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MISSOURI PUBLIC SERVICE COMMISSION

CASE NO. GR-99-315

SUPPLEMENTAL DIRECT TESTIMONY

OF

MARTIN J. LYONS, JR.

ON

BEHALF OF

**UNION ELECTRIC COMPANY
d/b/a AmerenUE**

**St. Louis, Missouri
August, 2004**

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1 **SUPPLEMENTAL DIRECT TESTIMONY**

2 **OF**

3 **MARTIN J. LYONS, JR.**

4 **CASE NO. GR-99-315**

5 **I. INTRODUCTION**

6 **Q. Please state your name and business address.**

7 A. My name is Martin J. Lyons, Jr. My business address is One Ameren
8 Plaza, 1901 Chouteau Avenue, St. Louis, Missouri 63103.

9 **Q. By whom are you employed?**

10 A. I am Vice President and Controller of Ameren Corporation (“Ameren”), as
11 well as of Union Electric Company (“AmerenUE”) and Ameren’s other subsidiaries.

12 **Q. Please describe your educational background.**

13 A. In 1988, I received a Bachelor of Science degree in Business
14 Administration, with an Accountancy major, from Saint Louis University. In 1997, I
15 received a Master of Business Administration degree from Washington University.

16 **Q. Please describe your qualifications.**

17 A. I am a certified public accountant licensed to practice in Missouri. I am a
18 member of the American Institute of Certified Public Accountants and the Missouri
19 Society of Certified Public Accountants.

20 **Q. Please describe your professional work experience.**

21 A. In 1988, I joined Price Waterhouse (now PricewaterhouseCoopers LLP)
22 and was admitted to the partnership in 1999. During my tenure as a partner, I devoted

1 approximately seventy-five percent of my time to supervising audits of, and consulting
2 on accounting issues for, utility clients. I routinely assisted utility clients with, among
3 other things, accounting and financial reporting matters, utility rate filings, debt and
4 equity offerings, merger and acquisition due diligence procedures and accounting issues
5 raised by deregulation. I also assisted utility clients in defending accounting principles
6 before the Securities and Exchange Commission ("SEC"), the Federal Energy Regulatory
7 Commission ("FERC") and various state regulatory agencies. In 2001 I joined Ameren
8 as Controller and in 2003 was named Vice President and Controller.

9 **Q. Please describe your duties and responsibilities as Vice President and**
10 **Controller.**

11 A. I manage the accounting, financial reporting, budgeting and investor
12 relations functions for Ameren, AmerenUE, and Ameren's other subsidiaries. I am
13 responsible for assuring that transactions are accounted for in accordance with generally
14 accepted accounting principles and the Uniform System of Accounts (USoA) or other
15 specific regulatory requirements. Additionally, I am responsible for SEC, FERC,
16 Missouri Public Service Commission and Illinois Commerce Commission regulatory
17 reporting requirements.

18 **II. PURPOSE AND SUMMARY OF TESTIMONY**

19 **Q. What is the purpose of your supplemental direct testimony?**

20 A. This case addresses two different approaches for the treatment of net
21 salvage costs: (1) the standard, time-tested approach that has been used by this
22 Commission in the regulation of Missouri utilities for decades (hereinafter referred to as

1 the “standard approach”); and (2) an approach that has been proposed by Staff in recent
2 cases that clearly is inconsistent with the standard treatment of net salvage (hereinafter
3 referred to as the “Staff’s approach”). The purpose of my testimony is to address the
4 consistency or inconsistency of these different net salvage approaches with standard
5 regulatory accounting requirements and standard ratemaking practices. I also explain in
6 detail the safeguards inherent in standard regulatory and accounting rules, which fully
7 compensate customers for “accrued but not yet spent” net salvage amounts and which
8 also offer customers and utilities full protection from any adverse effects associated with
9 changes in estimated depreciation parameters.

