

EXHIBIT

Exhibit No:  
Issue: Depreciation  
Witness: William W. Dunkel  
Type of Exhibit: Surrebuttal Testimony  
Case No.: ER-2008-0093  
Date Testimony Prepared: April 25, 2008

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Missouri Public  
Service Commission

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

In the Matter of the Empire District Electric )  
Company of Joplin, Missouri for Authority ) Case No. ER-2008-0093  
to File Tariffs Increasing Rates for Electric ) Tariff File No. YE-2008-0205  
Service Provided to Customers in the Missouri )  
Service Area of the Company. )

SURREBUTTAL TESTIMONY AND SCHEDULES

OF

WILLIAM W DUNKEL

ON BEHALF OF

OFFICE OF THE PUBLIC COUNSEL

OF THE STATE OF MISSOURI

OPC Exhibit No. 302  
Case No(s) ER-2008-0093  
Date 5-12-08 Rptr KF

**BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI**

|                                               |   |                              |
|-----------------------------------------------|---|------------------------------|
| In the Matter of the Empire District Electric | ) |                              |
| Company of Joplin, Missouri for Authority     | ) | <b>Case No. ER-2008-0093</b> |
| to File Tariffs Increasing Rates for Electric | ) | Tariff File No. YE-2008-0205 |
| Service Provided to Customers in the Missouri | ) |                              |
| Service Area of the Company.                  | ) |                              |

**AFFIDAVIT OF WILLIAM DUNKEL**

COUNTY OF SANGAMON   )  
                                          )  
STATE OF ILLINOIS       )

SS

William Dunkel, of lawful age and being first duly sworn, deposes and states:

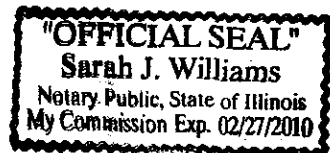
1. My name is William Dunkel. I am a Consultant for the Office of the Public Counsel.
2. Attached hereto and made a part hereof for all purposes is my surrebuttal testimony.
3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

*William Dunkel*  
William Dunkel  
Consultant

Subscribed and sworn to me this 23<sup>rd</sup> day of April 2008.

*Sarah J. Williams*  
Notary Public

My commission expires 12/27/2010





**Introduction**

**Q. Are you the same William W. Dunkel that previously filed Direct and Rebuttal Testimony in this proceeding on behalf of Office of the Public Counsel of the State of Missouri (OPC)?**

**A. Yes.**

**Q. What is the purpose of this Surrebuttal testimony?**

**A. The purpose of this Surrebuttal testimony is to respond to the depreciation issues in testimonies filed by other parties in this proceeding on or about April 4, 2008.**

**Response to Staff Testimony**

**Q. What does the Staff Rebuttal testimony recommend pertaining to depreciation rates?**

**A. Staff recommends that the current Empire depreciation rates not be changed in this case. Staff recommends "that the Company's currently ordered depreciation rates should be ordered in this case."<sup>1</sup>**

**Q. Do you oppose the Staff recommendation "that the Company's currently ordered depreciation rates should be ordered in this case"?**

**A. No. I do not oppose this Staff recommendation. There are significant problems in the new depreciation rates proposed by Empire, as discussed in my Direct testimony. The Staff recommendation that the current Empire depreciation rates not be changed in this case eliminates the problems in Empire's proposed depreciation rates.**

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<sup>1</sup> Rebuttal Testimony of Rosella L. Schad, PE, CPA ("Schad Rebuttal") page 12, lines 24-26.

1 **Q. The Staff testimony cites a prior order that states that the use of the whole life**  
2 **technique is a long-standing policy.<sup>2</sup> If the Commission accepts the Staff**  
3 **recommendation to use the current Empire depreciation rates this issue is resolved**  
4 **for this case, but for future utility depreciation studies in Missouri do you object to**  
5 **the whole life technique?**

6 A. No. The problem I will discuss only occurs when the actual book reserve amounts are  
7 not used in the whole life depreciation study. Nationwide the depreciation rates proposed  
8 in whole life depreciation studies are generally calculated considering the actual book  
9 reserve amounts. For example, in the recent AmerenUE proceeding in Missouri, the  
10 whole life depreciation study filed by AmerenUE included the adjustments for the actual  
11 book reserve amounts. In that AmerenUE proceeding, AmerenUE witness Wiedmayer  
12 stated "The reserve variance amortization developed in this study is based on the variance  
13 between the book accumulated depreciation and the calculated accrued depreciation using  
14 an amortization period equal to the composite remaining life for each property group."<sup>3</sup>  
15 He stated that using the actual "book" accumulated depreciation reserve amount was "to  
16 insure complete recovery of capital over the life of the property."<sup>4</sup>

