

M. Evan Buckley ebuckley@gosssamfordlaw.com (859) 368-7740

April 20, 2017

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PUBLIC SERVICE COMMISSION

#### VIA OVERNIGHT COURIER

Ms. Talina Mathews, Ph.D. Executive Director Kentucky Public Service Commission P.O. Box 615 211 Sower Boulevard Frankfort, KY 40602

# Re: IN THE MATTER OF APPLICATION OF NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION FOR AN ADJUSTMENT OF EXISTING RATES Case No. 2016-00367

Dr. Mathews:

Please find enclosed and accept for filing on behalf of Nolin Rural Electric Cooperative Corporation ("Nolin") a redacted original and ten (10) redacted copies of Nolin's Response to Commission Staff's Fourth Request for Information propounded April 11, 2017 (including eleven (11) identical flash drives). Also enclosed is a sealed envelope marked "Confidential" containing a copy of the confidential information contained in Nolin's Response. Please note that the confidential information is subject to Nolin's Motion for Confidential Treatment filed in this matter on December 29, 2016.

Pursuant to applicable regulation, I certify that copies of this letter and the enclosed Response have been served this same date via overnight courier upon the Attorney General, by and through his Office of Rate Intervention, at his offices in Suite 20 of the Kentucky State Capitol.

I appreciate your assistance with this matter, and please do not hesitate to contact me with any questions or concerns.

Respectfully,

M. Evan Buckley

Enclosures

#### COMMONWEALTH OF KENTUCKY

#### **BEFORE THE PUBLIC SERVICE COMMISSION**

#### IN THE MATTER OF:

# APPLICATION OF NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION FOR AN ADJUSTMENT OF EXISTING RATES

CASE NO. 2016-00367

# VERIFICATION OF Michael L. Miller

)

# STATE OF KENTUCKY ) ) COUNTY OF \_HARDIN\_\_\_\_

<u>Michael L. Miller</u>, being duly sworn, states that he has supervised the preparation of certain of the following responses of Nolin Rural Electric Cooperative Corporation to the Fourth Request for Information propounded by Commission Staff in the above-referenced case on April 11, 2017, and that the matters and things set forth in the responses are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

Michael L. Mill

Michael L. Miller

Subscribed and sworn to before me on this <u>19</u> day of <u>April</u>, 2017.

PUBLIC, Notary # 5 Commission expiration: 08-07-

#### **COMMONWEALTH OF KENTUCKY**

#### **BEFORE THE PUBLIC SERVICE COMMISSION**

#### IN THE MATTER OF:

### APPLICATION OF NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION FOR AN ADJUSTMENT OF EXISTING RATES

)

CASE NO. 2016-00367

# VERIFICATION OF James Adkins

### STATE OF KENTUCKY

#### COUNTY OF <u>Hardin</u>

<u>James Adkins</u>, being duly sworn, states that he has supervised the preparation of certain of the following responses of Nolin Rural Electric Cooperative Corporation to the Fourth Request for Information propounded by Commission Staff in the abovereferenced case on April 11, 2017, and that the matters and things set forth in the responses are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

James K. adkino

Subscribed and sworn to before me on this <u>19</u> day of <u>April</u>, 2017.

Ullison J. Coffers NOTARY PUBLIC, Notary # 5639

NOTARY PUBLIC, Notary # 563985 Commission expiration: Ougust 29, 2020

#### COMMONWEALTH OF KENTUCKY

#### **BEFORE THE PUBLIC SERVICE COMMISSION**

#### **IN THE MATTER OF:**

### APPLICATION OF NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION FOR AN ADJUSTMENT OF EXISTING RATES

CASE NO. 2016-00367

# VERIFICATION OF <u>Sara A. Roberson</u>

)

### STATE OF KENTUCKY ) ) COUNTY OF \_HARDIN\_\_\_

<u>Sara A. Roberson</u>, being duly sworn, states that he has supervised the preparation of certain of the following responses of Nolin Rural Electric Cooperative Corporation to the Fourth Request for Information propounded by Commission Staff in the above-referenced case on April 11, 2017, and that the matters and things set forth in the responses are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.

ALD A. Koberson

Subscribed and sworn to before me on this <u>19</u> day of <u>April</u>, 2017.

NOTARY PUBLIC, Notary #

Commission expiration: 08-07-18

# Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

### 1. Refer to the application, Exhibit D, page 2 of 4.

a. Explain why Nolin chose to eliminate its declining block rate for Schedule 3 – Large Power Rate in favor of a single energy charge.

#### **Response:**

Nolin's decision to eliminate its declining block rate for Schedule 3 – Large Power Rate in favor of a single energy charge is based on Nolin's desire to move more fully towards a cost-based rate design, especially for its large commercial and industrial members. This is the first step that Nolin is proposing in this process. Nolin is proposing to increase its demand rate to an amount equal to the rate of its wholesale power supplier as well as increase its customer charge to better align its rates with the cost-of-service results for this rate class. Eventually, Nolin hopes to achieve a completely cost-based rate for this rate class and others by having the Member Cost of Service Charge recover all customer-related costs, the demand charge recover all demand-related costs (including the wholesale power demand costs as well as the distribution demand-related costs), and the energy charge recover the energy-related costs (wholesale power-related energy costs).

b. Explain why there is at present no customer charge for Schedule 4, Industrial Rate.

#### **Response:**

As the Commission is aware, Nolin has not often appeared before it seeking to adjust its rates. As a result, there have been few opportunities and minimal need to make significant changes to the rate design of Nolin's various rate classes. As described above, however, Nolin is now moving towards a more cost-based rate design whereby it seeks to recover its fixed costs of service in a reasonable and predictable manner. While the rates approved by the Commission in Nolin's last general rate adjustment case (Case No. 2006-00482) did not include a customer charge for Schedule 4, Industrial Rate, such a monthly charge is reasonable and warranted under present circumstances.

# Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

2. Refer to the application, Exhibit K, page 7 of 7, line 13, and Exhibit W, page 5. Exhibit K shows that G&T Patronage Capital is \$34,290,633. Exhibit W, page 5, shows this amount for the month of March 2016. Confirm that the amount on Exhibit K, page 7 of 7, should be \$34,288,149 as reflected for April 2016 on Exhibit W, page 5, in account No. 123.10. Provide revised schedules as necessary.

#### **Response:**

Nolin confirms the G&T Patronage Capital should be the \$34,288,149. The updated Exhibit K, page 7 of 7 is attached.

# Nolin Rural Electric Cooperative Case No. 2016-00367 Equity Capitalization April 30, 2016

		Test	Calendar Year					
		Year						
	Proposed	2016	2015	2014	2013	2012	2011	
Equity Capitalization:								
without G&T patronage capital								
Total margins and equities	65 9/12 623	63 694 552	67 193 771	70 643 167	65 488 202	63 056 420	57 579 686	
Loss G&T Patronago capital	24 288 140	31 288 1/10	30 811 202	26 937 646	22 467 538	19 046 700	15 386 434	
Less Gol Fationage capital	21 655 / 9/	29 106 103	36 682 569	43 705 521	43 020 664	44 009 720	42 193 252	
Long torm dobt	100 544 778	100 544 778	93 838 720	91 804 909	101 248 169	94 574 853	103 251 400	
Total	132 200 262	129 951 181	130 521 289	135 510 430	144 268 833	138 584 573	145 444 652	
10(4)	152,200,202	120,001,101	100,021,203	100,010,100	11,200,000	100,00 1,070	110)111)002	
Equity capitalization ratio	24%	23%	28%	32%	30%	32%	29%	
Equity capitalization ratio	<u> </u>							
Equity Capitalization:								
with G&T patronage capital								
Total margins and equities	65,943,633	63,694,552	67,493,771	70,643,167	65,488,202	63,056,420	57,579,686	
Long-term debt	100,544,778	100,544,778	93,838,720	91,804,909	101,248,169	94,574,853	103,251,400	
Total	166,488,411	164,239,330	161,332,491	162,448,076	166,736,371	157,631,273	160,831,086	
Equity capitalization ratio	<u>40%</u>	<u>39%</u>	<u>42%</u>	<u>43%</u>	<u>39%</u>	<u>40%</u>	<u>36%</u>	
Equity to Total Assets:								
with G&T patronage capital								
Total margins and equities	65,943,633	63,694,552	67,493,771	70,643,167	65,488,202	63,056,420	57,579,686	
Total assets	188,725,942	186,476,861	185,817,730	183,061,318	192,659,022	183,047,332	177,430,757	
Equity to total accet ratio	350/	310/	36%	30%	31%	34%	37%	
Equity to total asset fatio	3370	5470	5070	3370	54/0	5470	5270	

# Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

3. Refer to the application, Exhibit 1, page 2, and Exhibit 2, page 1. Explain why the allocation factors used in these exhibits differ. Provide revised schedules as necessary.

#### **Response:**

The percentage adjustments contained in Exhibit 2 were not updated to reflect the labor percentages contained in Exhibit 1. The document attached hereto as Attachment 3 shows the adjustment contained in the original Exhibit 2, page 1 as well as the corrected adjustment. The updated schedule resulted in a difference of \$53.

Net Nolin

Net Nolin

### Exhibit 2, page 1 As originally filed

Adjustment	Percent	<u>Total Adjustment</u>	Percent	<u>Amount</u>
107 Capitalized	18.70%	\$1,411	96.05%	\$1,355
163	0.00%	0	0.00%	0
416 Clearing and others	4.80%	362	99.22%	359
580 Operations	22.80%	1,720	99.13%	1,705
590 Maintenance	18.70%	1,411	90.18%	1,272
901 Consumer Accoutns	16.40%	1,237	99.83%	1,235
908 Customer service	5.20%	392	100.00%	392
912 Sales	0.00%	0	0.00%	0
920 Administrative and general	13.40%	1,011	85.71%	867
Total	100%	\$7,544	94.97%	\$7,185

Amount expensed

#### Exhibit 2, page 1 Revised

#### **Total Adjustment** Percent Amount **Adjustment** Percent 96.05% \$1,332 107 Capitalized 18.39% \$1,387 0 0.00% 0.00% 163 0 4.13% 312 99.22% 309 416 Clearing and others 1,748 23.37% 1,763 99.13% 580 Operations 90.18% 1,019 14.98% 1,130 590 Maintenance 1,206 901 Consumer Accoutns 16.01% 1,208 99.83% 390 5.17% 390 100.00% 908 Customer service 0.00% 0 912 Sales 0.00% 0 17.95% \$1,354 85.71% 1,161 920 Administrative and general 94.97% \$7,165 100% \$7,544

Total

Amount expensed

\$5,524

\$5,471

# Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

4. Refer to the application, Exhibit 3, page 2 of 6, and to Case No. 2016-00434, the application, Exhibit 3, page 2 of 6. Explain why the percentages used to allocate the proposed increase in depreciation expense are the same in both exhibits. Provide any necessary revisions to any affected exhibits.

#### **Response:**

The adjustment percentages from Case No. 2016-00434 were used to format the adjustment for Nolin but mistakenly left unchanged. The document attached hereto as Attachment 4 shows the percentages for Nolin as originally filed and the percentages for Nolin as revised. Also included on an accompanying flash drive is an electronic version of the revised Exhibit 3.

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#### Exhibit 3, page 2 of 6 as originally filed

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Account	<u>%</u>	<u>Amount</u>
Construction and retirement WIP	34%	\$5,436
Others	1%	186
Distribution - operations	15%	2,376
Distribution - maintenance	27%	4,248
Consumer accounts	7%	1,092
Consumer service and information	6%	902
Sales	0%	0
Administrative and general	10%	1,549
Total	100%	\$15,790
-		
Amount expensed	<u></u>	\$10,167

### Exhibit 3, page 2 of 6

• •			
-	Revised		
	Account	<u>%</u>	<u>Amount</u>
	Construction and retirement WIP	31%	\$4,895
	Others	0%	0
	Distribution - operations	54%	8,526
-	Distribution - maintenance	9%	1,421
	Consumer accounts	2%	316
	Consumer service and information	3%	474
	Sales	0%	0
	Administrative and general	1%	158
	- -		
	Total	100%	\$15,790
-			\$10 <b>,89</b> 5

# Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

- 5. Refer to the application, Exhibit 3, and Nolin's response to the Attorney General's Second Request for Information ("AG's Second Request"), Item 21.
  - a. Provide the date that Nolin's current depreciation rates were approved and the case reference.