10 **Q. Please summarize your testimony and conclusions.**

11 A. I reach two main conclusions in this testimony. First, the standard
12 approach appropriately allocates the service value of assets, which is defined as the
13 difference between the original cost and net salvage value of utility plant, over the
14 estimated service life to the customers actually using that plant. This requires the
15 estimation of both the service lives and the net salvage values of a utility’s assets. The
16 standard approach to depreciation is consistent with the Uniform System of Accounts
17 (“USoA”) utilities must follow and is widely supported by virtually all state commissions
18 and the recommendations of authoritative texts and experts, such as witnesses Stout and
19 Fetter.

20 In stark contrast with the standard approach, Staff’s approach to net
21 salvage is inconsistent with USoA requirements, is inconsistent with the standard
22 regulatory practice recommended by the National Association of Regulatory Utility
23 Commissioners (“NARUC”), and is not supported by recognized authorities in the field.

1 Second, adequate safeguards exist to protect consumers from any potential
2 over-accruals which may occur as a result of changes in estimates of depreciation. The
3 standard approach to depreciation assures that the (1) differences between accruals and
4 actual net salvage costs are monitored and “trued up” to ensure that total recovery from
5 customers does not exceed (or fall short of) actual expenditures; (2) customers are fully
6 compensated for “accrued but not yet spent” net salvage costs of currently used assets
7 through rate base reductions; and (3) updates of the depreciation estimates ensure that
8 depreciation rates remain closely related to the underlying asset lives and salvage values.

9 **Q. How have you organized the remainder of your testimony?**

10 A. I discuss the two conclusions in separate sections. Section III elaborates
11 on the consistency or inconsistency of each approach with utility accounting standards.
12 Section IV discusses the safeguards inherent in regulatory and accounting conventions
13 that protect customers from any adverse effects associated with future changes of
14 estimated depreciation parameters.

15 **III. CONSISTENCY WITH ACCOUNTING AND REGULATORY**
16 **STANDARDS**

17 **Q. What is the purpose of this section of your testimony?**

18 A. In this section of my testimony I first explain the standard utility
19 accounting for depreciation, including net salvage, as provided for by the USoA. As
20 Mr. Stout and I show, the use of these accounting practices for ratemaking is
21 recommended by authoritative texts and experts, including NARUC. Second, I show that
22 Staff’s approach is inconsistent with standard regulatory accounting and ratemaking
23 practices.

1 **A. DEPRECIATION TREATMENT UNDER REGULATORY ACCOUNTING RULES AND**
2 **STANDARD REGULATORY PRACTICE**

3 **Q. What is the purpose of depreciation in utility ratemaking?**

4 A. As other witnesses in this proceeding have pointed out, the purpose of
5 depreciation is to allocate the “service value” of assets, which is defined as the difference
6 between the original cost and net salvage value of utility plant, over the assets’ estimated
7 service life. This process “distributes” asset costs, which include estimated net salvage,
8 to the individual accounting periods during the property’s life, resulting in a fair
9 allocation of costs to individual accounting periods and the customers that actually
10 benefit from the use of the property.

11 **Q. Is this concept of depreciation a standard for accounting within the**
12 **utility industry?**

13 A. Yes. In fact, this concept of depreciation, including the definitions of
14 service value, net salvage value, and service life, are all incorporated in the USoA, which
15 all utilities, including utilities in Missouri, have adopted.¹ For example, the USoA makes
16 it quite clear that “[u]tilities must use a method of depreciation that allocates in a
17 systematic and rational manner the service value of depreciable property over the service
18 life of the property.”² Importantly, the accounting rules under Part 101 of the USoA are
19 quite specific as to how this allocation must be accomplished: “Utilities must use
20 percentage rates of depreciation that are based on a method of depreciation that allocates

¹ See USoA, Pt 101 (electric) and Pt 201 (natural gas), Definitions. Missouri rules 4 CSR 240-20.030 (electric) and 240-40.040 (gas) require that the state’s utilities follow the USoA.

² USoA, Pt 101, General Instructions, No. 22A.

