BEFORE THE

NORTH CAROLINA UTILITIES COMMISSION

PUBLIC SERVICE COMPANY OF NORTH CAROLINA, INC.

DOCKET NO. G-5, SUB 632
DOCKET NO. G-5, SUB 634

REBUTTAL TESTIMONY

OF

JOHN J. SPANOS

OCTOBER 7, 2021

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1   **I.   INTRODUCTION**

2   Q.   PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

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

4   Camp Hill, Pennsylvania 17011.

5   Q.   IN WHAT CAPACITY ARE YOU EMPLOYED?

6   A.   I am President of Gannett Fleming Valuation and Rate Consultants, LLC

7   ("Gannett Fleming").

8   Q.   ON WHOSE BEHALF ARE YOU TESTIFYING?

9   A.   I am testifying on behalf of Public Service Company of North Carolina, Inc.,

10   d/b/a Dominion Energy North Carolina ("PSNC" or the "Company").

11   Q.   ARE YOU THE SAME JOHN J. SPANOS WHO FILED DIRECT

12   TESTIMONY IN THE ORIGINAL FILING OF THE APPLICATION IN

13   DOCKET NO. G-5, SUB 632?

14   A.   Yes.

15   Q.   WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

16   A.   The purpose of my rebuttal testimony is to respond to the depreciation proposals

17   that are set forth in the testimony of Public Staff witness Roxie McCullar.

18   There is one primary depreciation-related issue raised by Ms. McCullar. This

19   is the method of net salvage[1] estimation and resultant net salvage estimates for

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[1] Net salvage is gross salvage less cost of removal. Because cost of removal frequently exceeds gross salvage, net salvage is often a negative amount. In my testimony, when I refer to "higher net salvage" I mean more negative net salvage or higher cost of removal.

1   two of the largest plant accounts and the resulting effect on depreciation

2   expense.

3   Public Staff witness McCullar's net salvage estimates for Account

4   476.10, Mains – Plastic and Account 476.30, Mains – Steel are largely informed

5   by a method of analysis that does not form a sound basis for estimating net

6   salvage.   This results in Ms. McCullar reducing the net salvage estimates for

7   each of these accounts by 20 percent, which results in levels that are below

8   reasonableness as compared to the historical ratio of costs to retire the

9   associated plant.   This inappropriate and unsupported method has previously

10   been rejected by this Commission.

11   **II.   MASS PROPERTY NET SALVAGE**

12   A.   **The Public Staff Has Not Proposed an Appropriate Method to**
13   **Estimate Net Salvage**

14   Q.   WHAT IS NET SALVAGE?

15   A.   Net salvage as used in depreciation is defined as gross salvage less cost of

16   removal.   When an asset is retired it may have scrap or reuse value, which is

17   gross salvage.   There is also a cost to retire the asset.   Removal costs can occur

18   even if an asset is not physically removed if there are costs associated with

19   retiring it.   For example, when retiring a gas main there are typically costs to

20   purge gas from the main and cut and cap the pipe even though the main may

21   not be physically removed from the ground.

22   Most types of utility property typically experience negative net salvage,

23   meaning that the cost of removal exceeds gross salvage.   It is also important to

1   understand that net salvage recorded in a given year is a function of the amount

2   of property retired.   For example, it would cost more to retire 1,000 gas mains

3   in a given year than to retire 100 gas mains.   The method I have used to

4   estimate net salvage in the depreciation study, which is the industry standard

5   method for estimating future net salvage, recognizes this relationship between

6   net salvage and retirements.   Ms. McCullar's estimates are informed by a

7   methodology that is not supported by depreciation authorities and does not

8   recognize this important relationship.   This is an important flaw in Ms.

9   McCullar's approach to estimating net salvage, since there has been a trend

10   towards increased retirement activity which will result in higher levels of net

11   salvage.

12   Q.   WHAT HAS MS. MCCULLAR PROPOSED FOR NET SALVAGE?

13   A.   Ms. McCullar proposes different net salvage estimates from the Company's

14   proposal for two subaccounts of distribution plant.   Her proposed method for

15   these two accounts is based on different practices than were used for the other

16   accounts.   In each case, the difference between her estimate and the

17   Company's is that she uses an approach to estimate net salvage that does not

18   have a sound mathematical basis and is not supported by depreciation

19   authorities.   Rather than using the accepted approach of expressing net salvage

20   as a percentage of retirements, Ms. McCullar's approach is based on the dollar

21   amount of net salvage recorded in recent years.   Ms. McCullar ignores the fact

22   that over $30 million in retired plant has occurred for distribution mains with

1   an associated $12.1 million cost of removal.   Her analysis is based on a premise

2   that annual depreciation accruals for net salvage should be closer to the average

3   net salvage dollar amounts that have been recorded in recent years.

4   Ms. McCullar's proposal is, therefore, based on an incorrect premise

5   that annual depreciation accruals for net salvage should have a relationship to

6   recent net salvage costs, and perhaps should be the same as or similar to recent

7   net salvage costs.   However, if depreciation accruals were determined to be the

8   same as recent net salvage costs, such an approach would mean that net salvage

9   is recovered in a manner more consistent with that of an operating expense

10   rather than as a capital cost because it would recover net salvage as it occurs

11   rather than over the lives of the Company's assets.[2]

12   I do recognize that Ms. McCullar has not proposed to set depreciation

13   expense for net salvage to be the same as recent net salvage costs.   Instead, she

14   has arbitrarily established net salvage depreciation accrual amounts to be some

15   multiple higher than recent net salvage costs.   However, this does not rectify

16   the problems with her analysis and proposal.   Ms. McCullar provides no

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[2] Ms. McCullar appears to argue in footnote 21 on page 21 of her testimony that her proposal is not a change from an accrual basis to a cash basis because she is "not recommending or implying that the depreciation accrual no longer be credited to the Accumulated Provision for Depreciation or that the net salvage costs be 'expensed'."   However, merely recording costs to accumulated depreciation does not meet the requirements of accrual accounting if the timing of the recording of these costs does not align with the time periods in which they provide service.   Recognizing net salvage when it is incurred (i.e., when the money is spent or received), rather than over the life of the related property, is more consistent with cash basis accounting than accrual accounting.   As a result, a net salvage method that only recovers net salvage costs as they occur is not consistent with accrual accounting for net salvage.

1 support for the specific multiple that she uses for each account, nor does she

2 provide any evidence for why this multiple is superior to any other number.