17 **Q. Is recovering the investment over the service life of the property part of proper**  
18 **depreciation rates?**

19 A. Yes. The FERC Uniform System of Accounts (USOA) requires:

20 *"22. Depreciation Accounting.*

<sup>2</sup> Rebuttal Testimony of Rosella L. Schad, PE, CPA ("Schad Rebuttal") page 12, lines 1-16.

<sup>3</sup> Page II-31, Schedule JFW-E1, AmerenUE Depreciation Study at December 31, 2005, attached to the Direct Testimony of John F. Wiedmayer, Case No. ER-2007-0002.

<sup>4</sup> Page II-31, Schedule JFW-E1, AmerenUE Depreciation Study at December 31, 2005, attached to the Direct Testimony of John F. Wiedmayer, Case No. ER-2007-0002.

1 A. *Method.* Utilities must use a method of depreciation that allocates in a  
2 systematic and rational manner the service value of depreciable property  
3 **over the service life of the property.**

4 B. *Service lives.* Estimated useful service lives of depreciable property  
5 must be supported by engineering, economic, or other depreciation  
6 studies.

7 C. *Rate.* Utilities must use percentage rates of depreciation that are based  
8 on a method of depreciation that allocates in a systematic and rational  
9 manner the service value of depreciable property to **the service life of the**  
10 **property.** Where composite depreciation rates are used, they should be  
11 based on the weighted average estimated useful service lives of the  
12 depreciable property comprising the composite group.”<sup>5</sup> (Emphasis  
13 added).  
14

15 Q. Can you demonstrate why using the existing book accumulated depreciation reserve  
16 amount is necessary in order to recover the service value “over the service life of the  
17 property”?

18 A. Yes. The investment is not depreciated “over the service life” if there is no recognition  
19 of the actual book depreciation reserve amount. For example, assume an investment of  
20 \$1,000 with an average service life of 10 years with only 4 years remaining life.<sup>6</sup> Under  
21 “unadjusted” whole life depreciation, the annual depreciation expense would be \$100  
22 (\$1,000/10 years = \$100 per year). Since there are only 4 years remaining before the  
23 investment retires, \$400 will be collected under the new rates and added to the  
24 depreciation reserve amount. However, \$1,000 is needed when the investment retires, so  
25 the “unadjusted” whole life calculation effectively assumes that there is already \$600 in  
26 the depreciation reserve account. This assumed \$600 is called the “theoretical” reserve

<sup>5</sup> General Instruction number 22 of FERC USOA 18 C.F.R. 101

<sup>6</sup> This example also assumes 0% future net salvage.

1 amount.<sup>7</sup> However, if there is only \$500 in the actual depreciation reserve account,  
2 collecting an additional \$400 in future depreciation accruals would mean that only \$900  
3 (\$500 in depreciation reserve plus \$400 in future accruals) will be collected over the  
4 service life of the property. This causes an under collection of \$100.<sup>8</sup> On the other hand  
5 if there is \$700 in the actual depreciation reserve account, collecting an additional \$400  
6 in future depreciation accruals would cause a total collection of \$1,100 (\$700 in  
7 depreciation reserve plus \$400 future accruals) and result in an over collection of \$100.<sup>9</sup>

8 Without an adjustment for the actual booked depreciation reserve the “unadjusted” whole  
9 life rate will not recover the value of the investment over the service life.<sup>10</sup>

10 **Q. Is it difficult to include the existing book accumulated depreciation reserve amounts**  
11 **in a whole life depreciation study?**

12 **A.** No. This is a very simple calculation, and all of the numbers required for that calculation  
13 are developed for other parts of the depreciation calculation. For example, if the  
14 difference between the book reserve and the theoretical reserve for an account is \$100,  
15 and the average remaining life is 4 years, the adjustment is just the reserve difference (of  
16 \$100) divided by remaining life (4 years), for an adjustment of \$25 per year (\$100/4

<sup>7</sup> 4 years \* \$100 per year = \$400 depreciation expense accrued in the future. \$600 already in the depreciation reserve account + \$400 additional depreciation expense = \$1,000.