1 in a systematic and rational manner the service value of depreciable property to the
2 service life of the property”.³

3 **Q. Is this concept of depreciation consistent with standard regulatory**
4 **ratemaking practice?**

5 A. Yes, it is. This concept of depreciation, as defined and required by the
6 USoA, has also been sanctioned by NARUC. NARUC’s Depreciation Practices
7 publication states:

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

17 Again, as defined in NARUC Depreciation Practices “service value” is the
18 “original cost of an asset *less its estimated net salvage*” (emphasis supplied, p. 324). Or
19 as NARUC summarizes, “depreciation accounting is the process of charging the book
20 cost (generally stated as original cost in utility accounting) of depreciable property,
21 adjusted for net salvage value, to operations over its useful life” (p. 43).

22 With respect to net salvage, NARUC Depreciation Practices specifically explains:

23 Net salvage is expressed as a percentage of plant retired by
24 dividing the dollars of net salvage by the dollars of original cost of
25 plant retired. The goal of accounting for net salvage is to allocate
26 the net cost of an asset to accounting periods, making due
27 allowance for net salvage, positive or negative, that will be
28 obtained when the asset is retired. This concept carries with it the

³ *Id.*, General Instruction No. 22B.

⁴ National Association of Regulatory Utility Commissioners, *Public Utilities Depreciation Practices*, August 1996 (NARUC Depreciation Practices), p. 13. This definition essentially is identical to the currently-effective USoA (see Pt. 101 and Pt. 201, Definitions No. 12).

1 premise that property ownership includes the responsibility for the
2 property's ultimate abandonment or removal. Hence, if current
3 users benefit from its use, they should pay their pro rata share of
4 the costs involved in the abandonment or removal of the
5 property.... This treatment of net salvage is in harmony with
6 generally accepted accounting principles [and] has the advantage
7 that current customers pay or receive a fair share of costs
8 associated with the property devoted to their service, even though
9 the costs may be estimated (p. 18).

10 **Q. Is this concept of depreciation consistent with treatment**
11 **recommended by authoritative experts in the field?**

12 A. Yes. As Mr. Stout explains in his testimony, this treatment of depreciation
13 and net salvage is the treatment recommended by the leading depreciation practitioners in
14 the country, including Drs. Wolf and Fitch, who have been acknowledged as authorities
15 on the subject area by Staff's own depreciation witnesses.

16 **Q. Is the Commission required to adopt for ratemaking purposes the**
17 **standard approach to depreciation accounting recognized by the USoA and the**
18 **depreciation experts?**

19 A. Although most aspects of the ratemaking process are fully consistent with
20 the accounting framework utilized by utilities in conformity with the USoA, the
21 Commission does have the authority to deviate from that framework under certain
22 circumstances. However, deviations between rate treatment and the USoA and other
23 accounting requirements should not be taken lightly. The USoA requirements
24 incorporate "best practice" regulated utility accounting standards based on decades of
25 regulatory and cost-of-service ratemaking experience. In this situation, where
26 depreciation experts overwhelmingly support the USoA approach there is no justification
27 for the Commission to deviate from it.

1 **Q. But is it not correct that net salvage values under the standard**
2 **depreciation approach have become large costs that can be a substantial fraction of,**
3 **and in some cases even exceed, assets' original costs?**

4 A. Yes, it is correct that net salvage values can be large, even larger than the
5 associated assets' original costs, due to the effect of inflation. But that makes it even
6 more important that these costs are allocated to the actual users of the assets. NARUC
7 Depreciation Practices also recognizes this point:

8 Due to inflation and other factors, there is a tendency for costs of
9 retirement, typically labor, to increase more rapidly than material
10 prices. In an increasing number of instances, the average net
11 salvage is estimated to be a large negative number when expressed
12 as a percentage of original cost, sometimes in excess of negative
13 100%. This may look unrealistic but is appropriate and necessary
14 so that the required cost allocation occurs (p. 19).