3 Q. HAS MS. MCCULLAR PROVIDED A SYSTEMATIC AND RATIONAL

4 BASIS FOR HER PROPOSALS?

5 A. No. Ms. McCullar discusses the impact of inflation on traditional methods of

6 estimating net salvage and also discusses her comparison of net salvage costs

7 to net salvage accruals.   However, it is not clear how any of these factors led

8 to her specific proposals and, as a result, it is difficult to respond to the specific

9 bases of her recommendations.   My testimony will respond to the concepts she

10 discusses in support of her recommendations and explain that these concepts

11 are not sound mathematically and are inconsistent with and not supported by

12 the authorities she cites in her testimony.   I first discuss why an approach of

13 comparing net salvage costs to net salvage accruals does not provide a

14 reasonable basis for estimating net salvage and then will address her discussion

15 related to inflation in net salvage estimates and explain that authorities,

16 including those cited in her testimony, support the approach I have used to

17 estimating net salvage.

18 **B.** **The Public Staff's Proposal Will Fail to Recover Future Net**
19 **Salvage Costs Over the Lives of the Company's Assets**

20 *1.* *Net Salvage Accruals Should Not Be Expected to Be the*
21 *Same as Recent Net Salvage Costs*

22 Q. MS. MCCULLAR BASES HER NET SALVAGE ESTIMATES ON A

23 COMPARISON OF RECENT NET SALVAGE COSTS TO THE PROPOSED

1   NET SALVAGE ACCRUALS. IS THIS A REASONABLE BASIS FOR

2   THE ESTIMATION OF FUTURE NET SALVAGE?

3 A. No. The underlying premise of Ms. McCullar's approach is that net salvage

4   accruals should be similar to, if not the same as, recent net salvage costs.   This

5   premise is incorrect. Net salvage accruals are intended to allocate future net

6   salvage costs over the life of a Company's assets, and therefore should not be

7   expected to be the same as recent net salvage costs.

8 Q. IS THERE REASON TO EXPECT THAT FUTURE NET SALVAGE WILL

9   BE HIGHER ON A DOLLAR BASIS THAN CURRENT AND RECENT

10   LEVELS OF NET SALVAGE?

11 A. Yes.   There are several conceptual reasons why one should not expect future

12   net salvage to occur at a similar dollar level to current or recent costs, which I

13   will discuss in more detail below.   Additionally, recent history and future

14   expectations support that the level of retirements will increase, which will also

15   create an anticipated increase in cost of removal and a larger increase in net

16   salvage accruals.

17   Ms. McCullar's net salvage methodology fails to recognize that the

18   level of net salvage is not static and will change over time.   Due to this flaw,

19   Ms. McCullar's methodology will not recover the expected increases in future

20   net salvage until after they occur.   This will result in intergenerational inequity

21   as future customers will be paying the costs of assets that have already been

22   retired.

1 Q. PLEASE PROVIDE AN EXAMPLE TO DEMONSTRATE THAT, IN

2   GENERAL, NET SALVAGE ACCRUALS SHOULD NOT BE THE SAME

3   AS CURRENT NET SALVAGE COSTS.

4 A. Consider an example of a single gas main segment that costs $5,000, has a

5   service life of 65 years, and for which the cost to retire the service, net of any

6   salvage, is $2,000. To properly allocate these net salvage costs in equal

7   amounts over the asset's 65-year service life through depreciation expense,

8   depreciation accruals for net salvage would need to be $31 per year to recover

9   the full $2,000 future net salvage costs.

10   However, recovering $31 per year in net salvage means that the net

11   salvage accruals will not be the same as the dollar levels of net salvage recorded

12   in a given year.   In each year of the gas main's life, the recorded amount of net

13   salvage would be $0.   When the asset is eventually retired in year 65, the

14   recorded net salvage would be $2,000.   Using accrual accounting and the

15   straight-line basis, the depreciation accruals for net salvage would be the same

16     $31 amount each year, as the net salvage costs are allocated in equal amounts

17   over the main's life.   By allocating the capital costs for net salvage equally over

18   its service life, customers are equitably charged for the cost of the service

19   provided by the asset.

20   In contrast, Ms. McCullar's approach would be inequitable.   Her

21   approach would charge customers for none of the net salvage costs from years

22   1 through 64 and then require customers in year 65 (or shortly after year 65) to

1   bear the entire cost to retire the gas main once it is retired.   This occurs because

2   Ms. McCullar's method is based on the dollar level of costs that have been

3   recorded in the recent past, which in this example is $0 until year 65.   This

4   demonstrates that the traditional accrual method is equitable to customers,

5   whereas her approach would inappropriately defer net salvage costs to

6   customers who receive no service from the asset.

7 Q.   THE EXAMPLE ABOVE WAS FOR A SINGLE UNIT.   WOULD THE

8   SAME CONCEPTS APPLY TO A GROUP OF PROPERTY?

9 A.   Yes.   Consider a group of gas main segments, each of which has the same cost

10   of installation and retirement as for the single-unit example.   This time I will

11   use an average service life of 65-years, which corresponds to the 65-R3 survivor

12   curve used for both my and Ms. McCullar's recommended depreciation rates

13   for Account 476.10, Mains – Plastic.   If 10,000 gas main segments were

14   installed in the year 2020, then the total original cost of this group of services

15   would be $50 million.   For a group of assets, there is typically a range of lives.

16   Some gas mains are retired prior to the average service life and some survive

17   longer than the average.   The 65-R3 survivor curve for these assets experiences

18   retirements consistent with the pattern shown in Figure JJS-1 below.