<sup>8</sup> 4 years \* \$100 per year = \$400 depreciation expense accrued in the future. \$500 already in the depreciation reserve account + \$400 additional depreciation expense = \$900. \$900 depreciation accruals collected - \$1,000 amount retired = \$100 under recovered.

<sup>9</sup> 4 years \* \$100 per year = \$400 depreciation expense accrued in the future. \$500 already in the depreciation reserve account + \$700 additional depreciation expense = \$1,100. \$1,100 depreciation accruals collected - \$1,000 amount retired = \$100 over recovered.

<sup>10</sup> Except in the rare instance in which the book depreciation reserve amount happens to equal the “theoretical” reserve amount.

1 years = \$25). All of the input numbers are readily available in the standard computer  
2 programs used for depreciation studies.

3 Attached as Schedule WWD-S7 are pages from the AmerenUE testimony in Case No.  
4 ER-2007-002. The last page shows how simple this calculation is.

5 **Q. What do you recommend?**

6 A. For this case, if the Commission accepts the Staff recommendation to use the current  
7 Empire depreciation rates this issue is resolved for this case. However prior to the next  
8 utility depreciation case in Missouri, I recommend the Staff consider using the whole life  
9 depreciation rates that do incorporate the actual existing book accumulated depreciation  
10 reserve amounts. Using the book accumulated depreciation reserve amounts is necessary  
11 in order to recover the investment "over the service life of the property."

12 The standard way this is done in whole life depreciation studies is to amortize the  
13 difference between (1) the book accumulated depreciation reserve amount for an account  
14 and (2) the theoretical reserve amount, over the average remaining life of that account, as  
15 is shown on the last page of Schedule WWD-S7. This is what I recommend the Staff  
16 adopt in the next depreciation case.

17 **Q. Do you recommend using the actual book accumulated depreciation reserve**  
18 **amounts in all cases, regardless of the direction of the reserve differences?**

19 A Yes. In some cases using whole life depreciation rates that incorporate the actual book  
20 reserve amounts may result in depreciation rates that are overall higher than they would  
21 be under "unadjusted" whole life rates. In other cases using whole life depreciation rates



1       that incorporate the actual book reserve amounts may result in depreciation rates that are  
2       lower overall than they would be under "unadjusted" whole life rates. Whole life  
3       depreciation rates that incorporate the actual book reserve amounts should be used in  
4       either event, because using the actual book accumulated depreciation reserve amounts is  
5       necessary in order to recover the investment "over the service life of the property."

6       **Q. Does failing to incorporate the actual "book" accumulated depreciation reserve**  
7       **amounts often result in excess depreciation charges to the customers?**

8       A. Yes. In this Empire case failing to incorporate the actual "book" accumulated  
9       depreciation reserve amounts results in higher depreciation expense, as I demonstrated in  
10      my Direct testimony. In addition, Empire witness Roff's Rebuttal Schedule DSR-2  
11      shows that the total annual depreciation expense is \$845,300 less when the actual book  
12      reserve amounts are used, as compared to the unadjusted whole life rates. That \$845,300  
13      amount does not even include all accounts, as will be discussed later in this testimony.<sup>11</sup>

14      In the AmerenUE case the Staff testimony states "The Staff's theoretical reserve for 2005  
15      is \$3,559,684,994, which represents 33% of the original cost of AmerenUE's actual plant  
16      in service. AmerenUE's actual 2005 reserve is \$4,325,788,188, which represents 41% of  
17      the original cost of AmerenUE's actual plant-in-service. Based on the Staff's  
18      depreciation study, AmerenUE's depreciation reserve is over accrued by  
19      \$766,103,194."<sup>12</sup>

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<sup>11</sup> Rebuttal Schedule DSR-2, attached to the Rebuttal Testimony of Donald S. Roff

<sup>12</sup> Page 10, Direct Testimony of Jolie L. Mathis, Case No. ER-2007-0002 (regarding AmerenUE)

1     The "unadjusted" whole life rates effectively assume that the actual book reserve  
2     amounts are the same as the theoretical reserve amounts. Using the above Staff numbers  
3     from the AmerenUE case, the "unadjusted" whole life rates effectively assumed the  
4     reserve amount was \$3,559,684,994, but the actual reserve amount was \$4,325,788,188.  
5     The "unadjusted" whole life rates would effectively ignore \$766,103,194 of money that  
6     had been paid into the reserve by the customers. Because \$766,103,194 of the money in  
7     the actual book reserve is ignored, the "unadjusted" whole life rates would be designed to  
8     collect \$766,103,194 too much over the service life of the investments.

