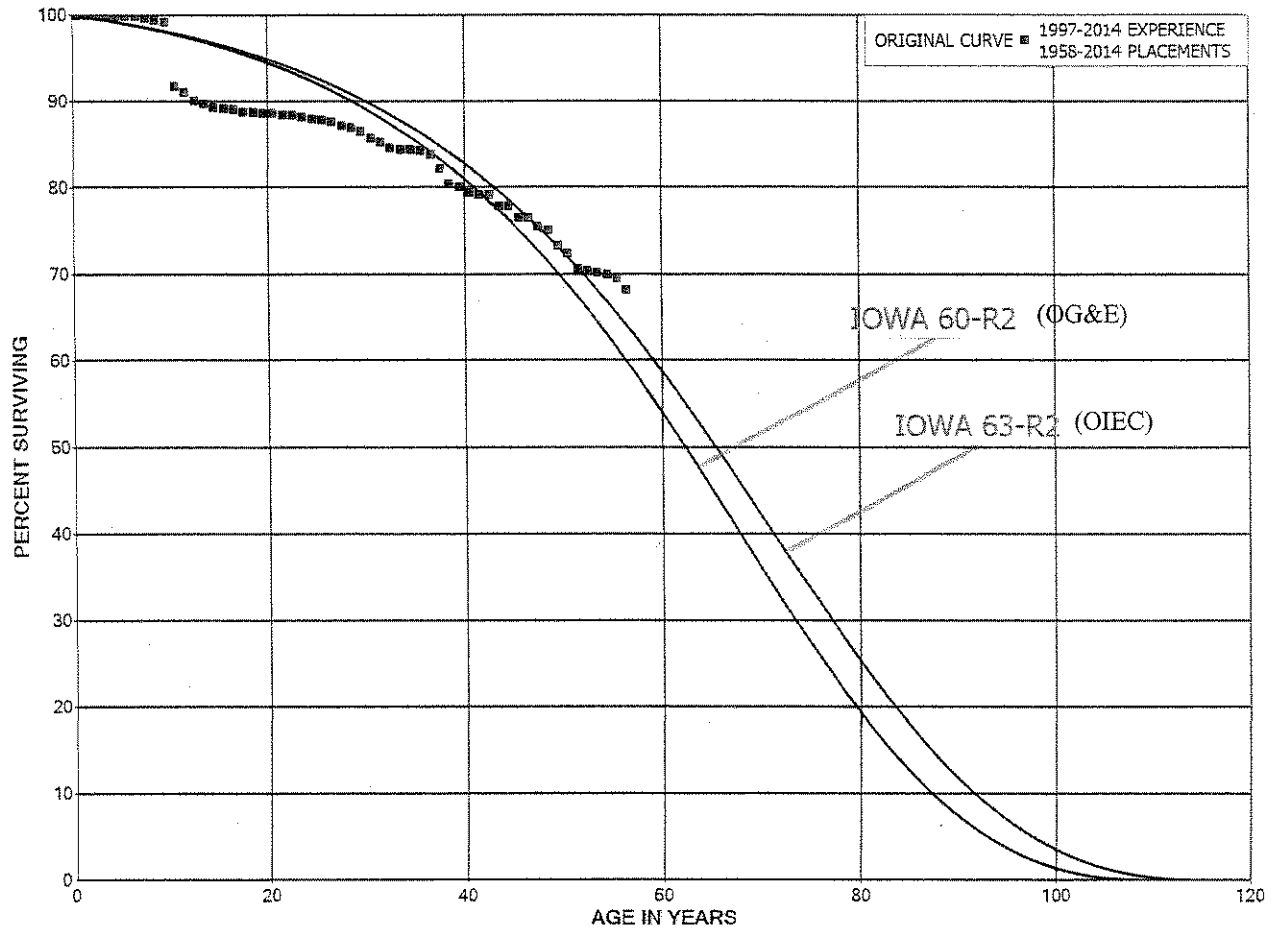
23 Figure 3 below compares my estimate with that of Mr. Pous³¹. The first item to note
24 is that both estimates are fairly similar graphically. They also both match certain portions of
25 the data, although neither matches a large number of points very well. This is not
26 unexpected, as although the average service life of the assets in this account is estimated to
27 be around 60 years, there is only 18 years of data.