1   **Figure JJS-1: Frequency of Retirements by Age for 65-R3 Survivor Curve**

2
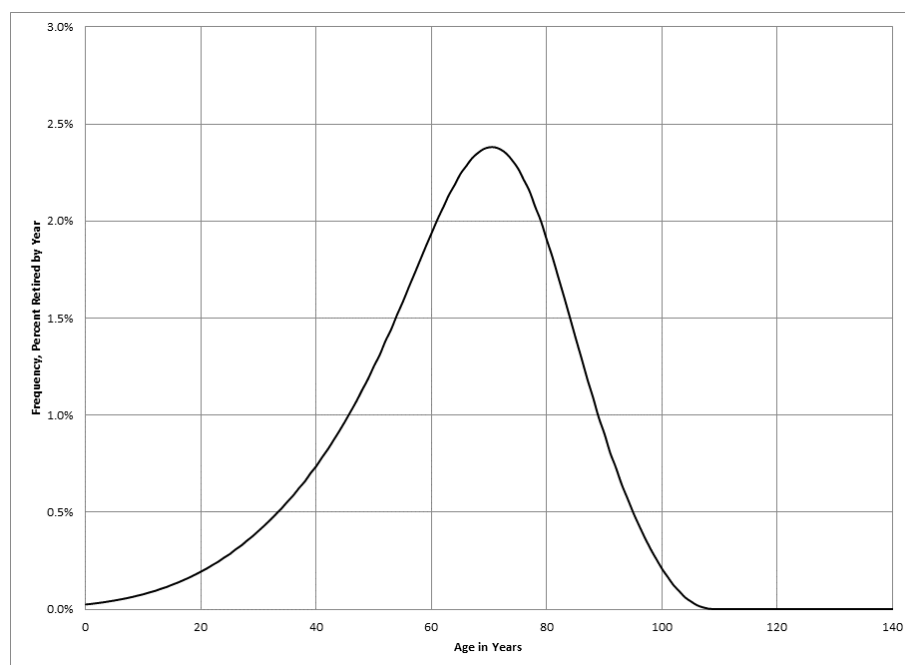
3   The chart shows the percentage of the 2020 assets that will be retired

4   each year. For example, the chart shows that approximately 0.03% of the

5   assets will retire at age 20.   Based on the starting balance of 10,000 gas main

6   segments, this means that about three gas main segments would retire at age 20.

7   The peak of the curve occurs at age 70, at which point the largest number of

8   retirements will occur.   Specifically, of the 10,000 gas main segments

9   originally installed, 240 will retire at age 70.   That is, more than eighty times

10   as many gas main segments will be retired at age 70 than at age 20.

1 Q. DOES THE DISPERSION OF SERVICE LIVES FOR A PROPERTY GROUP

2 DEMONSTRATE THAT NET SALVAGE COSTS WILL BE HIGHER IN

3 SOME YEARS THAN IN OTHER YEARS?

4 A. Yes. Continuing the example from the previous question, the net salvage cost

5 for a single gas main is $2,000. If retirements are more than eighty times larger

6 at age 70 than at age 20, then net salvage costs would similarly be more than

7 eighty times greater. This is illustrated in Figure JJS-2 below, which shows

8 the net salvage cost by year.

9 **Figure JJS-2: Net Salvage Accruals and Net Salvage Costs by Year**
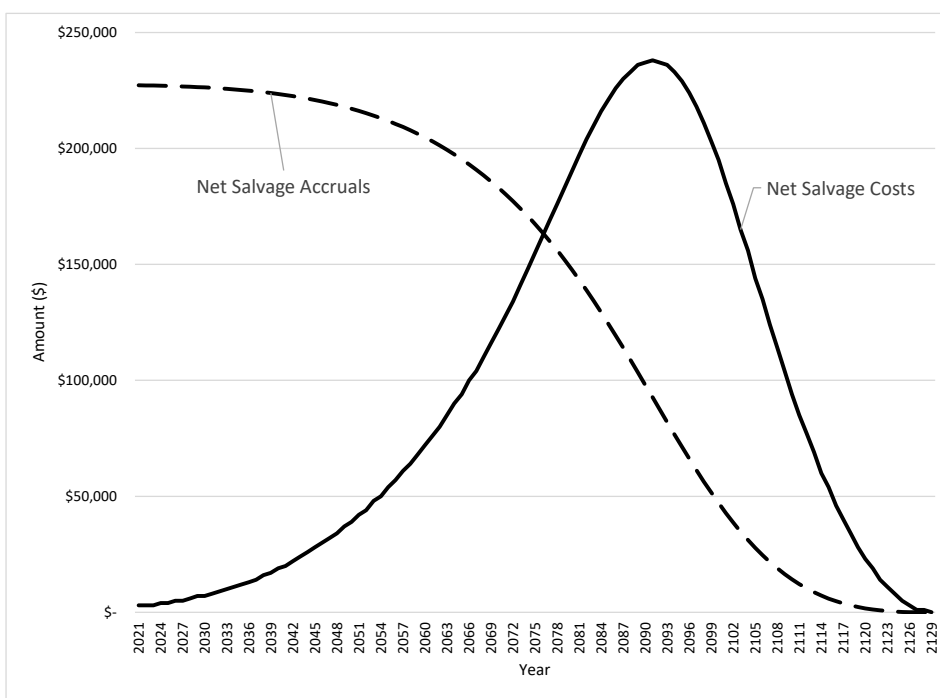
10

1   Q.   PLEASE EXPLAIN THE NET SALVAGE COSTS SHOWN IN FIGURE

2   JJS-2.

3   A.   The solid black line shows the net salvage cost by year.   Contrary to the

4   assumptions of Ms. McCullar's net salvage proposal, the total net salvage cost

5   incurred is not the same in each year.   The net salvage costs are instead a

6   function of the retirements that occur each year, and for this reason the net

7   salvage costs follow the frequency curve shown in Figure JJS-1.   For example,

8   net salvage costs for vintage 2020 are much higher in the years 2060 through

9   2090 than they are in earlier years.   This demonstrates that the approach used

10   by Ms. McCullar will fail to capture the higher future net salvage costs, because

11   net salvage costs are not the same in each year.   Looking backwards only at net

12   salvage recorded in recent years does not provide a reasonable basis for

13   estimating future net salvage.

14   Q.   PLEASE EXPLAIN THE NET SALVAGE ACCRUALS SHOWN IN

15   FIGURE JJS-2.

16   A.   Figure JJS-2 also shows the depreciation accruals for each year that are needed

17   to properly recover the net salvage costs for the assets in the example over their

18   service lives.   The net salvage accruals follow the survivor curve for this

19   account, and the same amount is accrued for each unit of service provided by

20   the group.   Figure JJS-2 demonstrates that the depreciation accruals for net

21   salvage should not be expected to be the same as net salvage costs.   Instead,

22   the accruals for net salvage are higher than the annual net salvage costs for

1   about the first 35 years, at which point the net salvage costs begin to exceed the

2   net salvage accruals.   If net salvage costs are allocated on a straight-line basis

3   for the group of 10,000 gas main segments, then the net salvage accruals should

4   be expected to be different from the net salvage costs incurred in a given year.