#### **Response:**

Nolin's current depreciation rates are supported by a Depreciation Study completed by Gannett Fleming Valuation and Rate Consultants, Inc., a copy of which is attached hereto as Attachment 5A. Upon information and belief, this Depreciation Study and the rates reflected therein were submitted to and accepted by the Commission as part of Case No. 2000-00482, in which case the Commission's Final Order was entered on August 2, 2001. In Nolin's last general rate adjustment case, Case No. 2006-00466, Nolin proposed to maintain its then-existing depreciation rates (which are the same rates Nolin proposes to continue as part of the present case); Case No. 2006-00466 concluded with the entry of the Commission's Final Order on December 19, 2007, in which Order the Commission adopted and approved a Joint Settlement submitted by Nolin and the Office of the Attorney General.

b. Provide a copy of Nolin's last depreciation study and reference the case in which it was approved.

#### **Response:**

Please see previous response.

Response No. 5 Page 2 of 2 Witness: James Adkins

c. State when Nolin's current rates were approved by the Rural Utilities Service ("RUS"). Provide all correspondence regarding RUS's approval of the current rates.

#### **Response:**

Nolin's current depreciation rates were approved by RUS on August 22, 2000. Please refer to "Attachment 5B" for verification of this approval.

d. Explain how Nolin determined the depreciation rate for Account 362, Station Equipment should be 10.25 percent.

#### **Response:**

The depreciation rate for Account 362, Station Equipment was determined as part of the above-referenced Depreciation Study conducted by Gannett Fleming. Nolin also regularly reviews its plant and reserve for any major changes, unusual occurrences, or other factors that would necessitate updating the depreciation study, but has not identified a need to do so (particularly in light of where it falls on the Depreciation Guideline Curve). Please see Nolin's response to Item No. 11 of this set of requests for information.

Attachment 5a Page 1

# NOLIN RURAL ELECTRIC **COOPERATIVE CORPORATION** ELIZABETHTOWN, KENTUCKY

# SERVICE LIFE AND SALVAGE STUDY AND **RECOMMENDED DEPRECIATION ACCRUAL RATES** AS OF DECEMBER 31, 1998

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, INC.



HARRISBURG, PENNSYLVANIA

# NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION Elizabethtown, Kentucky

# SERVICE LIFE AND SALVAGE STUDY AND RECOMMENDED DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 1998

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, INC.

Harrisburg, Pennsylvania

Attachment 5a Page 5



GANNETT FLEMING VALUATION AND RATE CONSULTANTS, INC. P.O. Box 67100 Harrisburg, PA 17106-7100 Location:

207 Senate Avenue Camp Hill, PA 17011

Office: (717) 763-7211 Fax: (717) 763-8150 www.gannettfleming.com

January 11, 2000

Nolin Rural Electric Cooperative Corporation 411 Ring Road Elizabethtown, KY 42701

Attention Mr. O. V. Sparks Administrative and Finance Manager

Gentlemen:

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Pursuant to your request, we have studied the service life and net salvage characteristics of the electric plant of the Nolin Rural Electric Cooperative Corporation, for the purpose of determining recommended annual depreciation accrual rates as of December 31, 1998. The results of our study are presented in the attached report.

The report sets forth a brief description of the concepts and methods upon which the study was based, our estimates of survivor curves and net salvage, and the ensuing remaining life depreciation accrual rates. A summary statement of the results of our study is presented on pages III-5 and III-6 of the report.

Respectfully submitted,

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, INC.

WILLIAM M. STOUT, P.E. President

JOHN F. WIEDMAYER Supervisor, Depreciation Studies

WMS/JFW:krm Attachment



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# PART I. INTRODUCTION

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#### NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

### SERVICE LIFE AND SALVAGE STUDY AND RECOMMENDED DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 1998

#### PART I. INTRODUCTION

#### SCOPE

This report presents the results of the service life and net salvage study prepared by Gannett Fleming Valuation and Rate Consultants, Inc., for Nolin Rural Electric Cooperative Corporation. The report relates to the concepts, methods, and basic judgments which underlie the depreciation calculations related to current electric plant in service. The primary objective of the study was to determine the estimated survivor curves, average service lives and net salvage applicable to the depreciable property groups of electric plant in service.

The report presents a summary of the annual accrual rates and level of annual depreciation expense as of December 31, 1998, as well as historical statistics related to the survivor curve and net salvage analyses in graphic and tabular form.

#### BASIS OF STUDY

#### Depreciation

For most accounts, the annual depreciation accrual rates and pro forma amounts as of December 31, 1998, were calculated by the straight line method and the average remaining life basis. For certain general plant accounts, the annual accrual rates and amounts are based on amortization accounting. Both types of calculations were based on original cost, attained ages, and estimated service life characteristics and net salvage resulting from our study of each plant account.

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The change to amortization accounting for certain general plant accounts is recommended because of the disproportionate plant accounting effort required when compared to the minimal original cost of the large number of items in these accounts. Many electric utilities in North America have received approval to adopt amortization accounting for these accounts. An explanation of the calculation of annual remaining life amortization rates is presented beginning on page II-28 of the report.

#### Service Life Estimates

The service life estimates were based on informed judgment which incorporated analyses of available historical service life data related to the property, a review of management's current plans and operating policies, and a general knowledge of service lives experienced and estimated in the electric industry. The use of survivor curves to reflect the expected dispersion of retirements provides a consistent method of estimating depreciation for utility property. Iowa type survivor curves were used to depict the estimated survivor curves for the plant accounts not subject to amortization accounting.

The procedure for estimating service lives consisted of compiling historical data for the plant accounts or depreciable groups, analyzing this history through the use of widely accepted techniques, and forecasting the survivor characteristics for each depreciable group on the basis of interpretations of the historical data analyses and the probable future. The combination of the historical experience and the estimated future yielded estimated survivor curves from which the average service lives were derived.

The retirement rate method of life analysis was used for the distribution plant accounts included in the study. Statistically aged plant accounting data through 1998 were used in

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the retirement rate computations and were the primary statistical support of the service life estimates.

# Net Salvage Estimates

The method of analysis underlying the estimates of net salvage consisted of studying historical gross salvage and cost of removal data for total distribution plant and judging the net salvage on the basis of that history, outlook for the future, and a review of salvage estimates of other electric utilities for similar plant accounts. The data analyzed included gross salvage and cost of removal related to depreciable plant retirements recorded during the period 1965 through 1998.

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Attachment 5a Page 17

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# PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

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#### LIFE ANALYSIS

#### Average Service Life

The use of an average service life for a property group implies that the various units in the group have different lives. Thus, the average life may be obtained by determining the separate lives of each of the units, or by constructing a survivor curve by plotting the number of units which survive at successive ages. The use of survivor curves, which reflect experienced and expected dispersion of service lives, is a systematic and rational means of estimating average service lives to be used to calculate depreciation for utility property. A discussion of the general concept of survivor curves and the lowa type survivor curves is presented.

#### Survivor Curves

The survivor curve graphically depicts the amount of property existing at each age throughout the life of an original group. From the survivor curve, the average life of the group, the remaining life expectancy, the probable life and the frequency curve can be calculated. In Figure 1, a typical smooth survivor curve and the derived curves are illustrated. The average life is obtained by calculating the area under the survivor curve, from age zero to the maximum age, and dividing this area by the ordinate at age zero. The remaining life expectancy at any age can be calculated by obtaining the area under the curve, from the observation age to the maximum age, and dividing this area by the percent surviving at the observation age. For example, in Figure 1 the remaining life at age 30 years is equal to the crosshatched area under the survivor curve divided by 29.5 percent surviving at age 30. The probable life at any age is developed by adding the age and remaining life. If the probable life of the property is calculated for each year of age, the probable life curve shown

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### PART II. METHODS USED IN THE ESTIMATION OF DEPRECIATION

#### DEPRECIATION

Depreciation, as defined in the Uniform System of Accounts, is the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of electric plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, and requirements of public authorities.

Depreciation as used in accounting is a method of distributing fixed capital costs over a period of time by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing utility service. There are two bases for computing depreciation, the whole life basis and the remaining life basis. In the whole life basis, the original cost and net salvage are recovered over the entire service life from age zero to the retirement age. In the remaining life basis, the original cost less depreciation less future net salvage are recovered over the remaining life from the study age to the retirement age. The most prevalent method of allocation for both bases is to distribute an equal amount of cost to each year of service life. This method is known as the straight line method of depreciation.

To calculate straight line remaining life depreciation, prior determinations of survivor curves and net salvage are required. These subjects are discussed in the sections which follow.

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Attachment 5a Page 21 in the chart can be developed. The frequency curve presents the number of units retired in each age interval and is derived by obtaining the differences between the amount of property surviving at the beginning and at the end of each interval.

#### Iowa Type Curves

The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the lowa type curves. There are four families in the lowa system, labeled in accordance with the location of the modes of the retirements in relationship to the average life and the relative height of the modes. The left moded curves, presented in Figure 2, are those in which the greatest frequency of retirement occurs to the left of, or prior to, average service life. The symmetrical moded curves, presented in Figure 3, are those in which the greatest frequency of retirement occurs at average service life. The right moded curves, presented in Figure 4, are those in which the greatest frequency occurs to the right of, or after, average service life. The origin moded curves, presented in Figure 5, are those in which the greatest frequency of retirement occurs at the origin, or immediately after age zero. The letter designation of each family of curves (L, S, R or O) represents the location of the mode of the associated frequency curve with respect to the average service life. The numerical subscripts represent the relative heights of the modes of the frequency curves within each family.

The lowa curves were developed at the lowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired. A report of the study which resulted in the classification of property survivor characteristics into 18 type curves, which constitute three of the

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Figure 2. Left Modal or "L" Iowa Type Survivor Curves

Attachment 5a Page 23

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Figure 3. Symmetrical or "S" Iowa Type Survivor Curves

Attachment 5a Page 24

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Figure 4. Right Modal or "R" Iowa Type Survivor Curves

Attachment 5a Page 25



Figure 5. Origin Modal or "O" Iowa Type Survivor Curves

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four families, was published in 1935 in the form of the Experiment Station's Bulletin 125<sup>1</sup>. These type curves have also been presented in subsequent Experiment Station bulletins and in the text, "Engineering Valuation and Depreciation<sup>2</sup>." In 1957, Frank V. B. Couch, Jr., an Iowa State College graduate student, submitted a thesis<sup>3</sup> presenting his development of the fourth family consisting of the four O type survivor curves.

# Retirement Rate Method of Analysis

The retirement rate method is an actuarial method of deriving survivor curves using the average rates at which property of each age group is retired. The method relates to property groups for which aged accounting experience is available or for which aged accounting experience is developed by statistically aging unaged amounts and is the method used to develop the original stub survivor curves in this study. The method (also known as the annual rate method) is illustrated through the use of an example in the following text, and is also explained in several publications, including "Statistical Analyses of Industrial Property Retirements,"<sup>4</sup> "Engineering Valuation and Depreciation"<sup>5</sup> and "Methods of Estimating Utility Plant Life".<sup>6</sup>

<sup>1</sup>Winfrey, Robley. <u>Statistical Analyses of Industrial Property Retirements</u>. Iowa State College, Engineering Experiment Station, Bulletin 125. 1935.

<sup>2</sup>Marston, Anson, Robley Winfrey and Jean C. Hempstead. <u>Engineering Valuation</u> <u>and Depreciation</u>, 2nd Edition. New York, McGraw-Hill Book Company. 1953.