28 Given that I have already recognized an increase in average service life, Mr. Pous'
29 recommendation to increase the life even further is not appropriate. The 60 year average

³¹ The figure also presents the Company's original data for the points that I consider to be significant. .

1 service life I have recommended is longer than most estimates for others in the industry and
 2 is at the upper end of the range. The historical data is not conclusive enough to extend the
 3 life even further, as Mr. Pous recommends.

Figure 3



4 **Q. Are there any considerations cited by Mr. Pous that would support a shorter average**
 5 **service life?**

6 A. Yes. As I discussed in Section II, in addition to meeting with OG&E engineering and
 7 operating personnel, I meet with similar individuals at utilities across the country.
 8 Consistently these personnel tell me that for many substation assets, new equipment should
 9 not be expected to last as long as older equipment. One example is relays. Newer solid state
 10 relays are expected to have a shorter life than older electromechanical relays. Another
 11 example is transformers and circuit breakers. These assets are engineered and designed with
 12 tighter tolerances than they were 40 years ago. While this makes the assets less expensive to

1 manufacture and purchase, it will likely lead to shorter service lives going forward than is
2 represented in the historical data (as the historical data represents far more older transformers
3 and circuit breakers than is currently in service).

4
5 **Q. Mr. Pous does not appear to agree with this concept. He states that “most depreciation
6 experts no longer rely on such claims...”³² Can you address this comment?**

7 A. Yes. First, I should be clear that unlike members of my firm, Mr. Pous does not regularly
8 meet with engineers from utility companies who are experts regarding substation assets. I
9 have been told by engineers at many utility companies that newer transformers and circuit
10 breakers are designed with tighter tolerances and should not be expected to last as long as
11 older transformers. My colleagues at Gannett Fleming have been told the same when
12 conducting their studies. I trust the experience of actual utility engineers far more than Mr.
13 Pous’ unsubstantiated opinion.

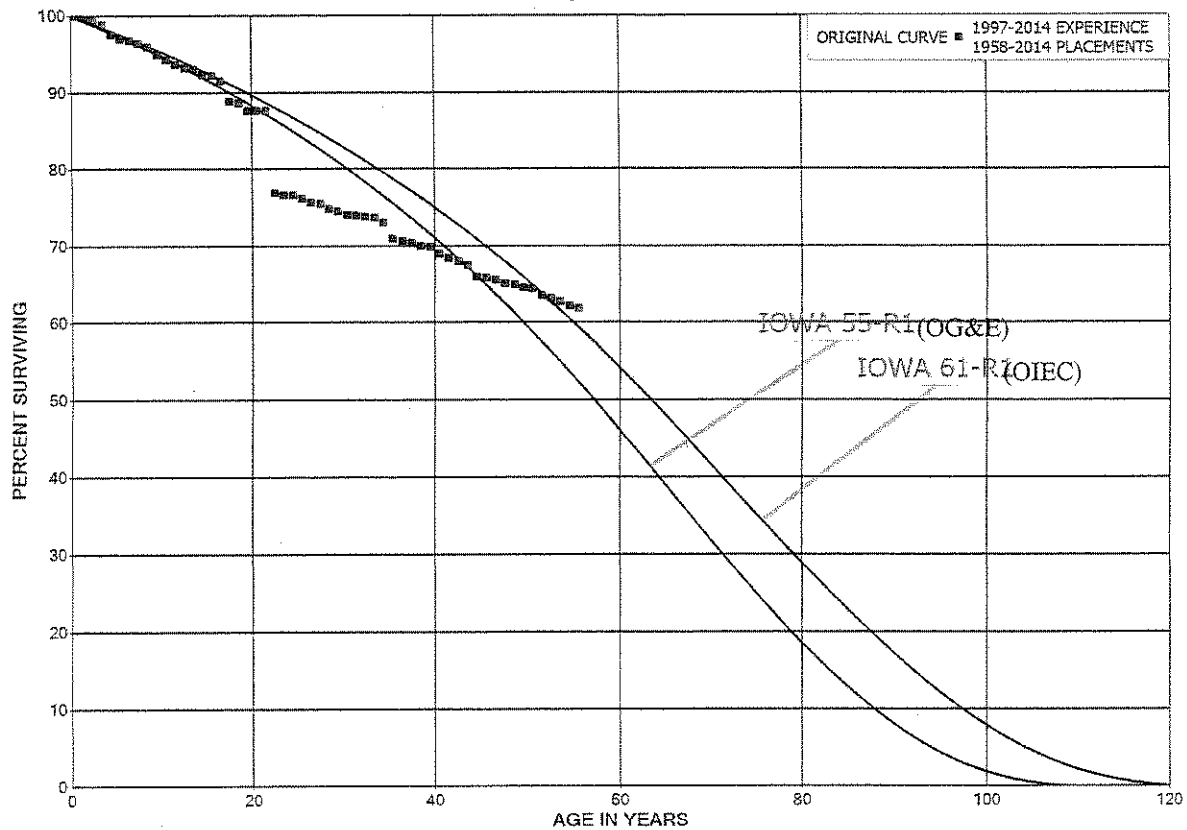
14 Given that Mr. Pous’ unsubstantiated claim, in discovery he was asked to support his
15 claim that “most depreciation experts no longer rely on” claims that assets such as
16 transformers may have shorter lives due to tighter design tolerances. He provided no
17 support, but simply stated that “Mr. Pous no longer sees references made by depreciation
18 witnesses in utility proceedings that reference the claim raised by Mr. Spanos.” Thus, when
19 asked to support this statement, Mr. Pous not only provided no evidence but instead made a
20 statement that is untrue and easily refuted. There are recent examples of other cases in which
21 Mr. Pous was involved in which depreciation witnesses making similar statements to mine.
22 One example is Sierra Pacific Power Company’s most recent cases (Nevada Docket No. 13-
23 06004), in which the Company witness C. Richard Clarke (a colleague of mine) made a
24 similar statement regarding design tolerances. Mr. Pous was a witness in that case and
25 therefore should recognize that Mr. Clarke noted tighter design tolerances for assets such as
26 transformers. In the Sierra case Mr. Pous recommended a different survivor curve for the
27 Account 353 than was recommended by Mr. Pous’ response. The Nevada commission
28 approved Mr. Clarke’s proposal for that account and did not adopt Mr. Pous’.