5 Q. WHAT DOES THIS EXAMPLE ILLUSTRATE WITH REGARD TO MS.

6   MCCULLAR'S METHODOLOGY?

7 A. This example demonstrates that Ms. McCullar's methodology is based on a

8   flawed concept.   Net salvage accruals and net salvage costs at each age are not

9   the same, and for this reason her approach and analysis do not provide a

10   reasonable basis for accruing for future net salvage.   The accruals resulting

11   from her approach would track the solid line labeled "Net Salvage Costs" in

12   Figure JJS-2.   This would result in net salvage costs being deferred, and most

13   of the costs would be paid by customers after the year 2057, at which time less

14   than half of the assets have already been retired.

15 Q. ONE OF MS. MCCULLAR'S CRITICISMS OF THE TRADITIONAL

16   METHOD FOR NET SALVAGE IS THAT IT INCLUDES FUTURE

17   INFLATION.   IN THE EXAMPLE PROVIDED IN THIS SECTION, DO

18   NET SALVAGE ACCRUALS EXCEED NET SALVAGE COSTS DUE TO

19   INFLATION?

20 A. No.   In this example, the cost to retire a gas main segment remains constant

21   over the life of the property group.   That is, for this example, inflation has no

22   impact on net salvage accruals or net salvage costs.   Net salvage accruals

1   exceed net salvage costs in many years due to the need to accrue for future net

2   salvage, not due to inflation.

3 Q.   THIS EXAMPLE WAS FOR A SINGLE VINTAGE. DO THE SAME

4   CONCEPTS APPLY TO REAL WORLD PROPERTY ACCOUNTS THAT

5   INCLUDE MANY VINTAGES?

6 A.   Yes. For most real-world accounts, net salvage accruals are higher than recent

7   net salvage costs. Because utility systems have grown over time, a Company's

8   assets are typically newer, on average, than the average service life. Just as the

9   net salvage accruals exceed net salvage costs prior to the average service life

10   (i.e., for the first 65 years) in Figure JJS-2, net salvage accruals for real-world

11   property groups typically exceed recent net salvage costs.

12   **2.**   ***Ms. McCullar's Approach Does Not Properly Allocate Net***
13   ***Salvage Costs***

14 Q.   PLEASE EXPLAIN HOW NET SALVAGE IS ESTIMATED USING THE

15   TRADITIONAL METHOD OF ESTIMATING NET SALVAGE.

16 A.   When using the traditional method of estimating net salvage, the analysis of

17   historical net salvage data is performed by comparing historical net salvage to

18   historical retirements. Net salvage (and its components, cost of removal and

19   gross salvage) is expressed as a percentage of retirements for each year and for

20   longer term periods. The traditional method does not focus on the dollar

21   amount of net salvage recorded, as Ms. McCullar does. Instead, it properly

1 recognizes that the dollar level of net salvage will tend to vary based on the

2 level of retirements recorded in a given year.

3 Q. PLEASE PROVIDE AN EXAMPLE TO DEMONSTRATE THAT, UNLIKE

4 MS. MCCULLAR'S PROPOSAL, THE TRADITIONAL METHOD WILL

5 PROPERLY ESTIMATE NET SALVAGE.

6 A. To demonstrate this concept, consider a utility that has 100,000 gas main

7 property units, for which the original cost of each is $5,000 and the cost of

8 removal, net of salvage, is $2,000. Thus, the total future net salvage would be

9 $200 million (100,000 x $2,000). If the average service life for gas mains were

10 65 years, then the annual accruals for the net salvage for these gas main

11 segments would approximate $3.08 million ($200 million divided by 65). That

12 is, a $3.08 million annual accrual amount is the correct amount to recover the

13 future net salvage of $200 million for these gas main segments over their service

14 lives. This is illustrated in Table JJS-2 below.

15 **Table JJS-2: Quantities, Costs and Average Service Life for Group of Gas**
16 **Main Segments**

Number of Gas Main Segments	100,000
Original Cost per Gas Main Segment	5,000
Plant in Service	500,000,000
Net Salvage Per Gas Main	2,000
Future Net Salvage	200,000,000
Average Service Life	65
Net Salvage Accruals	3,076,69200

1 Q. PLEASE EXPLAIN HOW NET SALVAGE WOULD BE ESTIMATED

2   USING MS. MCCULLAR'S METHOD AND THE TRADITIONAL

3   METHOD.

4 A. As discussed in Section II.A, the number of services retired in a given year will

5   vary based on the age of the assets and the survivor characteristics of the assets

6   in the account. Consider a scenario in which the Company has retired an

7   average of 1,000 gas main segments per year for the last five years. This would

8   mean that net salvage was, on average, $2,000,000 per year (1,000 x $2,000).

9   If one were to use Ms. McCullar's approach and establish a net salvage accrual

10   based on this average cost of $2,000,000, then the Company would recover

11    $2,000,000 per year through depreciation expense for net salvage. The result

12   is that the Company would not recover the necessary $200 million in future net

13   salvage and instead would only recover $130 million. Thus, Ms. McCullar's

14   approach would fail to properly recover the future net salvage costs for the

15   Company's assets.

16   In contrast, using the traditional method, the result would be the proper

17   recovery of the full $200 million in future net salvage costs. The average net

18   salvage recorded for this period would be $2,000,000 and the retirements would

19   be on average $5 million (1,000 x $5,000). Net salvage is divided by the

20   original cost of the retirements. Thus, the traditional net salvage analysis

21   would indicate a net salvage percent of negative 40 percent ($2 million divided

22   by $5 million). With a 65-year average service life, the use of a negative 40

1   percent net salvage estimate would correctly produce annual accruals for net

2   salvage of $3.08 million[3] and would recover the full $200 million in future net

3   salvage over the lives of the assets.

4 Q. PLEASE EXPLAIN THE IMPLICATIONS OF MS. MCCULLAR'S

5   METHOD AND THE TRADITIONAL METHOD IF A HIGHER NUMBER

6   OF SERVICES HAD BEEN RETIRED IN THE LAST FIVE YEARS.

7 A. Consider a scenario in which the Company retired an average of 4,000 gas main

8   segments per year for the most recent five years, resulting in an average net

9   salvage of $8 million per year (4,000 x $2,000).   If Ms. McCullar's approach

10   were used then the Company would recover $8 million per year through

11   depreciation for net salvage, which would result in a recovery of $520 million

12   over the lives of the gas mains, which is too much.

13   If the traditional method were used, then the average dollar amount of

14      $8 million for net salvage would be divided by the average retirement amount

15   of $20 million (4,000 x $5,000).   This too would indicate a net salvage percent

16   of negative 40 percent and result in the correct depreciation accruals.