9     I am sure the Staff goal is to calculate the appropriate depreciation rates. Using whole  
10    life depreciation studies that incorporate the book reserve amounts is a key step in  
11    recovering the investment over the service live of the investment. In order to recover the  
12    investment "over the service life", I recommend the "book" reserve amounts be used in  
13    all future cases, including both cases in which this is an upward adjustment and cases in  
14    which this is a downward adjustment (as compared to the "unadjusted" whole life rates).

**Response to the Company Rebuttal Testimony**

**Q. In your Direct Testimony you stated that Mr. Roff used a double standard. You testified that for some accounts Mr. Roff made an adjustment based on the book reserve amounts, but in other accounts he did not adjust for the book reserve amounts. You testified this double standard resulted in higher depreciation rates, all as explained in more detail on pages 3-9 of your Direct Testimony. Does Mr. Roff admit that his treatment of the reserve amounts was “inconsistent”?**

**A.** Yes. On page 4 of his Rebuttal Testimony, lines 10- 16, Mr. Roff admits that his treatment of the reserves was “inconsistent” and that he “actually used the book reserve in calculating an adjustment” for certain accounts.

On his Rebuttal Schedule DSR-2, Mr. Roff calculates that if he adjusted for the book reserve amounts, for the accounts shown on the Schedule, that adjustment would reduce his annual depreciation expense by \$845,330.

**Q. If the adjustment shown on Mr. Roff’s Rebuttal Schedule DSR-2 were made, would Mr. Roff’s treatment of the reserves then be consistent for all accounts?**

**A.** No. For each account shown on Mr. Roff’s Rebuttal Schedule DSR-2, Mr. Roff has recovered the difference between the theoretical reserve and the book reserve over the remaining life for that account. The remaining life is the correct period to use for this adjustment. However for accounts not shown on Rebuttal Schedule DSR-2, Mr. Roff is using a 4 year period, not that account’s remaining life, for the reserve difference recovery period. The largest account that is not shown on Mr. Roff’s Rebuttal Schedule DSR-2 is account 397, Communications Equipment. Mr. Roff in his Depreciation Study

1 determined that this account has an average remaining life of 8.7 years, but his filing  
2 recovers the reserve difference in this account over a 4 year period, not over the 8.7 year  
3 remaining life.<sup>13</sup> The accounts Mr. Roff did not show on Rebuttal Schedule DSR-2 are  
4 the accounts that he has proposed to "amortize." In his Depreciation Study, Mr. Roff's  
5 proposed annual expense for these accounts does include a recovery of the difference  
6 between the book reserve and the theoretical reserve, but that recovery is not over the  
7 remaining life.

8 **Q. What is Schedule WWD-S8?**

9 A. Schedule WWD-S8 shows the accounts that Mr. Roff did not include in his Rebuttal  
10 Schedule DSR-2. For these accounts (which are the accounts that Mr. Roff proposes to  
11 amortize), Schedule WWD-S8 shows that if the reserve differences in these accounts  
12 were recovered over their remaining lives, consistent with what Mr. Roff has shown for  
13 the other accounts on Rebuttal Schedule DSR-2, the annual expense would be \$349,429  
14 less than proposed in Mr. Roff's Depreciation Study.

15 This \$349,429 difference is just for the 7 accounts shown on Schedule WWD-S8. This  
16 \$349,429 reduction is in addition to the \$845,330 reduction for the other account shown  
17 on Rebuttal Schedule DSR-2. In total the annual depreciation expense would be  
18 \$1,194,759<sup>14</sup> less than Mr. Roff proposed in his Direct testimony if the only change is to  
19 amortize the difference between the theoretical reserve and the book reserve in each  
20 account over the remaining life of that account.

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<sup>13</sup> "Average Life Group Method Account Summary" in the General Tab of Empire's Depreciation Study  
Workpapers Book 3 of 3

<sup>14</sup> \$349,429 for the accounts Mr. Roff proposed to amortize, plus \$845,330 for the account he did not proposed to  
amortize = \$1,194,759.