³² Direct Testimony of Jacob Pous, p. 68, lines 21-22.

1 Q. Please address Account 355, Poles and Fixtures.

2 A. The current estimate for Account 355, Poles and Fixtures is a 55-R1 survivor curve. I have
3 proposed to retain the current estimate. Mr. Pous has proposed in some parts of his
4 testimony to increase the average service life to 61 years and in other parts you shows a 65
5 year average life (It should be noted that his calculations appear to use the 65 year life).
6 Therefore, it is unclear what his actual estimate is for this account. However, for my
7 rebuttal I will assume he has used the 61-R1 survivor curve he states to be his estimate.
8 Figure 4 below compares my estimate and that of Mr. Pous. My estimate is a better fit of
9 the historical data, and Mr. Pous' estimate fits very few of the actual historical data points.

Figure 4



1 **Q. Mr. Pous claims to have “normalized” the data “in the manner [you] deem**
2 **appropriate.”³³ Can you address his claim?**

3 A. Yes. Mr. Pous’ reference to “normalizing” data is related to an analysis for a specific
4 transaction for a specific account for PSO in a recent case. The “normalization” I performed
5 in that case was pertinent only to that situation, in which I reduced the impact of a specific
6 retirement because it would affect a smaller portion of the account going forward. The same
7 does not apply here, and so Mr. Pous’ “normalization” is not appropriate. The transaction in
8 question for Account 355 is a retirement due to an ice storm that causes the large drop in the
9 original curve (black squares) in the graph in Figure 8.

10 As I have explained in discovery,³⁴ ice storms happen with some degree of regularity
11 in Oklahoma. Therefore the transaction should not be deemphasized in the manner in which
12 Mr. Pous has done. Instead, I would expect a similar level of retirements as in the historical
13 data. However, what is likely is that fewer would occur at age 22 and more would occur at
14 later ages.