<sup>3</sup>Couch, Frank V. B., Jr. "Classification of Type O Retirement Characteristics of Industrial Property." Unpublished M.S. thesis (Engineering Valuation). Library, Iowa State College, Ames, Iowa. 1957.

<sup>4</sup>Winfrey, Robley, Supra Note 1.

<sup>5</sup>Marston, Anson, Robley Winfrey, and Jean C. Hempstead, Supra Note 2.

<sup>6</sup>A Report of the Engineering Subcommittee of the Depreciation Accounting Committee, Edison Electric Institute. Publication No. 51-23. Published 1952.

The average rate of retirement used in the calculation of the percent surviving for the survivor curve (life table) requires two sets of data: first, the property retired during a period of observation, identified by the property's age at retirement; and second, the property exposed to retirement at the beginning of the age intervals during the same period. The period of observation is referred to as the <u>experience band</u>, and the band of years which represent the installation dates of the property exposed to retirement during the experience band is referred to as the <u>placement band</u>. An example of the calculations used in the development of a life table based on the age at retirement in years follows. The example includes schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table and illustrations of smoothing the stub survivor curve.

Schedules of Annual Transactions in Plant Records. The property group used to illustrate the retirement rate method is observed for the experience band 1989-1998 during which there were placements during the years 1984-1998. In order to illustrate the summation of the aged data by age interval, the data were compiled in the manner presented in Tables 1 and 2 on pages II-12 and II-13. In Table 1, the year of installation (year placed) and the year of retirement are shown. The age interval during which a retirement occurred is determined from this information. In the example which follows, \$10,000 of the dollars invested in 1984 were retired in 1989. The \$10,000 retirement occurred during the age interval between 4½ and 5½ years on the basis that approximately one-half of the amount of property was installed prior to and subsequent to July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint

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# TABLE 1. RETIREMENTS FOR EACH YEAR 1989 - 1998

# SUMMARIZED BY AGE INTERVAL

# Experience Band 1989-1998

Placement Band 1984-1998

				Re	<u>tirements</u>	s, Thousa	ands of [	Dollars		•		
Year	. <u> </u>				Duri	ng Year					Total During	Age
Placed	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	Age Interval	Interval
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1984	10	11	12	13	14	16	23	24	25	26	26	131⁄2-141⁄2
1985	11	12	13	15	16	18	20	21	22	19	44	121⁄2-131⁄2
1986	11	12	13	14	16	17	19	21	22	18	64	11½-12½
1987	8	9	10	11	_ <b>11</b>	13	14	15	16	17	83	101⁄2-111⁄2
1988	9	10	11	12	13	14	16	17	19	20	93	91⁄2-101⁄2
1989	• 4	9	10	11	12	13	14	15	16	20	105	81⁄2-91⁄2
1990		5	11	12	13	14	15	16	18	20	113	71⁄2-81⁄2
1991			6	12	13	15	16	17	19	19	· 124	61⁄2-71⁄2
1992				6	13	15	16	17	19	19	131	51⁄2-61⁄2
1993			-		7	14	16	17	19	20	143	41⁄2-51⁄2
1994						8	18	20	22	23	146	31⁄2-41⁄2
1995							9	20	22	25	150	21⁄2-31⁄2
1996					1			11	23	25	151	11/2-21/2
1997									<sup>^</sup> 11	24	153	1/2-11/2 🦕
1998		- <u></u> -								<u>13</u>	80	0-½ Attach
Total	<u>53</u>	<u>68</u>	<u>86</u>	<u>106</u>	<u>128</u>	<u>157</u>	. <u>196</u>	<u>231</u>	<u>273</u>	<u>308</u>	<u>1.606</u>	Page 29

# TABLE 2. OTHER TRANSACTIONS FOR EACH YEAR 1989-1998 SUMMARIZED BY AGE INTERVAL

Experience Band 1989-1998

Placement Band 1984-1998

					Acqu	lisitions, Theuse	Transfer	s, and Sal	les,			
Year					Du	ring Yea	in <u>as or De</u> ir				Total During	Age
<u>Placed</u> (1)	<u>1989</u> (2)	<u>1990</u> (3)	<u>1991</u> (4)	<u>1992</u> (5)	<u>1993</u> (6)	<u>1994</u> (7)	<u>1995</u> (8)	<u>1996</u> (9)		<u>1998</u> (11)	Age Interval (12)	Interval (13)
1984	-	-		-	-	-	60a	-	_	-	-	131⁄2-141⁄2
1985	-	-	-	-	-	<b>-</b> .	-	-	-	-	-	121⁄2-131⁄2
1986	-	-	- `	-	. –	-	-	-	-	-	-	11½-12½
1987	-	-	-	-	<b>-</b> ·	-	<b>-</b> .	(5) <sup>b</sup>	-	-	60	101⁄2-111⁄2
1988	-	-	-	-	-	-	-	6 a	-	-	-	9½-10½
1989	·	-	-	-	-	-	-	-	-	-	(5)	81⁄2-91⁄2
1990		-	-	-	-	-	-	-	-	-	6	71⁄2-81⁄2
1991			-	· _	-	-	-	-	-	-	-	61⁄2-71⁄2
1992				-	-	-	-	(12) <sup>b</sup>	-	-	-	51⁄2-61⁄2
1993					-	-	-	-	22a	-		41⁄2-51⁄2
1994						-	-	(19) <sup>b</sup>	-	· <b>–</b>	10	31⁄2-41⁄2
1995							-	-	-	-	-	21⁄2-31⁄2
1996								-	-	(102) <sup>c</sup>	(121)	11⁄2-21⁄2
1997									-	• 🗕	-	1⁄2-11⁄2
1998	—			_		·	<b>-</b>	-	-			0-1/2
Total	-	- 	-	-	-	<u>-</u>	<u>60</u>	( <u>30</u> )	<u>22</u>	( <u>102</u> )	( <u>50</u> )	

<sup>a</sup> Transfer Affecting Exposures at Beginning of Year <sup>b</sup> Transfer Affecting Exposures at End of Year

<sup>c</sup> Sale with Continued Use

Parentheses denote Credit amount.

of a one-year age interval of time, except the first age interval which encompasses only onehalf year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age interval. For example, the total of \$143,000 retired for age interval  $4\frac{1}{2}-5\frac{1}{2}$  is the sum of the retirements entered on Table 1 immediately above the stairstep line drawn on the table beginning with the 1989 retirements of 1984 installations and ending with the 1998 retirements of the 1993 installations. Thus, the total amount of 143 for age interval  $4\frac{1}{2}-5\frac{1}{2}$  equals the sum of:

10 + 12 + 13 + 11 + 13 + 13 + 15 + 17 + 19 + 20.

In Table 2, other transactions which affect the group are recorded in a similar manner. The entries illustrated include transfers and sales. The entries which are credits to the plant account are shown in parentheses. The items recorded on this schedule are not totaled with the retirements but are used in developing the exposures at the beginning of each age interval.

<u>Schedule of Plant Exposed to Retirement</u>. The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Table 3 on page II-15.

The surviving plant at the beginning of each year from 1989 through 1998 is recorded by year in the portion of the table headed "Annual Survivors at the Beginning of the Year". The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Table 3 for each successive year following the beginning balance or addition are obtained by adding or subtracting the net entries shown

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# TABLE 3. PLANT EXPOSED TO RETIREMENT JANUARY 1 OF EACH YEAR 1989-1998 SUMMARIZED BY AGE INTERVAL

1

Experience Band 1989-1998

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Placement Band 1984-1998

-					Expo	sures, T	housand	ls of Doll	ars			
	······										Total at	
Year			Ann	ual Surviv	<u>ors at th</u>	e Beginn	ing of th	<u>e Year</u>			Beginning of	Age
<u>Placed</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>	<u>1994</u>	<u>1995</u>	<u>1996</u>	<u>1997</u>	<u>1998</u>	Age Interval	<u>Interval</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1984	255	245	234	222	209	195	239	216	192	167	167	13½-14½
1985	279	268	256	243	228	212	194	174	153	131	323	121⁄2-131⁄2
1986	307	296	284	271	257	241	224	205	184	162	531	11½-12½
1987	338	330	321	311	300	289	276	262	242	226	823	10½-11½
1988	376	367	357	346	334	321	307	297	280	261	1,097	91⁄2-101⁄2
1989	420ª	416	407	397	386	374	361	347	332	316	1,503	81⁄2-91⁄2
1990		460 <sup>a</sup>	455	444	432	419	405	390	374	356	1,952	71⁄2-81⁄2
1991			510ª	504	492	479	464	448	431	412	2,463	61⁄2-71⁄2
1992				580ª	574	561	546	530	501	482	3,057	51⁄2-61⁄2
1993					660ª	653	639	623	628	609	3,789	41⁄2-51⁄2
1994						750°	742	724	685	663	4,332	31⁄2-41⁄2
1995							850ª	841	821	799	4,955	21⁄2-31⁄2
1996								960ª	949	926	5,719	11⁄2-21⁄2
1997									1,080ª	1,069	6,579	1⁄2-11⁄2
1998					<u> </u>	. <u></u>				<u>1,220</u> ª	7,490	0-1⁄2
Total	<u>1,975</u>	<u>2,382</u>	<u>2,824</u>	<u>3,318</u>	<u>3,872</u>	<u>4,494</u>	<u>5,247</u>	<u>6,017</u>	<u>6.852</u>	<u>7,799</u>	<u>44,780</u>	
			•									

<sup>a</sup> Additions during the year.

Attachment 5a Page 32

# TABLE 4. ORIGINAL LIFE TABLE CALCULATED BY THE RETIREMENT RATE METHOD

# Experience Band 1989-1998

### Placement Band 1984-1998

# (Exposure and Retirement Amounts are in Thousands of Dollars)

Age at	Exposures at	Retirements		•	Surviving at
Beginning of Interval	Beginning of <u>Age Interval</u>	During Age	Retirement	Survivor Ratio	Beginning of Age Interval
(1)	(2)	(3)	(4)	(5)	(6)
0.0	7,490	80	0.0107	0.9893	100.00
0.5	6,579	153	0.0233	0.9767	98.93
1.5	5,719	151	0.0264	<b>0.9736</b>	96.62
2.5	4,955	150	0.0303	0.9697	94.07
3.5	4,332	146	0.0337	0.9663	91.22
4.5	3,789	143	0.0377	0.9623	88.15
5.5	3,057	131	0.0429	0.9571	84.83
6.5	2,463	124	0.0503	0.9497	81.19
7.5	1,952	113	0.0579	0.9421	77.11
8.5	1,503	105	0.0699	0.9301	72.65
9.5	1,097	93	0.0848	0.9152	67.57
10.5	823	83	0.1009	0.8991	61.84
11.5	531	64	0.1205	0.8795	55.60
12.5	323	44	0.1362	0.8638	48.90
13.5	<u>    167</u>	26	0.1557	0.8443	42.24
				-	35.66
Total	44,780	1,606			

Column 2 from Table 3, Column 12, Plant Exposed to Retirement.

Column 3 from Table 1, Column 12, Retirements for Each Year.

Column 4 = Column 3 Divided by Column 2.

Column 5 = 1.0000 Minus Column 4.

Column 6 = Column 5 Multiplied by Column 6 as of the Preceding Age Interval.

on Tables 1 and 2. For the purpose of determining the plant exposed to retirement, transfersin are considered as being <u>exposed</u> to retirement in this group <u>at the beginning of the year</u> in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the <u>beginning of the following year</u>. Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each successive transaction year. For example, the exposures for the installation year 1994 are calculated in the following manner:

Exposures at age $0 =$ amount of addition	=	\$750,000
Exposures at age ½ = \$750,000 - \$ 8,000	=	\$742,000
Exposures at age 1½ = \$742,000 - \$18,000	=	\$724,000
Exposures at age 2½ = \$724,000 - \$20,000 - \$19,000	=	\$685,000
Exposures at age 3½ = \$685,000 - \$22,000	=	\$663,000

For the entire experience band 1989-1998, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing of the retirements during an age interval (Table 1). For example, the figure of 3,789, shown as the total exposures at the beginning of age interval  $4\frac{1}{2}-5\frac{1}{2}$ , is obtained by summing:

255 + 268 + 284 + 311 + 334 + 374 + 405 + 448 + 501 + 609.