17 Q. WHAT DOES THIS EXAMPLE DEMONSTRATE WITH REGARD TO MS.

18   MCCULLAR'S METHOD?

19 A. This example further demonstrates the basis of Ms. McCullar's approach, that

20   net salvage accruals should be based on the dollar level of recent net salvage

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[3] $500 million plant in service multiplied by 40 percent divided by 65 years is approximately $3.08 million.

1   costs, is fundamentally flawed.   The dollar amount of recent net salvage costs

2   is not a reasonable basis for estimating future net salvage because it does not

3   consider the number of assets that were retired over the same time period.   In

4   both scenarios discussed above, Ms. McCullar's method fails to correctly

5   allocate the future net salvage costs of the Company's assets.   Ms. McCullar's

6   approach is dependent on the amount of assets retired in recent years and, as a

7   result, will not recover the correct amount of net salvage.

8   In contrast to Ms. McCullar's method, this example demonstrates that

9   the traditional method determines the correct future net salvage and properly

10   allocates net salvage over the lives of the assets.   By properly recognizing the

11   relationship of net salvage to retirements, the traditional method incorporates

12   the fact that retirements do not occur at the same level in each year and provides

13   a reasonable basis for the estimation of future net salvage.

14   **C.**   **Ms. McCullar's Proposed Net Salvage Method Is Not Supported**
15   **by Depreciation Authorities**

16   *1.*   ***Authoritative Depreciation Texts Do Not Support Ms.***
17   ***McCullar's Proposed Net Salvage Method***

18 Q.   MS. MCCULLAR CITES TO TWO DEPRECIATION TEXTS IN HER

19   TESTIMONY.   DO THESE TEXTS SUPPORT HER APPROACH?

20 A.   No.   The two texts cited by Ms. McCullar are the National Association of

21   Public Regulatory Utility Commissioners' ("NARUC") Public Utility

22   Depreciation Practices (the "NARUC Manual") and Depreciation Systems by

23   Wolf and Fitch ("Wolf and Fitch").   Her presentation of selected quotes from

1   these texts could give the incorrect impression that either text expresses concern

2   with the traditional approach for estimating net salvage or with the concept that

3   there is an implicit level of inflation incorporated in the traditional net salvage

4   analysis.   However, neither actually supports her proposed methodology.

5   Instead, each supports the traditional method.   Both texts explain that net

6   salvage should be accrued over the life of the related property and should be

7   estimated using the traditional method of net salvage analysis in which net

8   salvage is expressed as a ratio of retirements.

9   Q.   PLEASE EXPLAIN.

10   A.   First, both textbooks explain that net salvage should be recovered over the life

11   of the related assets.   For example, the NARUC Manual states at page 157:

12   Historically, most regulatory commissions have required that
13   both gross salvage and cost of removal be reflected in
14   depreciation rates.   The theory behind this requirement is that,
15   since most physical plant placed in service will have some
16   residual value at the time of retirement, the original cost
17   recovered through depreciation should be reduced by that
18   amount.   Closely associated with this reasoning is the
19   accounting principle that revenues be matched with costs and the
20   regulatory principle that utility customers who benefit from the
21   consumption of plant pay for the cost of that plant, no more, no
22   less.   The application of the latter principle also requires that the
23   estimated cost of removal of plant be recovered over its life.

24   Similarly, the 1994 edition of *Depreciation Systems* states at page 7:

25   The matching principle specifies that all costs incurred to
26   produce a service should be matched against the revenue
27   produced.   Estimated future costs of retiring of an asset
28   currently in service must be accrued and allocated as part of the
29   current expenses.

1   Thus, both sources use mandatory language when describing the

2   traditional approach of accruing "retirement" or "removal" costs over the life

3   of the plant.

4   Q.   DO BOTH OF THESE TEXTS EXPLAIN HOW FUTURE NET SALVAGE

5   IS ESTIMATED?

6   A.   Yes.   Both explain that net salvage, expressed as a percentage of original cost

7   of plant in service, is estimated incorporating the same methods of analysis

8   employed in the Company's depreciation studies.   That is, both texts support

9   the traditional method of estimating future net salvage.

10 Q.   HOW DOES NARUC EXPLAIN HOW NET SALVAGE SHOULD BE

11   ESTIMATED?

12 A.   NARUC states that "net salvage is expressed as a percentage of plant retired by

13   dividing the dollars of net salvage by the dollars of original cost of plant

14   retired."[4]   This is the method of analysis used in the Company's depreciation

15   study and referred to in my testimony as the traditional method.

16 Q.   HOW DO WOLF AND FITCH EXPLAIN THAT NET SALVAGE IS

17   ANALYZED?

18 A.   Wolf and Fitch also explain that net salvage is expressed as a percentage of the

19   original cost of plant retired, noting "the SR [Salvage Ratio] is the salvage

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[4] NARUC Manual, p. 18.

1   divided by the original cost of the retirements and usually is expressed as a

2   percentage."[5]

3   Q.   DO ANY AUTHORITATIVE DEPRECIATION TEXTS SUPPORT MS.

4   MCCULLAR'S APPROACH OF COMPARING NET SALVAGE

5   ACCRUALS TO RECORDED NET SALVAGE COSTS?

6   A.   No.   I am not familiar with any.   Ms. McCullar did not cite to any authorities

7   that support the actual approach she used.

8   **2.   *The Traditional Method Meets the Requirements of the***
9   ***Uniform System of Accounts***

10   Q.   WHAT IS THE FEDERAL ENERGY REGULATORY COMMISSION

11   ("FERC") UNIFORM SYSTEM OF ACCOUNTS?

12   A.   The Uniform System of Accounts ("USOA") is the standard set of definitions,

13   rules and instructions established by the FERC that provides consistency in

14   accounting for utilities under its jurisdiction.   Most jurisdictions, including

15   North Carolina, have adopted the Uniform System of Accounts for the utilities

16   they regulate.

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[5] Wolf and Fitch, p. 261.   Note that, in this context, Wolf and Fitch use the term "salvage" to mean "net salvage."   In addition to describing the traditional method, Wolf and Fitch also present more detailed analysis of net salvage by age.   The intent of this more detailed analysis is to recognize the impact of age and inflation on the traditional method of net salvage analysis.   In the aged net salvage analysis described by Wolf and Fitch, net salvage is first converted to constant dollars.   Then, the level of inflation that will occur over the full service life of each asset is calculated (which is often longer than the age of retirements in the historical net salvage data).   The result of this more detailed analysis is typically more negative net salvage estimates than would occur from the traditional method.