1 **Q. In your Direct testimony you had redistributed the depreciation reserve. On page 3**  
2 **of his Rebuttal testimony, lines 15-21, Mr. Roff objects to redistributing the reserve.**  
3 **Please respond.**

4 A. Redistributing the reserve is a common practice in depreciation studies, but it is close to  
5 a "zero sum" game. The total reserve amount does not change. In this case,  
6 redistributing the reserve changes the total annual depreciation expense by less than  
7 \$42,000.<sup>15</sup>

8 In my Direct testimony I had (1) redistributed the reserve among the accounts within each  
9 Plant category,<sup>16</sup> and then (2) calculated depreciation rates that spread the difference  
10 between the book accumulated depreciation reserve and the theoretical reserve amount  
11 for that account, over the average remaining life of that account. The result of only these  
12 two changes was an annual depreciation expense of \$38,506,125 that was \$1,153,610 less  
13 than the Company filing, as shown on Schedule WWD-1, attached to my Direct  
14 testimony.

15 In Rebuttal Schedule DSR-2, and Schedule WWD-S8 without redistributing the reserve,  
16 the difference between the book accumulated depreciation reserve and the theoretical  
17 reserve amount is amortized over the average remaining life for each account. When only  
18 this change is made, the resulting annual depreciation expense of \$38,464,973 is

<sup>15</sup> Calculated from Schedule WWD-S9 column C reserve redistributed amount of \$38,506,124 less column E reserve not redistributed amount of \$38,464,973 = \$41,151.

<sup>16</sup> For example, within the Distribution Plant accounts

1 \$1,153,610 less than the Company filing,<sup>17</sup> and is less than \$42,000 different than the  
2 \$38,506,125 figure from my Direct testimony that included redistributing the reserve.

3 **Q. Earlier you proposed that the difference between (1) the book accumulated**  
4 **depreciation reserve amount for an account and (2) the theoretical reserve amount**  
5 **for that account should be amortized over the average remaining life of that**  
6 **account. Would this policy correct the inconsistent treatments of the reserve**  
7 **differences such as the inconsistent treatments Mr. Roff has proposed in this**  
8 **proceeding?**

9 **A.** Yes. This policy would require the difference be amortized for all accounts, so that  
10 would eliminate amortizing the reserve differences for some accounts, but not for other  
11 accounts, which is what Mr. Roff did in his Direct Testimony.

12 Requiring that the reserve difference always be amortized over the remaining life of that  
13 account would eliminate the inconsistent amortization periods, such as amortizing the  
14 reserve differences over the remaining life for some accounts, but using a 4 year  
15 amortization period (which is different than the remaining life) for other accounts. Such  
16 inconsistent reserve difference amortization periods is what would occur if the  
17 adjustment shown on Rebuttal Schedule DSR-2 was adopted, while continuing to use a 4  
18 year reserve difference amortization period for the other accounts.

19 As demonstrated in Mr. Roff's filings in this case, witnesses are in Missouri are filing  
20 adjustment for the differences between the book accumulated depreciation reserve  
21 amounts and the theoretical reserve amounts. However, these adjustments may be

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<sup>17</sup> As shown on Schedule WWD-1 page 1 attached to my Direct testimony

1       inconsistently applied between accounts, and/or may use inconsistent amortization  
2       periods.

3       **Q.     Could you please summarize your overall recommendations?**

4       A.     Yes. I do not object to the Staff's recommendation that the current Empire depreciation  
5       rates not be changed in this case. However, prior to the next utility depreciation case in  
6       Missouri, I recommend that Staff consider using the whole life depreciation rates that do  
7       incorporate the actual existing book accumulated depreciation reserve amounts. This  
8       adjustment is necessary in order to recover the investment "over the service life of the  
9       property."

10      Also, as demonstrated in this testimony there are significant inconsistencies in the  
11      depreciation rates proposed by Mr. Roff. However, if the Commission accepts Staff  
12      recommendation to continue to use the current Empire depreciation rates, it will not be  
13      necessary for the Commission to address these inconsistencies in Mr. Roff's depreciation  
14      proposal.