<u>Original Life Table</u>. The original life table, illustrated in Table 4 on page II-17, is developed from the totals shown on the schedules of retirements and exposures, Tables 1 and 3, respectively. The exposures at the beginning of the age interval are obtained from the corresponding age interval of the exposure schedule, and the retirements during the age interval are obtained from the corresponding age interval of the retirement schedule. The retirement ratio is the result of dividing the retirements during the age interval by the exposures at the beginning of the age interval. The percent surviving at the beginning of each age interval is derived from survivor ratios, each of which equals one minus the retirement ratio. The percent surviving is developed by starting with 100% at age zero and successively multiplying the percent surviving at the beginning of each interval by the survivor ratio, i.e., one minus the retirement ratio for that age interval. The calculations necessary to determine the percent surviving at age 5½ are as follows:

Percent surviving at age 41/2	=	88.15	
Exposures at age 41⁄2	=	3,789,000	
Retirements from age 41/2 to 51/2	=	143,000	
Retirement Ratio	=	143,000 ÷ 3,	789,000 = 0.0377
Survivor Ratio	=	1.000 -	0.0377 = 0.9623
Percent surviving at age 51/2	=	(88.15) x	(0.9623) = 84.83

The totals of the exposures and retirements (columns 2 and 3) are shown for the purpose of checking with the respective totals in Tables 1 and 3. The ratio of the total retirements to the total exposures, other than for each age interval, is meaningless.

The original survivor curve is plotted from the original life table (column 6, Table 4). When the curve terminates at a percent surviving greater than zero, it is called a stub survivor curve. Survivor curves developed from retirement rate studies generally are stub curves.

<u>Smoothing the Original Survivor Curve</u>. The smoothing of the original survivor curve eliminates any irregularities and serves as the basis for the preliminary extrapolation to zero percent surviving of the original stub curve. Even if the original survivor curve is complete from 100% to zero percent, it is desirable to eliminate any irregularities as there is still an extrapolation for the vintages which have not yet lived to the age at which the curve reaches

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zero percent. In this study, the smoothing of the original curve with established type curves was used to eliminate irregularities in the original curve.

The lowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the lowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 6, 7, and 8, the original curve developed in Table 4 is compared with the L, S, and R lowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 or the S0. In Figure 9, the three fittings, 12-L1, 12-S0, and 12-R1 are drawn for comparison purposes. It is probable that the 12-R1 lowa curve would be selected as the most representative of the plotted survivor characteristics of the group, assuming no contrary relevant factors external to the analysis of historical data.

#### Simulated Plant Balance Method

The simulated plant balance method of life analysis is a statistical procedure by which experienced average service life and survivor characteristics are inferred through a series of approximations in which several average service life and survivor curve combinations are tested. The testing procedure consists of applying survivor ratios defined by the average service life and survivor curve combinations being tested to historical plant

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additions and comparing the resulting calculated, or simulated, surviving balances with the actual surviving balances.

Each year-end book balance is the sum of the plant surviving from the original annual additions. Each calculated year-end balance is the sum of the simulated plant surviving from the same original annual additions. The simulated survivors are calculated for each vintage by multiplying the original additions by the percent surviving corresponding to the age of the vintage as of the date of the year-end balances being simulated. This procedure is repeated until a series of simulated balances are calculated. The balances are then compared with the book balances to determine which average service life and survivor curve combinations result in calculated balances most nearly simulating the progression of actual balances.

The simulated plant record method is presented in greater detail in the Edison Electric Institute's publication, "Methods of Estimating Utility Plant Life"<sup>7</sup>.

# **Computed Mortality Method**

The computed mortality method of life analysis as used in this study is a procedure for statistically aging annual retirements of property and analyzing the statistically aged retirements by the retirement rate method. In this procedure, an aged plant balance is developed for the year prior to and for each test year during the given term of comparison. Each given balance is aged by a simulation procedure which applies a series of successive survivor curve trials using a specified lowa type curve. The lowa type survivor curve specified for each account is based on judgment incorporating the results of the simulated plant

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<sup>&</sup>lt;sup>7</sup>Supra Note 6.

record analyses, a knowledge of the property, and the type curves estimated for the account in other electric companies. Each trial consists of constructing a specific survivor curve at one-year intervals beginning with age ½. From this curve, survivor ratios are computed and applied, by vintage, to the previous year's aged ending balance and the current test year's given gross addition. The resultant aged surviving balances also produce the aged retirements which are the differences between successive aged balances. The aged data are then analyzed by the retirement rate method as described above.

### NET SALVAGE ANALYSIS

# **Distribution Plant**

The statistical basis for the estimates of net salvage included a study of the amounts of gross salvage received and costs of removal incurred in connection with experienced retirements during the period 1965 through 1998. These data were available for each transaction year, but could not be identified by plant account within total distribution plant.

The estimates of net salvage by plant account were based on judgment which incorporated analyses of the available historical data, expectations with respect to future levels of removal costs and gross salvage, and considerations of other electric utilities' experience. The level of experienced negative net salvage for total distribution plant during the most recent seven years, 1992 through 1998, was a significant factor in the estimation of net salvage percentages for the individual plant accounts.

#### **General Plant**

The estimates of net salvage by plant account were based on judgment which incorporated analyses of the available historical data, 1992 through 1998, expectations

with respect to future net salvage amounts, and considerations of other electric utilities' experience. The net salvage estimate for the former main office building included in Account 390 is based upon the estimated sales price for the property, excluding land. The net salvage estimates for the three subaccounts of Account 392, Transportation Equipment, were based on judgment which included a review of the trade-in values received for each vehicle category, estimates used by other utilities and discussion with management regarding future outlook.

# CALCULATION OF DEPRECIATION

The recommended annual depreciation rates were calculated as of December 31, 1998, based on electric distribution plant and the accumulated provision for depreciation (book reserve) balances as of that date, the straight line method of depreciation, the average service life procedure, and the average remaining life basis. Use of the remaining life basis recognizes the current status of the accumulated provision for depreciation and aims to allocate the previously unallocated service value over the remaining life.

# Group Depreciation Procedures

A group procedure for depreciation is appropriate when considering more than a single item of property. Normally the items within a group do not have identical service lives, but have lives that are dispersed over a range of time. There are two primary group procedures, namely, average service life and equal life group.

In the average service life procedure, the rate of annual depreciation is based on the average life or average remaining life of the group, and this rate is applied to the surviving balances of the group's cost. A characteristic of this procedure is that the cost of plant retired prior to average life is not fully recouped at the time of retirement, whereas the cost of plant retired subsequent to average life is more than fully recouped. Over the entire life cycle, the portion of cost not recouped prior to average life is balanced by the cost recouped subsequent to average life.

# **Remaining Life Annual Accruals**

For the purpose of calculating remaining life accrual rates as of December 31, 1998, the estimated book depreciation reserve for total distribution plant is allocated among the depreciable plant accounts in proportion to the calculated accrued depreciation for each account. The company maintains the book accumulated depreciation for general plant account at the account level. For Accounts 391 and 392, Office Furniture and Equipment and Transportation Equipment, respectively, the accounts were separated into subaccounts. The book accumulated depreciation for Accounts 391 and 392 were allocated among the subaccounts in proportion to the calculated accrued depreciation for each account. The detailed calculations that support the calculated accrued depreciation and average remaining life for each account are set forth in the Results of Study section of the report.

In the average service life procedure, the remaining life annual accrual for each account is determined by dividing future book accruals (original cost less book accumulated depreciation less future net salvage) by the average remaining life of the account. The average remaining life is a directly weighted average derived from the estimated future survivor curve in accordance with the average service life procedure.

The calculated accrued depreciation represents that portion of the depreciable cost of the group which would not be allocated to expense through future whole life depreciation accruals if current forecasts of life characteristics are used as the basis for such accruals. The accrued depreciation calculation consists of applying an appropriate ratio to the surviving

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original cost of each vintage of each account, based upon the attained age and service life. The straight line accrued depreciation ratios are calculated as follows for the average service life procedure:

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

# CALCULATION OF ANNUAL AND ACCRUED AMORTIZATION

Amortization is the gradual extinguishment of an amount in an account by distributing such an amount over a fixed period, over the life of the asset or liability to which it applies, or over the period during which it is anticipated the benefit will be realized. Normally, the distribution of the amount is in equal amounts to each year of the amortization period. For this report, an amount representing the amortization of the reserve variance is added to the normal amortization amount. The sum of the two amounts equals the total amortization amount calculated using the remaining life technique.

The calculation of annual and accrued amortization requires the selection of an amortization period. The amortization periods used in this report were based on judgment which incorporated a consideration of the period during which the assets will render most of their service, the amortization period and service lives used by other utilities, and the service life estimates previously used for the asset under depreciation accounting.

Amortization accounting is proposed for certain General Plant accounts that represent numerous units of property, but a very small portion of depreciable electric plant in service. The accounts and their amortization periods are as follows:

	Account	Amortization Period, <u>Years</u>
391.1	Office Furniture & Eq Furniture	20
391.2	Office Furniture & Eq Electronic Eq.	5
391.3	Office Furniture & Eq Software	10
393	Stores Equipment	15
394	Shop Equipment	20
395	Laboratory Equipment	15
397	Communications Equipment	10
398	Miscellaneous Equipment	20

The calculated accrued amortization is equal to the original cost multiplied by the ratio of the vintage's age to its amortization period. The normal annual amortization amount is determined by dividing original cost by the period of amortization for the account. To this amount, the amortization of the reserve variance is added. The reserve variance represents the difference between the calculated accrued amount or theoretical reserve and the book reserve. The theoretical reserve is a measure commonly used to assess the adequacy of a company's book reserve.

# PART III. RESULTS OF STUDY

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# PART III. RESULTS OF STUDY

# SUMMARY OF RESULTS

The estimates of survivor curves and net salvage and the determination of remaining life depreciation accrual rates are the principal results of the depreciation study. The survivor curve and net salvage estimates and the derived annual depreciation accrual rates are set forth in Schedule 1, "Summary of Service Life and Net Salvage Estimates and Calculated Remaining Life Annual Accruals Related to Original Cost at December 31, 1998," on pages III-5 and III-6. Schedule 2 on pages III-7 and III-8 presents a comparison of existing and proposed depreciation accrual rates and amounts as of December 31, 1998. Schedule 3A on page III-9 presents the allocation of total distribution plant book accumulated depreciation to each account in proportion to the calculated accrued depreciation. Schedule 3B on page III-10 presents the allocation of book accumulated depreciation for Accounts 391 and 392 from the account level to the subaccount level in proportion to the calculated accrued depreciation.

# QUALIFICATION OF RESULTS

The calculated annual and accrued depreciation presented in this report are based on the surviving original cost of electric plant in service at December 31, 1998. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates. An assumption that accrual rates can remain unchanged over a long period of time implies a disregard for the inherent variability in service lives and net salvage and for the change of the composition of property in service. The composite remaining life and the accrued depreciation for each account were calculated

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in accordance with the straight line average service life method of depreciation based on estimates which reflect considerations of current historical evidence and expected future conditions.

# DESCRIPTION OF STATISTICAL SUPPORT

The service life and net salvage estimates were based on judgment which incorporated statistical analyses of retirement data, discussions with management, previous estimates used by Nolin Rural Electric Cooperative Corporation, and consideration of estimates made for other electric utilities. The results of the statistical analyses of service life for distribution plant are presented in the section beginning on page III-11. The results of the salvage analyses for distribution plant are presented in the section beginning on page III-11.