15 **B. STAFF'S APPROACH IS INCONSISTENT WITH REGULATORY ACCOUNTING**
16 **REQUIREMENTS AND STANDARD REGULATORY PRACTICE**

17 **Q. How does Staff's approach deviate from the standard treatment of net**
18 **salvage?**

19 A. In this case, Staff proposed to reduce dramatically the annual accruals for
20 net salvage. Under the standard regulatory approach the proper annual accrual for net
21 salvage in depreciation rates is determined by estimating the net salvage values of assets
22 currently used to serve customers and allocating those net salvage values over the
23 estimated service life of the assets. In contrast, the Staff's proposed approach sets
24 depreciation rates to reflect net-salvage-related accruals equal only to the average net
25 salvage expenditures actually incurred in recent years due to the retirement of plant that
26 was used to serve customers in the past.

1 Since first applying its approach in this case, Staff has further modified its
2 approach by eliminating net salvage from depreciation rate calculations altogether.
3 Instead, Staff now only includes the average net salvage expenditures made in recent
4 years as an expense item to be included in utilities' revenue requirements. Varying from
5 one rate case to the other, Staff has determined this allowance for net salvage expense
6 based on the use of averages of three, four, five or ten years of the respective utilities' net
7 salvage expenditures.

8 As Mr. Stout explains, the Staff's approach collects in current rates only
9 the net salvage costs incurred on retired plant that was used to serve customers in the
10 past, while the standard approach accrues from current customers the net salvage costs
11 associated with currently-used plant. As my previous discussion of depreciation concepts
12 and requirements makes clear, Staff's approach is inconsistent with standard utility
13 depreciation practices as provided for under the USoA, is not supported by the
14 recommendations of the most authoritative experts and literature, and does not reflect
15 standard ratemaking treatment and sound regulatory policy. Staff has not been able to
16 point to *any* authoritative literature that would support its position. More importantly, the
17 Staff's approach to depreciation and net salvage also is inconsistent with the treatment
18 afforded by almost every other regulatory commission in the country. Not surprisingly
19 this leads to depreciation allowances that are dangerously below the reasonable range the
20 other state commissions have allowed.

1 **IV. SAFEGUARDS THAT PROTECT CUSTOMERS FROM CHANGES IN**
2 **ESTIMATED DEPRECIATION PARAMETERS**

3 **Q. Given that depreciation lives and net salvage require estimation, does**
4 **the standard approach include any safeguards that protect consumers from**
5 **potentially adverse effects of the estimation process?**

6 A. Yes. The standard approach incorporates safeguards that fully and
7 effectively protect both customers and utilities from potentially adverse effects associated
8 with estimating depreciation lives and net salvage. These safeguards are as follows:

9 (1) The depreciation reserve provides a balancing mechanism that
10 ensures that cost recovery from customers does not exceed (or fall
11 short of) actual expenditures.

12 (2) The fact that the depreciation reserve is deducted from rate base
13 effectively provides customers with a return (equal to the utility's
14 rate of return on rate base) on any funds paid to their utility that
15 have not yet been spent.

16 (3) The provision in the Commission's rules that requires utilities to
17 undertake periodic depreciation studies to update their depreciation
18 rates ensures that estimated depreciation lives and net salvage will
19 be continually updated to reflect the best available data.

20 **Q. Before you address these safeguards, how does the standard approach**
21 **recognize the fact that estimates of service lives and net salvage costs may change**
22 **over time?**

23 A. Traditional regulatory depreciation accounting is based on forward-
24 looking estimates of service lives and net salvage costs. These estimates are derived

1 from historic data, using time-tested analytic approaches that consider the current asset
2 base, supplemented with expert judgment. While all estimates include an amount of
3 uncertainty, using the best available estimates for both depreciation lives and net salvage
4 costs will attribute the total cost (i.e. service value) of the asset to the customers receiving
5 the benefit of the use of that asset. Just as we know that most assets will be useful for
6 more than a year, we also know that future net salvage costs will exceed today's net
7 salvage costs (due to inflation, changes in laws and growth in the installed asset base).