1   Q.   DOES THE USOA ADDRESS THE ISSUE OF HOW NET SALVAGE

2   COSTS SHOULD BE ACCOUNTED FOR, AND IF SO, HOW?

3   A.   Yes.   The USOA requires that net salvage costs be recorded to the accumulated

4   provision for depreciation account and accrued as part of depreciation expense

5   over the course of an asset's service life (i.e., recognized in each period in which

6   the asset provides service) in a systematic and rational manner.

7   Q.   PLEASE DISCUSS IN MORE DETAIL THE USOA'S TREATMENT OF

8   DEPRECIATION.

9   A.   The USOA defines depreciation as follows:

10   Depreciation, as applied to depreciable gas plant, means the loss
11   in service value not restored by current maintenance, incurred in
12   connection with the consumption or prospective retirement of
13   gas plant in the course of service from causes which are known
14   to be in current operation and against which the utility is not
15   protected by insurance.   Among the causes to be given
16   consideration are wear and tear, decay, action of the elements,
17   inadequacy, obsolescence, changes in the art, changes in
18   demand and requirements of public authorities.[6]

19   Q.   IN THE QUOTE ABOVE, THE USOA REFERS TO DEPRECIATION AS

20   THE "LOSS IN SERVICE VALUE."   WHAT IS SERVICE VALUE?

21   A.   Service value, as also defined in the USOA, is "the difference between original

22   cost and net salvage value of gas plant."[7]   Thus, the USOA requires that

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[6] FERC Uniform System of Accounts Prescribed for Natural Gas Companies Subject to the Provisions of the Natural Gas Act, definition 12B.
7 FERC Uniform System of Accounts Prescribed for Natural Gas Companies Subject to the Provisions of the Natural Gas Act, definition 37.

1   depreciation include net salvage as well as the original cost of the Company's

2   assets.

3 Q.   DOES THE USOA ALSO DEFINE WHAT IT MEANS BY "NET SALVAGE

4   VALUE"?

5 A.   Yes. "'Net salvage value' means the salvage value of property retired less the

6   cost of removal."[8] These costs are recorded to accumulated depreciation at the

7   cost expended (or received as salvage) at the time they occur and are included

8   in depreciation expense over the service lives of the assets.

9 Q.   DOES THE USOA PRESCRIBE A BASIS FOR ACCOUNTING?

10 A.   Yes. The gas USOA includes General Instruction 11, "Accounting to be on

11   accrual basis," which states, "[t]he utility is required to keep its accounts on the

12   accrual basis." Under the accrual basis of accounting, transactions are

13   accounted for when the order is made, the item is delivered, or the service

14   occurs, regardless of when any money for such orders, items, or services is

15   actually received or paid. The accrual basis recognizes economic events

16   without regard to when the related cash transaction occurs. Combined with the

17   use of the term "service value" in the definition of depreciation, the use of

18   accrual accounting means that net salvage costs should be recognized while the

19   asset is providing service – that is, over its service life, rather than when the

20   costs are actually incurred.

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[8] *Id*., definition 23.

1   To further emphasize this point, General Instruction 22 in the electric

2   USOA states:

3   Utilities must use a method of depreciation that allocates in a
4   systematic and rational manner the service value of depreciable
5   property over the service life of the property.

6   While the gas USOA does not have the same language, one can

7   reasonably infer that the service value (including net salvage) for gas plant must

8   also be allocated over the service life of the property.   Additionally, the

9   requirement for accrual accounting and the inclusion of net salvage in the

10   service value of an asset similarly require that net salvage costs be recovered

11   over the service life of an asset.

12 Q. DOES   THE   TRADITIONAL   METHOD   SATISFY   THESE

13   REQUIREMENTS?

14 A. Yes. I have demonstrated previously that the traditional method results in the

15   recovery of net salvage costs over the lives of the related assets.   The

16   traditional method, therefore, satisfies these requirements of the USOA.

17 Q. DOES MS. MCCULLAR'S METHOD SATISFY THESE REQUIREMENTS?

18 A. No.   As discussed previously, Ms. McCullar's method is not designed to

19   properly allocate net salvage costs over the service lives of the Company's

20   assets.   Instead, her method is based on the level of net salvage costs recently

21   incurred.

1   **3.**   *Ms. McCullar's Method Has Been Rejected in Other*

2   *Jurisdictions*

3   Q.   IS THE TRADITIONAL METHOD WIDELY USED IN THE UTILITY

4   INDUSTRY?

5   A.   Yes. The traditional method is used in the vast majority of regulatory

6   jurisdictions. In contrast, Ms. McCullar's method has been rejected by other

7   jurisdictions.

8   Q.   ARE YOU FAMILIAR WITH ANY STATES THAT HAVE SPECIFICALLY

9   REJECTED THE METHOD FOR NET SALVAGE SIMILAR TO THAT

10   PROPOSED BY MS. MCCULLAR?

11   A.   Yes. There are a number of states that have specifically rejected the approach

12   for net salvage proposed by Ms. McCullar. I will briefly discuss two recent

13   cases in Washington and Massachusetts in which Ms. McCullar's proposals

14   were rejected. Other states that have rejected approaches similar to what Ms.

15   McCullar has proposed include California,[9] Michigan,[10] Georgia,[11] and

16   Missouri.[12]

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[9] See California D.07-03-044 in A.05-12-002, pp. 226 and 227.

[10] Michigan Public Service Commission Order, Case No. U-15629, filed September 29, 2009, p. 12.

[11] Georgia Public Service Commission Docket No. 31647, Final Order, filed December 21, 2010.

[12] Missouri Case No. GR-99-315, Third Report and Order issued January 11, 2005, p. 7-16.

1 Q. PLEASE DESCRIBE THE RECENT CASE IN WASHINGTON IN WHICH

2   MS. MCCULLAR'S NET SALVAGE METHOD WAS REJECTED.

3 A. On behalf of the Washington Public Counsel, Ms. McCullar proposed net

4   salvage estimates based on a similar net salvage method in a case for Puget

5   Sound Energy ("PSE").   While other parties in that case reached a settlement

6   agreement that adopted most of the recommendations in PSE's depreciation

7   study, the Washington Public Counsel did not agree to the settlement and

8   continued to argue for Ms. McCullar's inappropriate net salvage method.   The

9   Washington Commission rejected Ms. McCullar's proposed method, stating:

10   164. Public Counsel's proposed alternative to the Settlement
11   Stipulation's treatment of net salvage of mass assets used in
12   natural gas operations appears to be based on testimony by Ms.
13   McCullar that we find to be vague in its methodology, not
14   supported by authoritative accounting literature, and supported
15   by unwarranted assumptions. Mr. Spanos' estimates of net
16   salvage for natural gas mass assets, in contrast, does not suffer
17   from these deficiencies.