The estimated survivor curves for each account are presented in graphical form. The charts depict the estimated smooth survivor curve and original survivor curve(s) related to each account. For accounts where the original survivor curve was plotted, the calculation of the original life table is also presented.

The analyses of salvage data are presented in the section titled, "Net Salvage Statistics." The salvage analyses for distribution plant present the total distribution plant original cost retired, cost of removal, gross salvage and net salvage for the period 1965 through 1998. The salvage analyses for certain general plant accounts not subject to amortization accounting present for each account the original cost retired, cost of removal, gross salvage and net salvage and net salvage for the period 1992 through 1998. Each amount is expressed as a percent of the retirement amount. Three-year moving averages and the average for the most recent five-year period, 1994-1998, also are presented.

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# DESCRIPTION OF DEPRECIATION TABULATIONS

1.

The tables of the calculated accrued depreciation are presented in account sequence on pages III-44 through III-65. The tables indicate the estimated survivor curve and net salvage percent for the account and set forth, for each installation year, the original cost, the average service life, the average remaining life or expectancy, and the calculated accrued depreciation factor and amount.

The tables of composite remaining lives are presented in account sequence on pages III-67 through III-96. The tables indicate the estimated survivor curve and net salvage percent for the account and set forth, for each installation year, the original cost, average service life, whole life annual accrual rate and amount, average remaining life, and the future accruals factor and amount. The composite remaining life at the end of each tabulation is the summation of the future accruals divided by the summation of the whole life annual accrual and is brought forward to column 7 of Schedule I on pages III-5 and III-6. The whole life annual accrual rates and amounts presented in these tables are required for the direct weighting of the remaining lives by installation year. Such rates are not the recommended annual depreciation accrual rates for Nolin Rural Electric Cooperative Corporation as of December 31, 1998.

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Response No. 5 Page 2 of 2 Witness: James Adkins

c. State when Nolin's current rates were approved by the Rural Utilities Service ("RUS"). Provide all correspondence regarding RUS's approval of the current rates.

### **Response:**

Nolin's current depreciation rates were approved by RUS on August 22, 2000. Please refer to "Attachment 5B" for verification of this approval.

d. Explain how Nolin determined the depreciation rate for Account 362, Station Equipment should be 10.25 percent.

### **Response:**

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The depreciation rate for Account 362, Station Equipment was determined as part of the above-referenced Depreciation Study conducted by Gannett Fleming. Nolin also regularly reviews its plant and reserve for any major changes, unusual occurrences, or other factors that would necessitate updating the depreciation study, but has not identified a need to do so (particularly in light of where it falls on the Depreciation Guideline Curve). Please see Nolin's response to Item No. 11 of this set of requests for information.

# Schedule 1. Summary of Service Life and Net Salvage Estimates and Calculated Remaining Life Annual Accruais

Related to Original Cost at December 31, 1998

		Probable		Net	Original	Book		Composite	Calculate	d Annual
		Retirement	Survivor	Salvage	Cost at	Accumulated	Future	Remaining	Acc	rual
_	Account	Date	Curve	Percent	12/31/98	Depreciation	Accruals	Life	Amount	Rate
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(7)/(8)	(10)=(9)/(5)
DIST										
362	Station Equipment - SCADA		10 -S2	0	520,389	66,912	453,477	8.50	53,350	10.25
364	Poles, Towers & Fixtures		27 -R2	(45)	12,269,499	4,864,989	12,925,785	18.41	702,107	5.72
365	Overhead Conductors		38 -R1	(25)	9,301,109	2,121,494	9,504,892	<b>29.93</b>	317,571	3.41
367	Underground Conductors		25 -L2	0	1,633,645	277,133	1,356,512	20.05	67,656	4.14
368	Line Transformers		41 -R2	0	9,745,774	1,878,990	7,866,784	31.77	247,617	2.54
369	Services		27 -R0.5	(20)	3,874,194	782,314	3,866,719	21.72	178,026	4.60
370	Meters		32 -R2.5	0	1,496,368	355,636	1,140,732	23.09	49,404	3.30
371	Installation on Consumer Premises		31 -R0.5	(5)	832,699	165,203	709,131	24.14	29,376	3.53
372	Temporary Meter Poles		15 -SQ	. 0	49,888	9,440	40,448	11.68	3,463	6.94
373	Street Lights		31 -R0.5	(5)	190,212	36,970	162,753	24.27	6,706	3.53
т	OTAL DISTRIBUTION PLANT				39,913,777	10,559,081	38,027,232		1,655,276	4.15

# Schedule 1. Summary of Service Life and Net Salvage Estimates and Calculated Remaining Life Annual Accruais Related to Original Cost at December 31, 1998

l R	Probable letirement	t Survivor	Net Salvage	Original Cost at	Book Accumulated	Future	Composite Remaining		t Annual Tual
Account	Date	Curve	Percent	12/31/98	Depreciation	Accruals	Life	Amount	Rate
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)=(7)/(8)	(10)
GENERÁL PLANT									
389 Land and Land Rights		Nondepre	ciable	596,208	-	-	-	Nondepr	eciable
390 Struc. & ImpMisc & Old HQ Office Bldg	g.	Fully Accrued	· 41	616,147	366,147	(0)	0.00	0	0.00
390.1 Struc. & ImpNew HQ Office Building	6-2047	100 -R2(a)	0	5,948,320	116,778	5,831,542	46.42	125,626	2.11
391.1 Office Furniture and EquipFurniture		20 -SQ	0	307,381	9,382	297,999	18.47	16,134	5.25 (b)
391.2 Office Furniture and EquipElect. Equip	<b>)</b> .	5 -SQ	0	497,689	68,269	429,420	3.46	124,110	26.25 (b)
391.3 Office Furniture and EquipSoftware		10 -SQ	0	34,547	5,818	28,729	5.79	4,962	14.36 (b)
392.1 Transportation EquipPassenger Cars		5 -R3	25	122,276	56,691	35,016	2.48	14,120	11.55
392.2 Transportation EquipVans & Light True	cks	5 -R3	30	411,955	174,831	113,538	2.52	45,055	10.94
392.3 Transportation EquipHeavy Trucks		10 -L2.5	15	991,778	363,344	479,668	6.48	74,023	7.46
393 Stores Equipment		15 -SQ	0	36,552	21,900	14,652	7.12	2,058	6.60 (b)
394 Shop Equipment		20 -SQ	0	104,025	46,921	57,104	15.55	3,672	4.11 (b)
395 Laboratory Equipment		15 -SQ	0	99,216	74,206	25,010	6.22	4,021	5.86 (b)
396 Power Operated Equipment		12 -L2	0	77,044	27,152	49,892	9.27	5,382	6.99
397 Communications Equipment		10 -SQ	0	275,372	83,792	191,580	6.45	29,702	11.88 (b)
398 Miscellaneous Equipment		20 -SQ	0	50,654	35,148	15,506	11.26	1,377	3.40 (b)
TOTAL GENERAL PLANT				10,169,164	1,450,377	7,569,657		450,242	.,
GRAND TOTAL				50,082,941	12,009,458	45,596,889		2,105,518	

(a) Survivor Curve shown indicates the interim survivor curve. The interim survivor curve describes the service life characteristics for the minor items of property included in this account such as carpets, HVAC system, roof, doors,etc.

(b) Rate is based on the accrual amount shown in column 9 divided by the original cost related to vintages within the amortization period. Vintage balances older than the amortization period are fully accrued and should be retired. Refer to the section titled, "Detailed Depreciation Calculations", in part III of the report for the original cost amounts within the amortization period.

# Schedule 2. Comparison of Proposed and Exisisting Depreciation Accrual Rates and Amounts as of December 31, 1998

		·	E	EXISTING	ESTIMA	TES		PROPOS	ED ESTIMA	TES	Change In
		Original		Net	Annu	al Accruai		Net	Calcula	ted Annual	Annual Accrual
		Cost at	Survivor	Salvage	Pe	r Books	Survivor	Salvage	Remaining	Life Accrual	Increase /
	Account	12/31/98	Curve	Percent	Rate	Amount	Curve	Percent	Rate	Amount	(Decrease)
	(1)	(2)	(3)	(4)	(5)	(6)=(2)*(5)	(7)	(8)	(9)	(10)	(11)=(10)-(6)
DIST	RIBUTION PLANT										
362	Station Equipment - SCADA	520,389	-	-	20.00	104,078	10 -S2	0	10.25	53,350	(50,728)
364	Poles, Towers & Fixtures	12,269,499	30 -R2	(45)	6.68	820,093	27 -R2	(45)	5.72	702,107	(117,986)
365	Overhead Conductors	9,301,109	40 -S0	(35)	4.02	373,905	38 -R1	(25)	3.41	317,571	(56,334)
367	Underground Conductors	1,633,645	40 -S3	0	2.56	41,756	25 -L2	0	4.14	67,656	25,900
368	Line Transformers	9,745,774	40 -S2	(35)	4.16	405,814	41 -R2	0	2.54	247,617	(158,197)
369	Services	3,874,194	25 -R1	(25)	5.92	229,197	27 -R0.5	(20)	4.60	178,026	(51,171)
370	Meters	1,496,368	35 -R2	0	3.14	47,046	32 -R2.5	0	3.30	49,404	2,358
371	Installation on Consumer Premises	832,699	30 -LO	0	3.50	29,178	31 -R0.5	(5)	3.53	29,376	198
372	Temporary Meter Poles	49,888	-	-	3.50	1,748	15 -SQ	0.	6.94	3,463	1,715
373	Street Lights	190,212	25 -R1	0	4.99	9,495	31 -R0.5	(5)	3.53	6,706	(2,789)
т	OTAL DISTRIBUTION PLANT	39,913,777			5.17	2,062,310			4.15	1,655,276	(407,034)

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### Schedule 2. Comparison of Proposed and Exisisting Depreciation Accrual Rates and Amounts as of December 31, 1998

		E	EXISTING	ESTIMA	TES		PROPOS	ED ESTIN	IATES	Change In
	Originai		Net	Annı	al Accrual		Net	Calcu	lated Annual	Annual Accrual
_	Cost at	Survivor	Salvage	Pe	r Books	Survivor	Salvage	Remaini	ng Life Accrual	Increase /
Account	12/31/98	Curve	Percent	Rate	Amount	Curve	Percent	Rate	Amount	(Decrease)
(1)	(2)	(3)	(4)	(5)	(6)=(2)*(5)	(7)	(8)	(9)	(10)	(11)=(10)-(6)
GENERAL PLANT										
389 Land and Land Rights	596,208	-	-		Nondepreciable	-	-	-	Nondepreciable	• -
390 Struc. & ImpMisc & Old HQ Office Bld	g. 616,147	-	-	3.00	18,484	0 0	41	0.00	0	(18,484)
390.1 Struc. & ImpNew HQ Office Building	5,948,320	-	-	2.00	119,204	100 -R2(a)	0	2.11	125,626	6,422
391.1 Office Furniture and EquipFurniture	307,381	-	-	6.00	18,443	20 -SQ	0	5.25	(b) 16,134	(2,309)
391.2 Office Furniture and EquipElect. Equip	. 497,689	-	-	6.00	29,861	5 -SQ	0	26.25	(b) 124,110	94,249
391.3 Office Furniture and EquipSoftware	34,547	-	-	6.00	2,073	10 -SQ	0	14.36	(b) 4,962	2,889
392.1 Transportation EquipPassenger Cars	122,276	-	-	9.00	11,005	5 -R3	25	11.55	14,120	3,115
392.2 Transportation EquipVans & Light True	ks 411,955	-	-	9.00	37,076	5 -R3	30	10.94	45,055	7,979
392.3 Transportation EquipHeavy Trucks	991,778	-	-	9.00	89,260	10 -L2.5	15	7.46	74,023	(15,237)
393 Stores Equipment	36,552	-	-	6.00	2,193	15 -SQ	0	6.60	(b) 2,058	(135)
394 Shop Equipment	104,025	-	-	6.00	6,242	20 -SQ	0	4.11	(b) 3,672	(2,570)
395 Laboratory Equipment	99,216	-	-	6.00	5,953	15 -SQ	0	5.86	(b) 4,021	(1,932)
396 Power Operated Equipment	77,044		-	6.00	4,623	12 -L2	0	6.99	5,382	759
397 Communications Equipment	275,372	-	-	6.00	16,522	10 -SQ	0	11.88	(b) 29,702	13,180
398 Miscellaneous Equipment	50,654	-	-	6.00	3,039	20 -SQ	0	3.40	(b)1,377	(1,662)
TOTAL GENERAL PLANT	10,169,164			3.80	363,978			4.70	450,242	86,264
GRAND TOTAL	50,082,941				2,426,288				2,105,518	(320,770)

(a) Survivor Curve shown indicates the interim survivor curve. The interim survivor curve describes the service life characteristics for the minor items of property included in this account such as carpets, HVAC system, roof, doors, etc.