8 The need to fairly allocate costs across generations of customers requires
9 the use of estimates. As noted in NARUC's Depreciation Practices, the standard
10 approach "has the advantage that current customers pay or receive a fair share of costs
11 associated with the property devoted to their service, even though the costs may be
12 estimated" (p. 18). Clearly, the standard approach was developed with the full realization
13 that service lives and net salvage must be estimated.

14 **Q. Have regulatory and legal authorities in Missouri recognized that**
15 **depreciation allowances are based on estimates of service lives and net salvage**
16 **values?**

17 A. Yes. The Commission has used the standard approach for the regulation
18 of Missouri utilities for decades, recognizing that the approach relies on estimates for
19 depreciation. For example, the Commission has specifically noted that depreciation
20 distributes "costs ... of tangible capital assets less salvage, over the estimated useful life
21 of the unit or group of assets in a systematic manner. ... Any attempt to allocate such
22 costs over a period of time requires an analysis of expected future events such as useful
23 life, salvage value, and cost of removal" (Re: St. Louis County Water Company,

1 4 Mo. P.S.C.3d 94, 102-103 (1995)). But as the Missouri Supreme Court has recognized
2 long ago, “modern bookkeeping methods... can be used to establish... depreciation with
3 reasonable accuracy” (State ex rel. Missouri Water Co. v. Public Service Commission,
4 308 S.W.2d 719 (Mo. 1958). In fact, depreciation analysis is essentially a field of
5 engineering study, reflecting time-tested analytic techniques and technological advances
6 all oriented toward reliably estimating service lives and net salvage values.

7 **Q. Has Staff acknowledged the fact that depreciation parameters need to**
8 **be estimated?**

9 A. Yes. In particular, Staff has recognized that the service lives used to
10 determine depreciation rates are based on the *estimated* average expected life of assets,
11 that informed judgment and recognition of current developments are needed to make a
12 recommendation for life estimation, that the forward-looking service life estimates for
13 currently-used plant need to be derived with empirical studies of historic data, that
14 service lives may change over time, and that periodic depreciation studies are needed to
15 assess the continued reasonableness of depreciation accrual rates derived from prior
16 estimates.⁵ Staff also recognized that, despite the fact that service lives need to be
17 estimated, using depreciation accounting to allocate the costs to the appropriate period is
18 important because it appropriately spreads utilities’ capital costs over the years that the
19 assets provide service.⁶

⁵ For example, see Direct Testimony of Rosella L. Schad in Case Nos. ER-2004-0034 and HR-2004-0024 (Aquila), December 2003, pp. 4-7.

⁶ Id.

1 **Q. Does the fact that estimates of net salvage costs and plant service lives**
2 **must be used as part of the standard approach compromise the accuracy of the**
3 **allocation of these costs?**

4 A. No. Because utilities have kept track of plant additions, retirements and
5 net salvage costs for many decades, and because depreciation engineers have developed
6 sophisticated methods for estimating service lives and net salvage costs, these variables
7 can be estimated quite accurately, and in any event, any discrepancies between estimated
8 and actual costs are trued up when plant is finally retired. But in the mean time, both the
9 customer and the utility are fully compensated for accrued amounts and fully protected
10 against inadvertent over- or under-estimation of service lives and net salvage through the
11 rate base treatment of the depreciation reserve. The use of unbiased, best estimates
12 minimizes any cross-subsidy to or from past or future generations of customers and
13 neither utilities nor customers as a whole will be harmed or enjoy any windfall gains.