15      **Q.     Does this conclude your Surrebuttal Testimony?**

16      A.     Yes.

Exhibit No.:  
Issues: Depreciation  
Witness: John F. Wiedmayer  
Sponsoring Party: Union Electric Company  
Type of Exhibit: Direct Testimony  
Case No.: ER-2007-0002  
Date Testimony Prepared: July 3, 2006

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO. ER-2007-0002**

**DIRECT TESTIMONY**

**OF**

**JOHN F. WIEDMAYER**

**ON**

**BEHALF OF**

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

**St. Louis, Missouri**  
**July, 2006**



**AmerenUE**  
ST. LOUIS, MISSOURI

DEPRECIATION STUDY  
  
CALCULATED ANNUAL DEPRECIATION ACCRUALS  
RELATED TO UTILITY PLANT  
AT DECEMBER 31, 2005



**Gannett Fleming**  
Valuation and Rate Division

Harrisburg, Pennsylvania

Calgary, Alberta

Valley Forge, Pennsylvania

Schedule JFW-E1

the attained age, service life and net salvage. The straight line accrued depreciation ratios are calculated as follows for the average service life procedure:

$$\text{Ratio} = \left( 1 - \frac{\text{Average Remaining Life}}{\text{Average Service Life}} \right) (1 - \text{Net Salvage, Percent}).$$

#### MONITORING OF BOOK ACCUMULATED DEPRECIATION

As stated previously, the calculated accrued depreciation or amortization represents that portion of the depreciable cost which will not be allocated to expense through future depreciation accruals, if current forecasts of service life characteristics and net salvage materialize and are used as a basis for depreciation accounting. Thus, the calculated accrued depreciation provides a measure of the book accumulated depreciation. The use of this measure is recommended in the adjustment of book accumulated depreciation variances to insure complete recovery of capital over the life of the property.

The reserve variance amortization developed in this study is based on the variance between the book accumulated depreciation and the calculated accrued depreciation using an amortization period equal to the composite remaining life for each property group.

AmerenUE - Electric

SCHEDULE 2. COMPARISON OF CALCULATED ACCRUED DEPRECIATION AND BOOK DEPRECIATION RESERVE  
AT DECEMBER 31, 2005 AND CALCULATION OF ANNUAL AMORTIZATION OF THE RESERVE VARIANCE  
BASED ON A COMPOSITE REMAINING LIFE PERIOD