(b) Rate is based on the accrual amount shown in column 9 divided by the original cost related to vintages within the amortization period. Vintage balances older than the amortization period are fully accrued and should be retired. Refer to the section titled, "Detailed Depreciation Calculations", in part III of the report for the original cost amounts within the amortization period.

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# Schedule 3A. Allocation of Book Accumulated Depreciation for Distribution Plant from the Functional Level to the Account Level in Proportion to the Calculated Accrued Depreciation

					Calculated	Accrued	Book Accu	mulated
		Original		Net	Depreci	ation	Depreci	ation
		Cost at	Survivor	Salvage	Amount	Percent	Amount	Percent
	Account	12/31/98 Curve		Percent	at 12/31/98	of Total	at 12/31/98	of Total
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DIST	RIBUTION PLANT							
362	Station Equipment - SCADA	520,389	10 -S2	0	78,058	0.63	66,912	0.63
364	Poles, Towers & Fixtures	12,269,499	27 -R2	(45)	5,675,416	46.07	4,864,989	46.07
365	Overhead Conductors	9,301,109	38 -R1	(25)	2,474,899	20.09	2,121,494	20.09
367	Underground Conductors	1,633,645	25 -L2	0	323,299	2.62	277,133	2.62
368	Line Transformers	9,745,774	41 -R2	0	2,191,999	17.80	1,878,990	17.80
369	Services	3,874,194	27 -R0.5	(20)	912,634	7.41	782,314	7.41
370	Meters	1,496,368	32 -R2.5	0	414,879	3.37	355,636	3.37
371	Installation on Consumer Premises	832,699	31 -R0.5	(5)	192,723	1.56	165,203	1.56
372	Temporary Meter Poles	49,888	15 -SQ	0	11,012	0.09	9,440	0.09
373	Street Lights	190,212	31 -R0.5	(5)	43,129	0.35	36,970	0.35
т	OTAL DISTRIBUTION PLANT	39,913,777	•		12,318,048	100.00	10,559,081	100.00

# Schedule 3B. Allocation of Book Accumulated Depreciation for General Plant Accounts 391 and 392 from the Account Level to the Subaccount Level in Proportion to the Calculated Accrued Depreciation

	Original		Net	Calculated AccruedDepreciation		Book AccumulatedDepreciation	
Account	Cost at 12/31/98	Survivor Curve	Salvage Percent	Amount at 12/31/98	Percent of Total	Amount at 12/31/98	Percent of Total
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
391.1 Office Furniture and EquipFurniture	307,381	20 -SQ	0	23,471	11.24	9,382	11.24
391.2 Office Furniture and EquipElect. Equip.	497,689	5 -SQ	0	170,834	81.79	68,269	81.79
391.3 Office Furniture and EquipSoftware	34,547	10 -SQ	0	14,555	6.97	5,818	6.97
Total Account 391	839,617			208,860	100.00	83,469	100.00
392.1 Transportation EquipPassenger Cars	122,276	5 -R3	25	46,294	9.53	56,691	9.53
392.2 Transportation EquipVans & Light Trucks	411,955	5 -R3	30	142,811	29.39	174,831	29.39
392.3 Transportation EquipHeavy Trucks	991,778	10 -L2.5	15	296,769	61.08	363,344	61.08
Total Account 392	1,526,009			485,874	100.00	594.865	100.00

# III-11

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# SERVICE LIFE STATISTICS

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Attachment 5a Page 61

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# ACCOUNT 364 POLES, TOWERS & FIXTURES

#### ORIGINAL LIFE TABLE

PLACEMENT BAND 1940-1998

EXPERIENCE BAND 1940-1998

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT: DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0 0.5 1.5 2.5 3.5 4.5 5.5 6.5 7.5 8.5	15,227,432 14,323,073 13,728,205 12,760,526 11,979,739 11,192,116 10,502,120 9,884,121 9,267,040 8,552,206	27,276 56,395 62,745 62,916 66,370 73,208 75,689 77,952 84,465 86,315	0.0018 0.0039 0.0046 0.0049 0.0055 0.0065 0.0072 0.0079 0.0091 0.0101	0.9982 0.9961 0.9954 0.9951 0.9945 0.9935 0.9928 0.9921 0.9909 0.9899	100.00 99.82 99.43 98.97 98.49 97.95 97.31 96.61 95.85 94.98
9.5 10.5 11.5 12.5 13.5 14.5 15.5 16.5 17.5 18.5	7,967,641 7,416,768 6,995,997 6,562,843 6,069,341 5,481,442 4,965,700 4,394,349 3,820,865 3,369,629	86,972 93,814 99,704 100,574 107,201 106,924 103,547 103,031 98,178 101,143	0.0109 0.0126 0.0143 0.0153 0.0177 0.0195 0.0209 0.0234 0.0257 0.0300	0.9891 0.9874 0.9857 0.9847 0.9823 0.9805 0.9791 0.9766 0.9743 0.9700	94.02 93.00 91.83 90.52 89.14 87.56 85.85 84.06 82.09 79.98
19.5 20.5 21.5 22.5 23.5 24.5 25.5 26.5 27.5 28.5	2,974,827 2,535,695 2,115,279 1,872,813 1,611,539 1,345,256 1,193,973 1,023,448 897,523 795,084	100,989 92,333 81,319 84,975 77,897 69,716 81,036 76,776 66,423 63,835	0.0339 0.0364 0.0384 0.0454 0.0483 0.0518 0.0679 0.0750 0.0740 0.0803	0.9661 0.9636 0.9546 0.9517 0.9482 0.9321 0.9250 0.9260 0.9197	77.58 74.95 72.22 69.45 66.30 63.10 59.83 55.77 51.59 47.77
29.5 30.5 31.5 32.5 33.5 34.5 35.5 36.5 37.5 38.5	653,820 569,389 481,453 403,046 346,984 287,269 220,532 178,315 137,644 95,244	62,277 56,352 55,855 48,296 41,838 49,301 34,734 31,290 29,533 19,775	0.0953 0.0990 0.1160 0.1198 0.1206 0.1716 0.1575 0.1755 0.2146 0.2076	0.9047 0.9010 0.8840 0.8802 0.8794 0.8284 0.8425 0.8425 0.8245 0.7854 0.7924	43.93 39.74 35.81 31.66 27.87 24.51 20.30 17.10 14.10 11.07

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# ACCOUNT 364 POLES, TOWERS & FIXTURES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1940-1998

EXPERIENCE BAND 1940-1998

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5 40.5 41.5 42.5 43.5	73,278 52,792 34,457 23,504 6,653 2,731	18,903 17,045 9,557 7,644 3,417	0.2580 0.3229 0.2774 0.3252 0.5136	0.7420 0.6771 0.7226 0.6748 0.4864	8.77 6.51 4.41 3.19 2.15
45.5 46.5 47.5	812 147 56	522 91 28	0.6429 0.6190 0.5000	0.3571 0.3810 0.5000	0.39 0.14 0.05
48.5	28	28	1.0000	0.0000	0.03



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Attachment 5a Page 65

# ACCOUNT 365 OVERHEAD CONDUCTORS

#### ORIGINAL LIFE TABLE

PLACEMENT BAND 1940-1998

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EXPERIENCE BAND 1940-1998

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AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENT: DURING AGE INTERVAL	S RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	10.969 506	27 024	0 0025	0 9965	100 00
0.0	TO'200'220	51,924	0.0035	0.3303	100.00
0.5	<b>3,040,303</b> 0 313 677	66,457	0.0007	0.9933	
1.5	9,213,077	50,404	0.0071	0.9929	98 28
2.5	0,300,947	59,000		0.9928	90.20
3.5	7 107 227	50,320	0.0073	0.9927	97.57
4.5	1,191,341 C 917 335	54,373	0.0078	0.9924	96.00
5.5	6,047,335	57,210	0.0084	0.9910	95.12
0.5 7 E	6,479,014	52,030	0.0081	0.9919	94 54
7.5	5 936 634	AE 967	0.0080	0.9920	93 78
0.5	5,650,624	±3,901	0.0075	0.7721	
9.5	5,541,209	46,645	0.0084	0.9916	93.04
10.5	5,191,566	51,488	0.0099	0.9901	92.26
11.5	4,923,102	47,672	0.0097	0.9903	91.35
12.5	4,683,948	46,039	0.0098	0.9902	90.46
13.5	4,459,195	51,679	0.0116	0.9884	89.57
14.5	4,218,203	51,087	0.0121	0.9879	88.53
15.5	3,958,256	46,830	0.0118	0.9882	87.40
16.5	3,643,784	50,333	0.0138	0.9862	86.43
17.5	3,268,993	47,258	0.0145	0.9855	85.24
18.5	2,896,930	43,945	0.0152	0.9040	84.00
19.5	2,571,553	47,688	0.0185	0.9815	82.72
20.5	2,244,611	38,813	0.0173	0.9827	81.19
21.5	1,897,564	31,488	0.0166	0.9834	79.79
22.5	1,761,096	33,830	0.0192	0.9808	78.47
23.5	1,536,898	29,180	0.0190	0.9810	76.96
24.5	1,339,592	31,351	0.0234	0.9766	75.50
25.5	1,237,272	26,719	0.0216	0.9784	73.73
26.5	1,105,869	22,705	0.0205	0.9795	72.14
27.5	1,041,899	24,571	0.0236	0.9764	70.66
28.5	985,680	23,224	0.0236	0.9764	68.99
29.5	899,977	20,721	0.0230	0.9770	67.36
30.5	860,767	21,988	0.0255	0.9745	65.81
31.5	782,389	25,925	0.0331	0.9669	64.13
32.5	693,584	21,399	0.0309	0.9691	62.01
33.5	663,480	21,949	0.0331	0.9669	60.09
34.5	601,966	18,145	0.0301	0.9699	58.10
35.5	533,254	15,051	0.0282	0.9718	56.35
36.5	498,568	13,765	0.0276	0.9724	54.76
37.5	450,333	14,688	0.0326	0.9674	53.25
38.5	369,082	11,404	0.0309	0.9691	51.51