18   165. In addition, Ms. McCullar's comparison of net salvage
19   accruals to net salvage expenditures PSE incurred during recent
20   years would effectively recover net salvage as an operating
21   expense, not a depreciation expense. We do not accept this
22   result.

23   166. Thus, we reject Public Counsel's alternative viewpoint and
24   approve the Settlement Stipulation with respect to net salvage of
25   mass assets that support PSE's natural gas operations.[13]

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[13] See page 60 of the Final Order of the Washington Utilities and Transportation Commission in Dockets
UE-170033 and UE-170034, issued on December 5, 2017.

1   Q.   PLEASE DESCRIBE THE CASE IN MASSACHUSETTS IN WHICH MS.

2   MCCULLAR'S PROPOSED METHOD WAS REJECTED.

3   A.   Ms. McCullar's firm was involved in a recent case for two Eversource

4   subsidiaries (Massachusetts Docket D.P.U 17-05-F).   In that case,

5   Eversource's proposed net salvage estimates were based on the traditional

6   method I have used in the instant case.   Ms. McCullar's firm proposed to

7   reduce Eversource's proposed net salvage estimates based on the same

8   approach that Ms. McCullar uses in the instant case.

9   Upon reconsideration, the Massachusetts Department of Public Utilities

10   ("DPU") rejected the proposal of Ms. McCullar's firm and adopted the

11   company's net salvage proposals.   First, the DPU held that:

12   [w]e conclude that the Eversource's method of deriving net
13   salvage values was appropriate and, in this instance, should have
14   been accepted.[14]

15   Ms. McCullar has criticized the traditional method of net salvage in the

16   instant case for incorporating some degree of future inflation and cited to

17   NARUC and Wolf and Fitch in support of her arguments.   The Massachusetts

18   DPU disagreed.   First, addressing the textbook Wolf and Fitch, the DPU stated:

19   [i]t is clear that the final salvage ratios developed using the
20   method described in Depreciation Systems include inflation.[15]

21   The DPU also stated that:

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[14] Massachusetts Docket No. D.P.U. 17-05-F, Order on Eversource's Motion for Reconsideration and Motion for Leave to File a Response, dated May 11, 2018, page 13.

[15] Massachusetts Docket No. D.P.U. 17-05-F, Order on Eversource's Motion for Reconsideration and Motion for Leave to File a Response, dated May 11, 2018, pages 16-17.

1 Given that the method set forth in Depreciation Systems and the
2 one prescribed by NARUC both recognize an inflation
3 component, the Department no longer is persuaded that
4 Eversource's failure to discount its salvage values for the time
5 value of money resulted in proposed net salvage factors that
6 overstate the Companies' salvage costs and produce excessive
7 depreciation accrual rates. Rather, we find that for the 14
8 subject accounts, Eversource's proposed net salvage factors
9 appropriately recognize the full service value of the assets in
10 these accounts. While it is true that Eversource's net salvage
11 factors result in higher depreciation rates than those proposed by
12 the Attorney General, we find that the rates, which were
13 calculated according to an acceptable method, are appropriate to
14 ensure that current customers who receive service from those
15 particular assets pay for an appropriate share of the costs for
16 retiring those assets. Therefore, the proposed net salvage
17 factors should have been approved in D.P.U. 17-05.[16]

18 The DPU affirmed that Eversource's use of the traditional method was

19 consistent with NARUC:

20 Based on a review of Eversource's depreciation studies, the
21 Department finds that Eversource's salvage analysis is
22 consistent with the analysis prescribed by NARUC.[17]

23 Finally, the DPU also concluded that Ms. McCullar's method was not

24 appropriate.

25 [w]e conclude that other than demonstrating that her alternative
26 represents a gradual decrease from the Companies' proposed
27 accruals, the Attorney General offered no persuasive
28 explanation why net salvage accruals that are 2.2 times larger
29 than a recent average annual net salvage expense are more

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[16] Massachusetts Docket No. D.P.U. 17-05-F, Order on Eversource's Motion for Reconsideration and Motion for Leave to File a Response, dated May 11, 2018, pages 16-17.

[17] Massachusetts Docket No. D.P.U. 17-05-F, Order on Eversource's Motion for Reconsideration and Motion for Leave to File a Response, dated May 11, 2018, page 16.

1   appropriate than the Companies' proposal or appropriate on their
2   own merit.[18]

3   The DPU concluded by explaining that Eversource's use of the

4   traditional method was a recognized and accepted approach, that Ms.

5   McCullar's method was not reliable, and that Eversource's depreciation rates

6   were appropriate.   Specifically, the DPU stated:

> 7   While we recognize that, in contrast to the selection of average
> 8   service lives and dispersion curves, the selection of salvage
> 9   values is more subjective, the Department is not prepared to
> 10   deviate from a recognized and accepted approach to deriving
> 11   salvage ratios in the absence of an appropriately supported
> 12   alternative. In this case, upon reconsideration, we are not
> 13   persuaded that the Attorney General's alternative approach is
> 14   sufficiently reliable to warrant a departure from the approach
> 15   used by Eversource. Moreover, as noted above, we find that the
> 16   overall depreciation rates proposed by Eversource are
> 17   appropriate and not excessive.[19]

18   ***4.   Ms. McCullar's net salvage method has not been accepted in***
19   ***North Carolina***

20 Q.   HAS   THE   NORTH   CAROLINA   UTILITIES   COMMISSION

21   ("COMMISSION") RULED ON THE APPROPRIATE METHOD OF

22   RECOVERING NET SALVAGE?

23 A.   Yes.   In recent cases for Duke Energy Progress in Docket No. E-2, Sub 1219[20]

24   and Duke Energy Carolinas in Docket No. E-7, Sub 1214[21], the Commission

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[18] Massachusetts Docket No. D.P.U. 17-05-F, Order on Eversource's Motion for Reconsideration and Motion for Leave to File a Response, dated May 11, 2018, page 17.

[19] Massachusetts Docket No. D.P.U. 17-05-F, Order on Eversource's Motion for Reconsideration and Motion for Leave to File a Response, dated May 11, 2018, page 18.