| Depreciable Group                       | Original<br>Cost at<br>December 31, 2005 | Book<br>Reserve      | Calculated<br>Accrued<br>Depreciation | Reserve<br>Variance   | Remaining<br>Life | Annual<br>Amortization<br>True Up |
|-----------------------------------------|------------------------------------------|----------------------|---------------------------------------|-----------------------|-------------------|-----------------------------------|
| (1)                                     | (2)                                      | (3)                  | (4)                                   | (5) = (4) - (3)       | (6)               | (7) = (5) / (6)                   |
| <b>Distribution Plant</b>               |                                          |                      |                                       |                       |                   |                                   |
| 361 Structures & Improvements           | 15,769,383.26                            | 4,953,060            | 4,928,091                             | (24,969)              | 42.5              | (588)                             |
| 362 Station Equipment                   | 513,217,383.08                           | 159,407,965          | 158,604,372                           | (803,593)             | 42.8              | (18,776)                          |
| 364 Poles & Fixtures                    | 653,216,781.90                           | 520,097,324          | 517,475,456                           | (2,621,868)           | 29.6              | (88,577)                          |
| 365 Overhead Conductors & Devices       | 712,573,522.48                           | 254,733,135          | 253,448,997                           | (1,284,138)           | 35.8              | (35,870)                          |
| 366 Underground Conduit                 | 164,964,340.73                           | 57,721,787           | 57,430,805                            | (290,982)             | 48.0              | (6,062)                           |
| 367 Underground Conductor & Devices     | 447,520,715.19                           | 134,015,952          | 133,340,363                           | (675,589)             | 39.6              | (17,060)                          |
| 368 Line Transformers                   | 346,481,166.48                           | 107,491,678          | 106,949,801                           | (541,877)             | 31.3              | (17,312)                          |
| 369.1 Overhead Services                 | 123,917,172.02                           | 145,720,361          | 144,985,769                           | (734,592)             | 22.2              | (33,090)                          |
| 369.2 Underground Services              | 118,053,965.91                           | 73,486,852           | 73,116,397                            | (370,455)             | 26.3              | (14,086)                          |
| 370 Meters                              | 102,314,800.21                           | 33,417,869           | 33,249,406                            | (168,463)             | 19.4              | (8,684)                           |
| 371 Installation On Customers' Premises | 164,854.00                               | 120,584              | 119,976                               | (608)                 | 3.4               | (179)                             |
| 373 Street Lighting & Signal Systems    | 100,172,901.93                           | 42,562,921           | 42,348,357                            | (214,564)             | 25.7              | (8,349)                           |
| <b>Total Distribution Plant</b>         | <b>3,298,356,987.19</b>                  | <b>1,533,729,488</b> | <b>1,525,997,790</b>                  | <b>(7,731,698)</b>    |                   | <b>(248,631)</b>                  |
| <b>General Plant</b>                    |                                          |                      |                                       |                       |                   |                                   |
| 390 Structures & Improvements           | 164,206,365.17                           | 46,077,375           | 45,845,094                            | (232,281)             | 33.1              | (7,018)                           |
| 391 Office Furniture & Equipment        | 39,127,355.95                            | 24,084,713           | 23,963,299                            | (121,414)             | 8.2               | (14,807)                          |
| 391.1 Mainframe Computers               | 422,013.95                               | 422,014              | 422,014                               | -                     | -                 | -                                 |
| 391.2 Personal Computers                | 1,310,097.52                             | 584,257              | 581,312                               | (2,945)               | 1.6               | (1,841)                           |
| 392 Transportation Equipment            | 84,159,803.74                            | 30,127,187           | 29,975,313                            | (151,874)             | 8.9               | (17,064)                          |
| 393 Stores Equipment                    | 2,065,006.72                             | 1,324,092            | 1,317,417                             | (6,675)               | 6.0               | (1,113)                           |
| 394 Tools, Shop, & Garage Equipment     | 10,524,040.25                            | 5,996,285            | 5,966,057                             | (30,228)              | 6.6               | (4,580)                           |
| 395 Laboratory Equipment                | 6,819,983.73                             | 3,347,588            | 3,330,712                             | (16,876)              | 6.0               | (2,813)                           |
| 396 Power Operated Equipment            | 10,465,818.28                            | 4,232,262            | 4,210,927                             | (21,335)              | 10.2              | (2,092)                           |
| 397 Communications Equipment            | 127,014,325.86                           | 94,611,692           | 94,134,744                            | (476,948)             | 2.9               | (164,465)                         |
| 398 Miscellaneous Equipment             | 637,305.10                               | 279,472              | 278,063                               | (1,409)               | 11.7              | (120)                             |
| <b>Total General Plant</b>              | <b>446,752,116.27</b>                    | <b>211,086,937</b>   | <b>210,024,952</b>                    | <b>(1,061,985)</b>    |                   | <b>(215,911)</b>                  |
| <b>TOTAL DEPRECIABLE ELECTRIC PLANT</b> | <b>10,492,945,443.99</b>                 | <b>4,325,788,188</b> | <b>\$ 4,479,445,639</b>               | <b>\$ 153,657,451</b> |                   | <b>\$ 8,531,976</b>               |

III-13

**COMPARISON OF EMPIRE'S CALCULATED THEORETICAL RESERVE  
AND ACTUAL BOOK RESERVE 12/31/06  
FOR THE AMORTIZED GENERAL ACCOUNTS**

| Account<br>Number                             | Description                     | Theoretical<br>Reserve<br>with<br>Salvage | Book<br>Reserve | Difference  | Remaining<br>Life From Roff<br>Study (years) | Annual \$,<br>Reserve<br>Diff Over<br>Remaining<br>Life | Years<br>Roff Used | Annual<br>Reserve<br>Difference<br>Recovery<br>Roff Used | Annual<br>Difference |
|-----------------------------------------------|---------------------------------|-------------------------------------------|-----------------|-------------|----------------------------------------------|---------------------------------------------------------|--------------------|----------------------------------------------------------|----------------------|
| A                                             | B                               | C                                         | D               | E=C-D       | F                                            | G=E/F                                                   | H                  | I=E/H                                                    | J=G-I                |
| <u>Accounts Mr. Roff Proposes to Amortize</u> |                                 |                                           |                 |             |                                              |                                                         |                    |                                                          |                      |
| 391.1                                         | Office Furniture & Equipment    | \$2,005,721                               | \$1,776,797     | \$228,924   | 15.4                                         | \$14,914                                                | 4                  | \$57,231                                                 | (\$42,317)           |
| 391.2                                         | Computer Equipment              | 4,537,880                                 | 3,358,085       | 1,179,795   | 6.7                                          | 175,044                                                 | 4                  | 294,949                                                  | (119,905)            |
| 393                                           | Store Equipment                 | 190,255                                   | 257,315         | (67,060)    | 16.8                                         | (3,982)                                                 | 4                  | (16,765)                                                 | 12,783               |
| 394                                           | Tools, Shop, & Garage Equipment | 1,832,137                                 | 1,765,859       | 66,278      | 9.7                                          | 6,826                                                   | 4                  | 16,570                                                   | (9,744)              |
| 395                                           | Laboratory Equipment            | 412,279                                   | 616,370         | (204,091)   | 25.3                                         | (8,083)                                                 | 4                  | (51,023)                                                 | 42,940               |
| 397                                           | Communications Equipment        | 5,605,111                                 | 3,886,570       | 1,718,541   | 8.7                                          | 196,855                                                 | 4                  | 429,635                                                  | (232,781)            |
| 398                                           | Miscellaneous Equipment         | 101,817                                   | 99,716          | 2,101       | 17.4                                         | 120                                                     | 4                  | 525                                                      | (405)                |
| Total Amortized General Plant                 |                                 | \$14,685,199                              | \$11,760,712    | \$2,924,487 | 7.7                                          | \$381,693                                               | 4                  | \$731,122                                                | (\$349,429)          |