### ACCOUNT 365 OVERHEAD CONDUCTORS

# ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1940-1998

EXPERIENCE BAND 1940-1998

AGE AT	EXPOSURES AT	RETIREMENTS			PCT SURV	
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF	
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL	
39.5	348,922	10,310	0.0295	0.9705	49.92	
40.5	331,372	11,537	0.0348	0.9652	48.45	
41.5	311,389	12,726	0.0409	0.9591	46.76	
42.5	278,706	10,873	0.0390	0.9610	44.85	
43.5	258,257	12,430	0.0481	0.9519	43.10	
44.5	210,335	11,437	0.0544	0.9456	41.03	
45.5	192,553	15,141	0.0786	0.9214	38.80	
46.5	162,577	13,149	0.0809	0.9191	35.75	
47.5	145,327	9,210	0.0634	0.9366	32.86	
48.5	115,904	11,086	0.0956	0.9044	30.78	
49.5	49,666	3,775	0.0760	0.9240	27.84	
50.5	40,834	2,396	0.0587	0.9413	25.72	
51.5	33,635	2,474	0.0736	0.9264	24.21	
52.5	27,379	1,917	0.0700	0.9300	22.43	
53.5	24,840	3,142	0.1265	0.8735	20.86	
54.5	21,359	4,540	0.2126	0.7874	18.22	
55.5	16,345	3,294	0.2015	0.7985	14.35	
56.5	13,015	2,031	0.1561	0.8439	11.46	
57.5	7,361	2,436	0.3309	0.6691	9.67	
58.5					6.47	



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# NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

### ACCOUNT 367 UNDERGROUND CONDUCTORS

## ORIGINAL LIFE TABLE

### PLACEMENT BAND 1967-1998

EXPERIENCE BAND 1967-1998

AGE AT	EXPOSURES AT	RETIREMENT	S		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	1,743,344	39	0.0000	1.0000	100.00
0.5	1,523,880	559	0.0004	0.9996	100.00
1.5	1,295,398	1,770	0.0014	0.9986	99.96
2.5	1,090,365	2,516	0.0023	0.9977	99.82
3.5	867,632	2,604	0.0030	0.9970	99.59
4.5	813,401	5,963	0.0073	0.9927	99.29
5.5	682,311	5,843	0.0086	0.9914	98.57
. 6.5	619,548	6,184	0.0100	0.9900	97.72
7.5	567,389	7,486	0.0132	0.9868	96.74
8.5	371,810	5,371	0.0144	0.9856	95.46
9.5	319,310	4,896	0.0153	0.9847	94.09
10.5	305,655	5,169	0.0169	0.9831	92.65
11.5	245,417	3,130	0.0128	0.9872	91.08
12.5	194,722	5,758	0.0296	0.9704	89.91
13.5	185,025	4,489	0.0243	0.9757	87.25
14.5	174,089	5,406	0.0311	0.9689	85.13
15.5	160,796	6,793	0.0422	0.9578	82.48
16.5	105,690	3,266	0.0309	0.9691	79.00
17.5	98,890	4,537	0.0459	0.9541	76.56
18.5	85,904	5,459	0.0635	0.9365	73.05
19.5	62,143	3,414	0.0549	0.9451	68.41
20.5	56,929	4,280	0.0752	0.9248	64.65
21.5	42,708	2,761	0.0646	0.9354	59.79
22.5	26,950	2,568	0.0953	0.9047	55.93
23.5	23,094	2,349	0.1017	0.8983	50.60
24.5	16,431	1,260	0.0767	0.9233	45.45
25.5	13,349	2,574	0.1928	0.8072	41.96
26.5	7,702	1,275	0.1655	0.8345	33.87
27.5	5,000	1,127	0.2254	0.7746	28.26
28.5	3,873	682	0.1761	0.8239	21.89
29.5	623	156	0.2504	0.7496	18.04
30.5	80	15	0.1875	0.8125	13.52
31.5					10.99


### ACCOUNT 368 LINE TRANSFORMERS

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1940-1998

EXPERIENCE BAND 1940-1998

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AGE AT	EXPOSURES AT	RETIREMENT	S		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	10,682,181	11,042	0.0010	0.9990	100.00
0.5	9,936,188	21,833	0.0022	0.9978	99.90
1.5	9,228,910	22,152	0.0024	0.9976	99.68
2.5	8,535,740	22,291	0.0026	0.9974	99.44
3.5	8,043,410	22,702	0.0028	0.9972	99.18
4.5	7,548,798	23,610	0.0031	0.9969	98.90
5.5	7,099,604	23,740	0.0033	0.9967	98.59
6.5	6,599,091	24,806	0.0038	0.9962	98.26
7.5	6,226,373	25,267	0.0041	0.9959	97.89
8.5	5,800,816	25,153	0.0043	0.9957	97.49
9.5	5,458,152	25,033	0.0046	0.9954	97.07
10.5	5,150,997	25,750	0.0050	0.9950	96.62
11.5	4,739,375	26,354	0.0056	0.9944	96.14
12.5	4,391,241	27,129	0.0062	0.9938	95.60
13.5	4,030,087	26,939	0.0067	0.9933	95.01
14.5	3,696,537	26,295	0.0071	0.9929	94.37
15.5	3,387,223	25,845	0.0076	0.9924	93.70
16.5	3,198,810	25,310	0.0079	0.9921	92.99
17.5	2,965,137	24,971	0.0084	0.9916	92.26
18.5	2,710,489	23,409	0.0086	0.9914	91.49
19.5	2,403,760	21,450	0.0089	0.9911	90.70
20.5	2,090,446	20,457	0.0098	0.9902	89.89
21.5	1,820,465	20,460	0.0112	0.9888	89.01
22.5	1,611,726	19,736	0.0122	0.9878	88.01
23.5	1,489,398	19,834	0.0133	0.9867	86.94
24.5	1,328,972	18,197	0.0137	0.9863	85.78
25.5	1,136,039	17,691	0.0156	0.9844	04.0U
20.5	1,010,919	16 662	0.0174	0.9020	03.20
27.5	947 625	16,002	0.0179	0.9021	01.0J 90 37
20.5	047,023	10,202	0.0191	0.9009	00.37
29.5	783,264	16,321	0.0208	0.9792	78.83
30.5	713,122	17,590	0.0247	0.9753	77.19
31.5	648,689	19,117	0.0295	0.9705	75.28
32.5	594,603	17,433	0.0293	0.9707	73.06
33.5	555,602	16,860	0.0303	0.9697	70.92
34.5	516,844	17,078	0.0330	0.9670	68.77
35.5	472,365	17,196	0.0364	0.9636	66.50
36.5	427,786	17,349	0.0406	0.9594	64.08
37.5	389,026	17,163	0.0441	0.9559	6⊥.48 F0 77
38.5	345,922	14,882	0.0430	0.9570	58.77

### ACCOUNT 368 LINE TRANSFORMERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1940-1998

EXPERIENCE BAND 1940-1998

AGE AT	EXPOSURES AT	RETIREMENT	S		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5	300,167	14,126	0.0471	0.9529	56.24
40.5	262,814	13,001	0.0495	0.9505	53.59
41.5	230,380	12,900	0.0560	0.9440	50.94
42.5	198,331	11,751	0.0592	0.9408	48.09
43.5	161,879	9,790	0.0605	0.9395	45.24
44.5	130,728	8,198	0.0627	0.9373	42.50
45.5	110,161	8,007	0.0727	0.9273	39.84
46.5	90,557	4,531	0.0500	0.9500	36.94
47.5	75,043	2,880	0.0384	0.9616	35.09
48.5	59,941	2,591	0.0432	0.9568	33.74
49.5	43,418	3,442	0.0793	0.9207	32.28
.50.5	23,819	2,448	0.1028	0.8972	29.72
51.5	12,930	1,975	0.1527	0.8473	26.66
52.5	8,253	420	0.0509	0.9491	22.59
53.5	6,633	806	0.1215	0.8785	21.44
54.5	5,207	439	0.0843	0.9157	18.84
55.5	4,395	41	0.0093	0.9907	17.25
56.5	4,242	. 34	0.0080	0.9920	17.09
57.5	2,433	24	0.0099	0.9901	16.95
58.5	-		-		16.78



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### ACCOUNT 369 SERVICES

### ORIGINAL LIFE TABLE

### PLACEMENT BAND 1940-1998

EXPERIENCE BAND 1940-1998

AGE AT	EXPOSURES AT	RETIREMENT	S		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	4,661,945	32,903	0.0071	0.9929	100.00
0.5	4,269,225	61,138	0.0143	0.9857	99.29
1.5	3,943,283	58,146	0.0147	0.9853	97.87
2.5	3,547,112	53,931	0.0152	0.9848	96.43
3.5	3,234,656	50,247	0.0155	0.9845	94.96
4.5	2,957,723	46,835	0.0158	0.9842	93.49
5.5	2,674,461	43,547	0.0163	0.9837	92.01
6.5	2,437,541	40,606	0.0167	0.9833	90.51
7.5	2,201,304	37,670	0.0171	0.9829	89.00
8.5	1,950,635	34,484	0.0177	0.9823	87.48
9.5	1,715,095	31,406	0.0183	0.9817	85.93
10.5	1,529,075	29,069	0.0190	0.9810	84.36
11.5	1,356,320	26,602	0.0196	0.9804	82.76
12.5	1,206,839	24,424	0.0202	0.9798	81.14
13.5	1,080,607	22,786	0.0211	0.9789	79.50
14.5	950,963	20,883	0.0220	0.9780	77.82
15.5	828,594	18,840	0.0227	0.9773	76.11
16.5	736,947	17,226	0.0234	0.9766	74.38
17.5	643,691	15,932	0.0248	0.9752	72.64
18.5	566,593	14,792	0.0261	0.9739	70.84
19.5	476,615	13,250	0.0278	0.9722	68.99
20.5	392,085	11,601	0.0296	0.9704	67.07
21.5	320,314	10,646	0.0332	0.9668	65.08
22.5	260,445	9,378	0.0360	0.9640	62.92
23.5	213,246	8,479	0.0398	0.9602	60.65
24.5	168,270	7,694	0.0457	0.9543	58.24
25.5	135,771	6,490	0.0478	0.9522	55.58
20.5	109,001	5,692	0.0519	0.9401	52. <i>92</i> 50 17
27.5	74,304	4,498	0.0605	0.9395	47.34
29 5	61 411	3 672	0 0598	0 9402	44 48
30 5	50,100	3,549	0.0708	0.9292	41.82
31 5	39,909	3,421	0.0857	0.9143	38.86
32.5	33,601	2,991	0.0890	0.9110	35.53
33.5	27,922	2,365	0.0847	0.9153	32.37
34.5	22,736	1,462	0.0643	0.9357	29.63
35.5	18,922	1,136	0.0600	0.9400	27.72
36.5	15,796	1,008	0.0638	0.9362	26.06
37.5	12,462	865	0.0694	0.9306	24.40
38.5	9,722	649	0.0668	0.9332	22.71

### ACCOUNT 369 SERVICES

### ORIGINAL LIFE TABLE, CONT.

### PLACEMENT BAND 1940-1998

EXPERIENCE BAND 1940-1998

AGE AT	EXPOSURES AT	RETIREMENTS	5		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5	7,797	568	0.0728	0.9272	21.19
40.5	6,209	501	0.0807	0.9193	19.65
41.5	4,859	337	0.0694	0.9306	18.06
42.5	3,769	295	0.0783	0.9217	16.81
43.5	3,220	253	0.0786	0.9214	15.49
44.5	2,633	149	0.0566	0.9434	14.27
45.5	2,086	132	0.0633	0.9367	13.46
46.5	1,284	83	0.0646	0.9354	12.6İ
47.5	1,020	62 <sup>·</sup>	0.0608	0.9392	11.80
48.5	739	61	0.0825	0.9175	11.08
49.5	110	22	0.2000	0.8000	10.17
50.5	13	13	1.0000	0.0000	8.14
51.5					0.00