14 **A. CUSTOMER PROTECTION THROUGH THE “TRUE-UP” OF DEPRECIATION**
15 **RESERVES**

16 **Q. You mentioned the accounting for net salvage in the depreciation**
17 **reserve provides a mechanism that ensures that customers are protected and total**
18 **recovery does not exceed (or fall short of) actual expenditures. Please explain.**

19 A. Under the standard approach, when net salvage is accrued via the
20 authorized depreciation rates, this amount is recorded in the depreciation reserve account.
21 Upon removal of the property from service, the actual net salvage is paid by the utility
22 and charged to the depreciation reserve. Under the standard approach, the accumulated
23 depreciation reserve grows during the life of the asset and reduces the level of rate base

1 on a dollar-for-dollar basis. If the amount accrued is greater than the amount ultimately
2 incurred to remove the property, the difference remains in the depreciation reserve and
3 rate base is reduced. This, in turn, reduces the customer's rates until such time as
4 depreciation estimates are updated and over-accruals (if any) are amortized. Of course, if
5 the amount accrued is less than the actual amount of net salvage, the difference also is
6 reflected in the depreciation reserve, which protects the utility from the impact of under-
7 accruals. The use of best estimates of an asset's service life and ultimate net salvage
8 value assures that the correct amounts are accrued from customers over time, and the
9 accounting treatment of net salvage in the depreciation reserve assures that, in the end,
10 customer have paid exactly for the actual net salvage costs—no more and no less. Thus,
11 the standard approach provides an effective monitoring and true up mechanism that
12 protects customers and utilities alike from differences between estimated and actual
13 service lives and net salvage values.

14 **B. CUSTOMER PROTECTION THROUGH RATE BASE TREATMENT OF THE**
15 **DEPRECIATION RESERVE**

16 **Q. You noted that the rate base treatment of the depreciation reserve**
17 **fully protects customers and utilities from any potential over-accruals and also**
18 **compensates customers for “accrued but not yet spent” net salvage amounts. Please**
19 **explain how rate base treatment of the depreciation reserve creates this safeguard.**

20 **A.** In the standard approach that the Commission has been using for many
21 years, the accumulated depreciation reserve reduces the level of rate base on a dollar-for-
22 dollar basis. Since rates include an allowed return on rate base, the netting of the
23 depreciation reserve against rate base reduces the revenue requirement used to set rates.

1 This standard treatment of the depreciation reserve also means that customers effectively
2 earn the utility's full allowed rate of return (including an allowance for the utility's
3 income taxes) on the depreciation reserve that has been accrued in rates.⁷ This "return"
4 earned on the depreciation reserve accrued from customers (including any accruals for
5 net salvage associated with currently-used assets) is passed on to customers in the form of
6 lower rates.

7 The fact that customers earn this allowed return on depreciation reserves
8 fully compensates customers for the cumulative amount of net salvage accruals until the
9 accrued amounts are spent by the utility. It also means that the rate base treatment of the
10 depreciation reserve offers customers and utilities full protection against over- and under-
11 estimated depreciation. In other words, over-accrued amounts (if any) are not only "trued
12 up" over time, but ratepayers will also be compensated for these over-accrued amounts
13 with "interest" at a rate equal to the utility's rate of return on rate base.

14 **Q. Do the safeguards you just mentioned similarly protect the utility and**
15 **its investors from any under-accrued depreciation reserves?**

16 A. Yes. If actual costs (or updated estimates of costs) exceed the accrued
17 amounts, the difference will reduce the depreciation reserve and increase the rate base,
18 thereby holding the utility harmless until the "under-accruals" are trued up.

⁷ The Commission's rule (4 CSR 240-10.020) that governs the treatment of accumulated depreciation would require imputation of only a 3% annual return on such depreciation reserves. However, the Commission practice has simply been to deduct the depreciation reserve from rate base, which effectively imputes the utilities' full return on rate base (including an allowance for taxes) to any over-accrued amounts.

1 This “true up with interest” result of the standard ratemaking treatment of
2 depreciation consequently fully protects *both* customers and utilities from any changes in
3 estimated depreciation parameters. Once again, under the standard depreciation
4 approach, total net salvage costs will be recovered exactly from customers over time,
5 eliminating opportunities for windfall gains or losses for a utility’s customers or
6 investors.