The \$731,122 amount calculated above agrees with that same amount shown on Table 1a, column 8, of Roff Schedule DSR-3 attached to Roff Direct Testimony  
Columns C and D from the "Amortization Schedule" in the General Tab of Depreciation Study Workpapers Book 3 of 3  
Column F from the "Average Life Group Method Account Summary" in the General Tab of Depreciation Study Workpapers Book 3 of 3

**Calculation of Empire's Adjusted Annual Depreciation Expense  
with the Difference Between Book Reserve Amounts and Theoretical Reserve Amounts  
Recovered over the Remaining Life**

| Description                  | Reserve Redistributed                                     |                                                        |                                             | Reserve Not Redistributed                                                                         |                                                                            |
|------------------------------|-----------------------------------------------------------|--------------------------------------------------------|---------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
|                              | Annual<br>Accrual Amount<br>Roff Direct<br>DSR-3, Table 1 | Annual<br>Difference<br>Dunkel Direct<br>WWD-1, Page 1 | OPC Filed<br>Dunkel Direct<br>WWD-1, Page 1 | Change to                                                                                         | Annual                                                                     |
|                              |                                                           |                                                        |                                             | Accrual due<br>to Adjusting for<br>Book Reserve<br>(Rebuttal Schedule DSR-2<br>& Schedule WWD-S8) | Accrual Amount -<br>Reserve Difference<br>Recovered over<br>Remaining Life |
|                              | A                                                         | B                                                      | C                                           | D                                                                                                 | E=A+D                                                                      |
| Steam Production Plant       | 4,331,421                                                 | (1,024,485)                                            | 3,306,937                                   | (989,211)                                                                                         | 3,342,210                                                                  |
| Hydraulic Production Plant   | 79,894                                                    | (15,670)                                               | 64,224                                      | (5,788)                                                                                           | 74,106                                                                     |
| Other Production Plant       | 6,747,943                                                 | (816,514)                                              | 5,931,430                                   | (748,873)                                                                                         | 5,999,070                                                                  |
| Transmission Plant           | 5,343,191                                                 | 638,166                                                | 5,981,357                                   | 614,992                                                                                           | 5,958,183                                                                  |
| Distribution Plant           | 19,339,746                                                | 1,011,747                                              | 20,351,493                                  | 838,654                                                                                           | 20,178,400                                                                 |
| General Plant <sup>(1)</sup> | 1,371,998                                                 | (215,731)                                              | 1,156,266                                   | (555,105)                                                                                         | 816,893                                                                    |
| Total Depreciable Plant      | 37,214,193                                                | (422,487)                                              | 36,791,707                                  | (845,330)                                                                                         | 36,368,862                                                                 |
| Amortized General Plant      | 2,445,540                                                 | (731,123)                                              | 1,714,417                                   | (349,429)                                                                                         | 2,096,111                                                                  |
| Total Plant                  | 39,659,733                                                | (1,153,610)                                            | 38,506,124                                  | (1,194,759)                                                                                       | 38,464,973                                                                 |

Note:

(1) General Plant does not include the Amortized General Plant Accounts

Sources:

Schedule DSR-3, Table 1 attached to Roff Direct Testimony

Rebuttal Schedule DSR-2, attached to Roff Rebuttal Testimony