15
16 **Q. Does your estimate reflect this expectation?**

17 A. Yes. As can be seen in Figure 4, my estimate fits the data very well through age 22 (and
18 better than that of Mr. Pous). It then does not decrease significantly at age 22 as the actual
19 data does. Instead, my estimate forecasts that a similar level of retirements will occur at
20 later ages, as the 55-R1 curve begins to decline more as it reaches later ages. Thus, my
21 estimate does properly “normalize” the impact of ice storms – which should be expected to
22 occur again – and does not inappropriately deemphasize these retirements as Mr. Pous does.

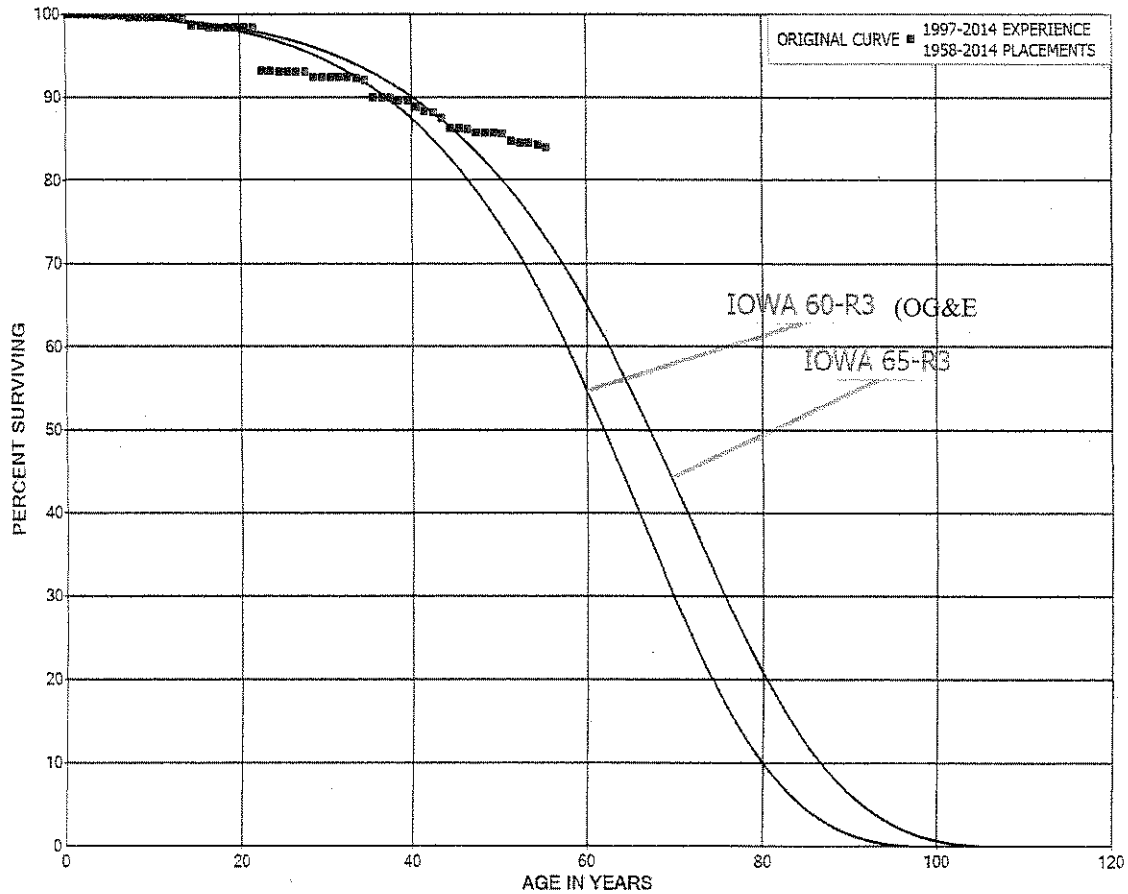
23
24 **Q. Please address Account 356, Overhead Conductors and Devices.**

25 A. For this account I have recommended the 60-R3 survivor curve. This is a similar estimate to
26 the current 60-R2.5 survivor curve. Mr. Pous has recommended the 65-R3 survivor curve.
27 As can be seen in Figure 5 below, the historical data does not provide a definitive way to
28 clearly support Mr. Pous’ estimate over mine. Further, many of the arguments Mr. Pous
29 presents for this account are similar to Account 355. In particular, Mr. Pous again incorrectly

³³ Direct Testimony of Jacob Pous, p. 71, lines 7-8.