[20] State of North Carolina Utilities Commission Raleigh Docket No. E-2, Sub 1219, Order Accepting Stipulations, Granting Partial Rate Increase, and Requiring Customer Notice, pages 43-44.

[21] State of North Carolina Utilities Commission Raleigh Docket No. E-7, Sub 1214, Order Accepting Stipulations, Granting Partial Rate Increase, and Requiring Customer Notice, pages 37-38.

1   agreed with the utilization of the traditional method which is the same method

2   that was utilized for all accounts in this case by the Company.   In both cases,

3   witness McCullar recommended the same methodology for net salvage that she

4   has recommended in this case for the two distribution main subaccounts.

5   Q.   PLEASE DESCRIBE THE RELATED ISSUES IN THE TWO DUKE

6   ENERGY PROCEEDINGS.

7   A.   In the two Duke Energy cases related to mass property net salvage, I represented

8   Duke Energy Progress and Duke Energy Carolinas and provided a depreciation

9   study that utilized the traditional net salvage method for all property accounts

10   consistent with the standards of recovery by all authoritative texts as well as

11   FERC and this Commission.   In each of the Duke Energy proceedings Ms.

12   McCullar selectively recommended an alternative method of net salvage for a

13   couple of accounts, which has not been recognized by authoritative texts as

14   appropriate.   Ms. McCullar did not provide any support for why those accounts

15   should be treated differently than the other accounts.   Ms. McCullar's only

16   apparent justification was that the level of net salvage accruals were much

17   higher than the net salvage costs of recent years.   This has clearly been found

18   to be an inappropriate comparison for developing depreciation rates for the

19   future.

1 Q. HAS MS. MCCULLAR PRESENTED THE SAME ARGUMENT IN THIS

2   CASE RELATED TO NET SALVAGE METHODOLOGY FOR ONLY A

3   COUPLE ACCOUNTS AS PRESENTED IN THE TWO DUKE ENERGY

4   CASES?

5 A. Yes.

6 Q. DID THE COMMISSION ACCEPT MS. MCCULLAR'S ARGUMENT IN

7   THOSE CASES?

8 A. No. The Commission did not adopt Ms. McCullar's arguments and found in

9   both cases that the future net salvage rates for mass property accounts that I

10   proposed were just and reasonable, appropriate for use, and were adopted.

11   **D. Ms. McCullar's Arguments Against the Traditional Method Do**
12   **Not Provide a Basis to Deviate from the Industry Standard**
13   **Method for Estimating Net Salvage**

14 Q. WHAT ARGUMENTS DOES MS. MCCULLAR MAKE WITH REGARD

15   TO THE TRADITIONAL NET SALVAGE METHOD YOU HAVE USED?

16 A. Ms. McCullar's primary argument against the use of the traditional net salvage

17   method relates to the implication that there is future inflation in historical net

18   salvage ratios because historical net salvage and retirements are at different

19   price levels. I note that Ms. McCullar does not provide any reasoning or

20   justification why this would be problematic. While she cites to both the

21   NARUC Manual and Wolf and Fitch, as I mentioned previously, neither text

22   supports her method.

1 Q. PLEASE ADDRESS THE ARGUMENT MADE BY MS. MCCULLAR

2 REGARDING THE DIFFERENCE IN PRICE LEVELS IN THE

3 CALCULATION OF HISTORICAL NET SALVAGE RATIOS.

4 A. Ms. McCullar criticizes the traditional method because historical net salvage is

5 expressed at current price levels (meaning the price level when the net salvage

6 is recorded) whereas retirements are recorded at original cost. There are

7 several responses to this criticism. The first is that the Company's current

8 plant balances, to which net salvage ratios are applied, are expressed at original

9 cost. That is, the assets in service are not brand new and many are decades old.

10 Further, these assets will not all be retired today but instead most will be retired

11 in the future. For these reasons, expressing historical net salvage as a

12 percentage of historical retirements makes sense and is appropriate. Not doing

13 so would understate future net salvage.

14 The second response is that, as discussed in detail in Section II.C,

15 authoritative depreciation textbooks and most regulatory commissions support

16 the use of the traditional method. There is a longstanding history of using the

17 traditional method and most regulatory commissions have not been convinced

18 by the types of arguments set forth by Ms. McCullar.

19 The third response is that, when one analyzes the age of historical

20 retirements in the net salvage analysis and compares this to the age at which

21 assets currently in service will be retired (i.e., the average service life or the

22 probable life), the time period between installation and retirement in the

1   historical data is typically shorter than will occur for assets in service.   Thus,

2   the traditional method of net salvage typically results in conservative estimates

3   of net salvage, at least with regard to any changes in price levels that will occur.

4   As a final response, Ms. McCullar has not actually attempted to propose

5   a method of estimating or recovering future net salvage that would adjust future

6   net salvage rates for inflation.   It may be possible to construct a methodology

7   that would do so, although such a method would have to recognize the age of

8   retirements in the historical net salvage analysis and would be very complex.

9   Ms. McCullar has not proposed such a method.   Instead, the only actual

10   analysis she provides is comparing the net salvage proposals to the costs the

11   Company has incurred in recent years.   This methodology is not a reasonable

12   basis to estimate future net salvage, much less attempt to adjust future net

13   salvage for inflation.

14   Q.   IN RESPONSE TO A QUESTION OF WHETHER THERE IS "ANY

15   CONCERN REGARDING THE HISTORIC NET SALVAGE RATIOS

16   CALCULATED IN THE DEPRECIATION STUDY," MS. MCCULLAR

17   CITES WOLF AND FITCH AND NARUC.   DO THESE TEXTS SUPPORT

18   THAT THERE IS A "CONCERN" WITH THE TRADITIONAL METHOD?

19   A.   No.   These cites do not suggest that there is a "concern" with the traditional

20   method.   As discussed in Section II.C.1, both texts support the traditional

21   method and neither support Ms. McCullar's method.   The recognition by both

22   texts of certain aspects of the traditional method does not mean either text

1   considers the difference in price level between net salvage and retirements in

2   historical net salvage ratios to be a concern.   Ms. McCullar's testimony should

3   not be misconstrued as support by either of these sources of an alleged

4   "concern" with the traditional method.   Rather, both recognize a characteristic

5   of the traditional net salvage analysis, but still support its use.

6   **III.   CONCLUSION**

7 Q.   DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

8 A.   Yes.