7 **Q. Does it make a difference whether under- or over-accruals of the**
8 **depreciation reserve are the result of a change in estimated service lives or due to a**
9 **change in net salvage values?**

10 A. No. It does not matter whether the over-accruals or under-accruals are the
11 result of updated depreciation lives or updated net salvage values. Either way, the
12 standard ratemaking process results in a “true up with interest” of the inadvertently over-
13 accrued or under-accrued amounts

14 **Q. But if both ratepayers and utilities are fully protected from**
15 **understated or overstated depreciation, what is the harm in adopting lower**
16 **depreciation rates?**

17 A. The harm from understating depreciation rates is imposed on future
18 customers. As explained by Mr. Stout, while the lower depreciation allowances may
19 reduce rates in the short run, they quickly lead to higher rates as the lower depreciation
20 reserve translates to a higher rate base and as the under-accrued amounts are “trued up”
21 in future rates. Also, by removing the net salvage component from the calculation of
22 depreciation, Staff’s approach eliminates these safeguards which essentially ensures there
23 will be winners and losers when it comes to paying for net salvage costs.

C. CUSTOMER PROTECTION THROUGH PERIODIC UPDATES OF ESTIMATED DEPRECIATION

Q. How is depreciation estimated?

A. In recognition of the need to estimate service lives and net salvage costs for various groups of utility plant, “depreciation studies” are performed periodically to update these estimates. As explained in NARUC Depreciation Practices, “depreciation rates applied to each group are often prescribed periodically or reviewed by a regulatory commission. The depreciation rates are related to the underlying asset life and salvage data to insure that they remain consistent with actual operations” (at 43-44). Expert judgment generally is part and parcel of estimating depreciation.

Q. What techniques are employed in these periodic depreciation studies to improve the estimates?

A. Depreciation studies generally determine both service lives and net salvage costs based on the actual history of how utility plant has been used and retired. As Mr. Stout explains, this empirical evidence is adjusted to reflect current and anticipated future conditions. For example, under the standard approach current accruals for net salvage are calculated to reflect the fact that the current installed asset base is significantly larger than the asset base from which the historical retirement data have come. Such depreciation studies will also typically recognize and reflect changes in net salvage costs over time, including trends in net salvage costs that also reflect changes (if any) in the relative proportions of abandonment versus removal of the to-be-retired property. For example, if more of the retired plant is removed over time (rather than abandoned in place) and net salvage costs increase, these trends, which all lead to higher ratios of net salvage cost to original cost of the retired plant, will be captured as new

1 depreciation studies are performed over time. The periodic nature of these studies
2 protects customers by ensuring that depreciation accruals remain consistent with the best
3 estimates of asset life and salvage costs.

4 **Q. What happens if a new depreciation study reveals that past estimates**
5 **of depreciation lives and net salvage value were over- or under-stated?**

6 A. The updated estimates work hand in hand with the traditional ratemaking
7 treatment of depreciation allowances and the depreciation reserve to ensure an equitable
8 outcome. Assume the most recent depreciation study recognized that a new
9 technological innovation has reduced the cost of net salvage. Not only would estimates
10 for annual depreciation need to be reduced, but it would also be recognized that the
11 accrued depreciation reserve is now too high, given the new estimates. As previously
12 stated, the customer benefits from the depreciation reserve being too high as this, in turn,
13 reduces rate base.

14 **Q. What does the combination of rate base treatment, the ultimate true -**
15 **up of estimates, and the updating of periodic depreciation studies mean with respect**
16 **to the broadly recognized fact that depreciation represents an estimate?**

17 A. The existence of these safeguards means that utilities would not reap
18 windfall gains even if depreciation lives were underestimated or net salvage costs were
19 overestimated. (As Mr. Stout explains, the latter is highly unlikely while the opposite is
20 likely to be true.) Due to these safeguards inherent in the standard approach, *the only*
21 *costs that customers ultimately will have paid is the actual service value of the assets,*
22 *which is the sum of the assets' original cost plus their actual net salvage costs.*

1 **Q. Does this conclude your testimony?**

2 A. Yes, it does.

CAROLYN J. WOODSTOCK
Notary Public - Notary Seal
STATE OF MISSOURI
Franklin County
My Commission Expires: May 19, 2008