1 applies a “normalization” process to retirements for ice storms that should be expected to
2 occur again in the future. Additionally, one of Mr. Pous’ support for increasing the life for
3 this account is that he has increased the life for Account 355. As I have explained, his
4 adjustment to Account 355 is not appropriate, and thus neither is his change to this account.

Figure 5



³⁴ Per data requests OIEC 6-28, OIEC 6-29 and OIEC 6-31.

VI. NET SALVAGE FOR MASS PROPERTY

1 **Q. What is the topic for this section of your testimony?**

2 A. In this section I will address Mr. Pous' net salvage estimates for certain mass property
3 accounts. Mass property accounts are those that do not use the life span method, such as
4 most transmission, distribution and general plant accounts.

5
6 **Q. Can you summarize the differences between your proposals and those of Mr. Pous?**

7 A. Yes. Table 1 provides a comparison of the estimates for the accounts in which Mr. Pous and
8 I differ. The table also provides a comparison to the existing estimates for these accounts, as
9 well as the statistical indications for each account based on the actual data.

Table 2

<u>ACCOUNT</u>	<u>EXISTING</u>	<u>OG&E PROPOSED</u>	<u>OIEC PROPOSED</u>	<u>OVERALL AVERAGE</u>	<u>5 YEAR AVERAGE</u>
353	(25)	(30)	(10)	(58)	(417)
355	(60)	(60)	(50)	(97)	(132)
390	0	0	15	1	0
392.1	10	10	20	9	15
392.5	10	10	15	9	15
392.6	10	10	0	9	15

10 **Q. How do the estimates for these accounts compare to the company's actual data?**

11 A. The table illustrates that the estimates made for the transmission plant accounts and the
12 estimates I have made are conservative when compared to this Company's actual data. For
13 example, for Account 353, Station Equipment, the Company's full database indicates net
14 salvage of negative 58 percent. The currently approved estimate for this account is negative
15 25 percent, which is clearly less negative than is reflected in the historical data. It is clear
16 from the data that in order to recover its costs, the net salvage needs to be more negative than
17 the currently approved estimate. I have proposed an estimate of negative 30 percent, which
18 is still much less negative than the actual data, and therefore represents a gradual change
19 towards the level indicated by the historical data alone.

20 For the general plant accounts, the table illustrates that the estimates I have made are
21 consistent with the historical data.

1 **Q What have PUD and FEA recommended for net salvage?**

2 A. Both PUD Witness Garrett and FEA Witness Andrews have used the same net salvage
3 estimates I have recommended for mass property accounts.
4

5 **Q. How do Mr. Pous' estimates compare to the historical data?**

6 While the historical data indicates much more negative net salvage for some of the
7 Company's accounts, Mr. Pous has only recommended minor changes. The result is net
8 salvage estimates recommended by OIEC that are far too low (i.e. less negative) than is
9 necessary to appropriately recover the Company's costs. For example, for Account 353,
10 while the overall historical average net salvage is more than two times the currently approved
11 estimate, Mr. Pous has proposed a decrease to negative 10 percent net salvage. This estimate
12 is well less than half of the net salvage indicated by the historical data. Mr. Pous' estimate is
13 far too conservative when the actual data is considered.
14

15 **Q. Are your estimates for the accounts challenged by Mr. Pous supported by the
16 company's data?**

17 A. Yes. In fact, the data would support even more negative net salvage estimates. However, I
18 have tempered my estimates to be more in line with estimates for other utilities and to
19 incorporate a degree of gradualism.
20

21 **Q. Are Mr. Pous' estimates supported by the historical data?**

22 A. No. Instead, Mr. Pous attempts to present a number of rationalizations for deviating from the
23 historical data. None are convincing
24

25 **Q. What reasons does Mr. Pous give to deviate from the historical data?**

26 A. First Mr. Pous presents a discussion of his opinion that the Company should perform a
27 "cause of retirement" study. This is an unnecessary and costly type of analysis, and it is rare
28 that a utility would perform analyses for a depreciation study with the level of detail Mr.
29 Pous suggests. Mr. Pous' recommendation has also been rejected by the Commission in a
30 previous case for PSO.

1 Mr. Pous argument for this type of analysis is further undermined by the fact that I
2 have investigated and explained many transactions, and have given less consideration to
3 those that are not as reflective of the types of property in service. However, although this
4 information was provided to Mr. Pous and explained in discovery, he not only has ignored
5 the information and my explanations but has strangely decided to criticize me for doing the
6 very type of analyses he claims should be done on a large scale.

7 Mr. Pous also argues that I have not provided enough support for my estimates,
8 despite the fact that the actual experience of the Company – that is, the historical data –
9 provides clear support for estimates at least as negative as those I have made. In contrast, his
10 justifications for significantly deviating from the historical data are speculative and do not
11 stand up to scrutiny. They most certainly do not support deviating from the actual statistical
12 support to the extreme levels Mr. Pous proposes.

13
14 **Q. Has Mr. Pous made similar criticisms of previous depreciation studies for any
15 Company in Oklahoma?**

16 A. Yes. I have explained in Section II that Mr. Pous has made similar criticisms in a case for
17 PSO, and that his recommendations were not adopted by the Commission.

18
19 **Q. You have discussed in general terms the issues with Mr. Pous' estimates. Can you
20 address Account 390, Structures and Improvements in more detail?**

21 A. Mr. Pous has proposed an estimate of positive 15 percent for this account. This estimate is
22 well outside the range of estimates that are common for this type of property. My estimate of
23 0 percent is more reflective of both the Company's actual data and the experience of others in
24 the industry.

25
26 **Q. What is the basis for Mr. Pous' recommendation?**

27 A. The basis for the recommendation of positive 15 percent net salvage is based on the
28 perception of Mr. Pous that OG&E will realize significant sums upon the sale of the
29 structures in this account.

1 **Q. Is this a sound basis for Mr. Pous' estimate?**

2 A. No. Mr. Pous is again attempting to incorporate the value of land into the net salvage
3 estimate for depreciable property. In my experience, the sale of the larger facilities in this
4 account generally results in far more value for the land, which is non-depreciable, than for
5 the structures themselves.

6 Additionally, Mr. Pous ignores that many assets in this account are typically retired
7 prior to the final retirement or sale of a building. During the life of the structure, remodeling
8 occurs that requires the removal of old improvements and the installation of new
9 improvements. The cost of removing improvements can be significant.

10 The historical data supports that there is typically cost of removal associated with
11 retirements for this account. As is common in structures and improvements accounts, the
12 retirements, cost of removal and salvage varied from year to year. However, usually when
13 there were retirements the cost of removal was higher than salvage which produced negative
14 net salvage. The overall average net salvage for the period 1986 to 2014 is negative 13
15 percent, which supports my estimate of negative 10 percent. It does not support Mr. Pous'
16 positive 15 percent estimate.

17

18 **Q. Do you agree with Mr. Pous' testimony regarding Transportation Equipment?**

19 A. No. First, Mr. Pous suggests he follows my statistical analyses and judgment for identifying
20 a net salvage percentage for these three accounts after spending numerous pages in his
21 testimony stating my process is flawed. Second, he determines net salvage percentages at the
22 subaccount level without completely understanding the how the gross salvage value is
23 recorded at the subaccount level. Not coincidentally he increases the salvage value for the
24 larger subaccounts and reduces it for the smaller subaccount. Third, he compares values of
25 national publications for vehicles that do not receive the wear and tear of a comparable utility
26 vehicle.

27

28 **Q. What do the statistical analyses show?**

29 A. First, the currently approved net salvage percentage is positive 10 percent for all types of
30 Transportation Equipment. Also, each individual type of transportation equipment has

1 averaged between positive 6 percent and positive 11 percent for the available historical
2 period of 1997-2014, except the trailers which has averaged positive 14 percent. In other
3 words, a contradiction to what Mr. Pous has presented in his testimony.
4

5 **VII. LIFE SPANS FOR PRODUCTION PLANT**

6 **Q. Have any parties disagreed with the Life Spans for Production Plant?**

7 A. Yes. FEA witness, Andrews, has made some adjustments to the life spans of some of the
8 generating units, however, PUD and OIEC have agreed with the life spans for each unit and
9 location.
10

11 **Q. What is Mr. Andrews' basis for changing the life span dates?**

12 A. Mr. Andrews makes his changes to Horseshoe Lake Unit 8 and the Seminole Units because
13 the Integrated Resource Plan(IRP) presented different years. However, it should be noted
14 that the IRP does not incorporate all forces of retirement or replacement such as a
15 depreciation study. Additionally, the IRP does not take into consideration the efficiencies or
16 cost –benefit analyses of the units as they age.
17

18 **VIII. HOLDING COMPANY DEPRECIATION**

19 **Q. Have the Holding Company assets been addressed in this case?**

20 A. No. There has not been a depreciation study conducted on the current plant in service for
21 Holding Company assets.
22

23 **Q. Do you agree with Mr. Pous' adjustments to depreciation for the Holding Company?**

24 A. No. Mr. Pous does not have any basis for changing the depreciation rates. He has not
25 performed any depreciation analyses.
26

27 **Q. What was the reasoning for not calculating new rates for the Holding Company?**

28 A. The Holding Company has no new assets planned to be added. Therefore, with no planned
29 growth, maintaining the current depreciation rates is most reasonable.

1 **IX. AMORIZATION OF ELECTRIC PLANT – SOFTWARE**

2 **Q. What is the issue in this section of your testimony?**

3 A. This section addresses Mr. Pous' proposal to reduce the depreciation expense for Account
4 303.2 Miscellaneous Intangible Plant – Software by adjusting the amount of costs to be
5 recovered to the middle of 2016.

6
7 **Q. What is the basis for Mr. Pous' proposal?**

8 A. Mr. Pous argues that because amortization will occur based on the existing amortization rates
9 through the time the Company's rates will be implemented, the amortization for this account
10 should be adjusted to reflect the amount left to be recovered at that time (which he estimates
11 to be the middle of 2016).

12
13 **Q. Has Mr. Pous used a similar approach for other accounts?**

14 A. No.

15
16 **Q. Why has Mr. Pous used this approach for this account?**

17 A. Mr. Pous appears to argue that because the amortization of this account is included in the
18 Company's customer rates, the calculation of amortization should be adjusted to reflect what
19 will be recovered through customer rates by the time new rates are implemented (i.e., the
20 middle of 2016).

21
22 **Q. Is Mr. Pous' argument convincing?**

23 A. No. Mr. Pous' argument is unconvincing because he fails to recognize that most of the
24 investment in this account has been added subsequent to the Company's last rate case. The
25 actual amount of depreciation in this account that was used to develop rates in Cause No.
26 PUD 201100087 was much lower than the Company's current depreciation expense. For this
27 reason, the actual situation for this account is the opposite of what Mr. Pous claims to be the
28 case – the Company incurs amortization expense for this account at a much higher level than
29 was established in customer rates.

1 **Q. Can you explain further?**

2 A. Yes. As Mr. Pous himself notes, most of the assets in this account were placed in service in
3 2012 and 2014³⁵. Indeed, over 80% of the 2014 plant balance in the account was installed
4 subsequent to 2012. That is, the majority of the assets in this account were added subsequent
5 to the last rate case.

6

7 **Q. Given this situation, do you think an adjustment is necessary?**

8 A. No. Regulatory lag is a part of the established ratemaking process. Customer rates are based
9 on costs and usage at a point in time. Activity between rate cases will occur and thus the
10 actual costs at any point in time will be different from the point at which rates were
11 established. While Mr. Pous has narrowly, and incorrectly, focused on one isolated account,
12 the fact of the matter is that the Company's investment base and therefore annual
13 depreciation expense and rate base is considerably higher than it was when rates were
14 established in Cause No. 201100087. Contrary to the Company earning "additional return,"
15 regulatory lag typically works in the opposite direction and a utility's annual depreciation
16 expense generally exceeds the level at which it was established in rates. For these reasons, as
17 well as the fact that Mr. Pous' descriptions of the circumstances for this account are
18 incorrect, and adjustment to the amortization expense for Account 303.2 Miscellaneous
19 Intangible Plant – Software is unnecessary and inequitable.

20

21 **Q. Does this conclude your rebuttal testimony?**

22 A. Yes.

³⁵ Direct Testimony of Jacob Pous, p. 44, lines 24-25.