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### ACCOUNT 370 METERS

### ORIGINAL LIFE TABLE

### PLACEMENT BAND 1940-1998

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EXPERIENCE BAND 1940-1998

AGE AT	EXPOSURES AT	RETIREMENT	S		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	1.792 323	2 205	0 0012	0 0000	100 00
0 5	1 707 878	2,205	0.0012	0.9988	100.00
1 5	1 617 907	4,708	0.0028	0.9972	99.88
2.5	1 = 64 = 000	4,958	0.0031	0.9969	99.60
2.5	1,504,890	5,132	0.0033	0.9967	99.29
3.5	1,520,416	5,553	0.0037	0.9963	98.96
4.5	1,464,951	6,015	0.0041	0.9959	98.59
5.5	1,422,983	6,378	0.0045	0.9955	98.19
6.5	1,386,766	6,667	0.0048	0.9952	97.75
7.5	1,320,705	6,536	0.0049	0.9951	97.28
8.5	1,208,053	6,694	0.0055	0.9945	96.80
9.5	1,131,609	6,990	0.0062	0.9938	96.27
10.5	1,057,553	7,750	0.0073	0.9927	95.67
11.5	979,900	8,273	0.0084	0.9916	94.97
12.5	911,543	8,150	0.0089	0.9911	94.17
13.5	830,503	8,330	0.0100	0.9900	93.33
14.5	751,296	8,555	0.0114	0.9886	92.40
15.5	681,223	8,989	0.0132	0.9868	91.35
16.5	645,372	9,797	0.0152	0.9848	90.14
17.5	602,328	9,229	0.0153	0.9847	8877
18.5	558,174	8,604	0.0154	0.9846	87.41
19.5	508.059	7.800	0 0154	0 9846	86.06
20.5	454.165	7,678	0 0169	0 9831	84 73
21.5	413,044	7,927	0.0192	0.9808	83 30
22.5	375,466	7 887	0.0102	0.9000	81 70
23.5	331,551	7 362	0.0210	0.9778	70 00
24 5	289 867	6 991	0.0222	0.9778	79.90
25 5	241 903	6 999	0.0241	0.9739	76.20
25.5	241,000	7 222	0.0209	0.9711	70.32
20.5	178 668	6 972	0.0390	0.9630	74.11 71 50
28.5	158,441	6,646	0.0390	0.9581	68.73
00 F	140.007	<i>c c c c c c c c c c</i>			
29.5 20 F	140,097	6,6UI	0.0471	0.9529	65.85
30.5	121,243	7,193	0.0593	0.9407	62.75
31.5	103,775	8,135	0.0784	0.9216	59.03
32.5	89,702	6,903	0.0770	0.9230	54.40
33.5	78,065	7,654	0.0980	0.9020	50.21
34.5	66,060	7,272	0.1101	0.8899	45.29
35.5	54,751	5,905	0.1079	0.8921	40.30
36.5	45,329	6,236	0.1376	0.8624	35.95
37.5	36,671	5,686	0.1551	0.8449	31.00
38.5	28,676	4,271	0.1489	0.8511	26.19

### ACCOUNT 370 METERS

### ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1940-1998

EXPERIENCE BAND 1940-1998

AGE AT	EXPOSURES AT	RETIREMENTS	5		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
39.5	21,741	3,965	0.1824	0.8176	22.29
40.5	15,273	3,433	0.2248	0.7752	18.22
41.5	10,670	2,171	0.2035	0.7965	14.12
42.5	7,692	2,987	0.3883	0.6117	11.25
43.5	4,547	2,597	0.5711	0.4289	6.88
44.5	1,950	1,459	0.7482	0.2518	2.95
45.5	491	353	0.7189	0.2811	0.74
46.5	138	112	0.8116	0.1884	0.21
47.5	26	16	0.6154	0.3846	0.04
48.5	10	10	1.0000	0.0000	0.02
49.5					0.00



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### ACCOUNTS 371 AND 373

### ORIGINAL LIFE TABLE

PLACEMENT BAND 1959-1998

EXPERIENCE BAND 1959-1998

AGE AT	EXPOSURES AT	RETIREMENT	S		PCT SURV
BEGIN OF	BEGINNING OF	DURING AGE	RETMT	SURV	BEGIN OF
INTERVAL	AGE INTERVAL	INTERVAL	RATIO	RATIO	INTERVAL
0.0	1,259,075	6,329	0.0050	0.9950	100.00
0.5	1,160,152	12,977	0.0112	0.9888	99.50
1.5	1,078,500	12,140	0.0113	0.9887	98.39
2.5	986,146	11,743	0.0119	0.9881	97.28
3.5	910,731	11,538	0.0127	0.9873	96.12
4.5	851,856	11,022	0.0129	0.9871	94.90
5.5	795,599	11,277	0.0142	0.9858	93.68
6.5	742,250	11,032	0.0149	0.9851	92.35
7.5	693,413	10,811	0.0156	0.9844	90.97
8.5	643,845	10,070	0.0156	0.9844	89.55
9.5	590,955	9,992	0.0169	0.9831	88.15
10.5	535,910	9,298	0.0173	0.9827	86.66
11.5	493,135	8,730	0.0177	0.9823	85.16
12.5	457,378	8,806	0.0193	0.9807	83.65
13.5	431,041	8,143 0 103	0.0189	0.9811	82.04
14.5	276 115	0,103 7 509	0.0202	0.9790	00.49 78 86
16 5	350 644	7,509	0.0200	0.9784	77 28
17 5	322 433	7,000	0.0218	0 9782	75 61
18.5	287,442	6,355	0.0221	0.9779	73.96
19.5	251,466	6,188	0.0246	0.9754	72.33
20.5	218,847	5,544	0.0253	0.9747	70.55
21.5	187,914	4,830	0.0257	0.9743	68.77
22.5	156,822	4,426	0.0282	0.9718	67.00
23.5	136,572	3,851	0.0282	0.9718	65.11
24.5	115,299	3,422	0.0297	0.9703	63.27
25.5	96,135	2,637	0.0274	0.9726	61.39
26.5	82,143	2,354	0.0287	0.9713	59.71
27.5	69,777	1,873	0.0268	0.9732	58.00
28.5	60,844	1,757	0.0289	0.9711	56.45
29.5	52,084	1,619	0.0311	0.9689	54.82
30.5	41,835	1,462	0.0349	0.9651	53.12
31.5	33,198	1,090	0.0328	0.9672	51.27
32.5	28,805	1,027	0.0357	0.9643	49.59
33.5	24,121	1,049	0.0435	0.9565	47.84
34.5	19,550	839	0.0429	0.33/1	43./4 13 70
35.5	1, 500	330	0.0394	0.3400	43./0 11 10
30.3	1 202	0 <u>0</u> 0	0.0504	0.9430	38 86
37.5	±,295 605	22	0.0744	0.9256	36.09
	000		V.V/77	0.2200	23.03



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III-35



III-36

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### NET SALVAGE STATISTICS

## DISTRIBUTION PLANT

# SUMMARY OF BOOK SALVAGE

TOTAL	1998	1997	1996	1995	1994	1993	1992	1991	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981	1980	2979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	1965	YEAR	     
6,455,610	471,150	342,283	447,076	428,817	312,671	319,172	439,629	313,568	453,512	187,322	211,644	205,959	172,996	187,176	164,473	164,696	197,836	201,670	126,768	134,080	126,342	101,553	77,830	93,845	120,151	69,760	92,653	46,888	41,278	48,264	29,103	59,248	46,379	19,818	RETIREMENTS	REGULAR
3,942,864	200,310	137,028	155,806	172,689	184,568	191,184	194,440	200,050	220,948	175,319	173,299	164,275	138,943	148,383	172,952	143,631	159,521	158,801	119,690	125,225	95,919	81,355	76,267	60,353	85,866	54,067	39,789	23,153	13,607	27,825	24,585	10,835	5,596	6,585	AMOUNT	COST REMOV
61	43	40	ա Մ	40	59 9	60	44	64	49	94	82	80	80	79	105	87	81	79	94	93	76	80	86	64	71	78	43	49	ω ω	58 С	84	18	12	ω	PCT	IAL PL
1,258,237 19	52,414 11	57,798 17	52,451 12	60,911 14	38,842 12	35,531 11	73,923 17	27,216 9	50,066 11	35,256 19	34,624 16	31,637 15	40,097 23	43,257 23	54,218 33	53,360 32	58,955 30	61,925 31	37,901 30	44,259 33	45,829 36	27,422 27	30,678 39	29,025 31	39,229 33	20,955 30	21,660 23	13,602 29	41,574 101	9,818 20	13,759 47	10,682 18	3,455 7	5,908 30	AMOUNT PCT	GROSS SALVAGE
2,684,627- 42-	147,896- 31-	79,230- 23-	103,355- 23-	111,778- 26-	145,726- 47-	155,653- 49-	120,517- 27-	172,834- 55-	170,882- 38-	140,063- 75-	138,675- 66-	132,638- 64-	98,846- 57-	105,126- 56-	118,734- 72-	90,271- 55-	100,566- 51-	96,876- 48-	81,789- 65-	<b>-09 -996,08</b>	50,090- 40-	53,933- 53-	45,589- 59-	31,328- 33-	46,637- 39-	33,112- 47-	18,129- 20-	9,551- 20-	27,967 68	18,007- 37-	10,826- 37-	153- 0	2,141- 5-	677- 3-	AMOUNT PCT	NET SALVAGE

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### DISTRIBUTION PLANT

### SUMMARY OF BOOK SALVAGE

		COST	OF	GROS	SS		NET	
	REGULAR	REMOV	AL	SALVA	AGE		SALVA	GE
YEAR	RETIREMENTS	AMOUNT	$\mathbf{PCT}$	AMOUNT	$\mathbf{PCT}$		AMOUNT I	PCT
THREE-	YEAR MOVING AV.	ERAGES						
65-67	41,815	7,672	18	6,682	16		990-	2-
66-68	44,910	13,672	30	9,299	21		4,373-	10-
67-69	45,538	21,082	46	11,420	25		9,662-	21-
68-70	39,548	22,006	56	21,717	55		289-	1-
69-71	45,477	21,528	47	21,665	48		137	0
70-72	60,273	25,516	42	25,612	42		96	0
71-73	69,767	39,003	56	18,739	27		20,264-	29-
72-74	94,188	59,907	64	27,281	29		32,626-	35-
73-75	94,585	66,762	71	29,736	31		37,026-	39-
74-76	97,275	74,162	76	32,977	34		41.185-	42-
75-77	91,076	72,658	80	29,042	32		43,616-	48-
76-78	101,908	84,514	83	34,643	34.		49,871-	49-
77-79	120,658	100,833	84	39,170	32		61,663-	51-
78-80	129,063	113,611	88	42.663	33		70,948-	55-
79-81	154,173	134,572	87	48.028	31		86,544-	56-
80-82	175,425	146.004	83	52,927	30		93,077-	53-
81-83	188,067	153,984	82	58,080	31		95.904-	51-
82-84	175,668	158,701	90	55,511	32		103,190-	59-
83-85	172.115	154,989	90	50,278	29		104.711-	61-
84-86	174.882	153,426	88	45.857	26		107.569-	62-
85-87	188,710	150,534	80	38,330	20		112,204-	59-
86-88	196,866	158,839	81	35,453	18		123.386-	63-
87-89	201.642	170,964	85	33,839	17		137,125-	68-
88-90	284,159	189,855	67	39,982	14		149.873-	53-
89-91	318,134	198.772	62	37.513	12		161,259-	51-
90-92	402,236	205.146	51	50,402	13		154,744-	38-
91-93	357,456	195,225	55	45,557	13		149,668-	42-
92-94	357,157	190,064	53	49,432	14		140.632-	39-
93-95	353,553	182,814	52	45,095	13		137,719-	39-
94-96	396,188	171.021	43	50,735	13		120,286-	30-1
95-97	406,058	155,174	38	57,053	14		98,121-	24-
96-98	420,170	164 381	29	54 221	13	,	110,160-	26-
	7901710	101,001	22	51/221		1	~~~/~~~~	20
FIVE-Y	EAR AVERAGE							
94-98	400.399	170.080	42	52.483	13		117.597-	29-
22 20	100,000	_,0,000		52,105	10			~~~

### ACCOUNT 392, TRANSPORTATION EQUIPMENT

### SUMMARY OF BOOK SALVAGE

		COST OF	GROS	SS	NET	Г
	REGULAR	REMOVAL	SALVA	GE	SALVA	AGE
YEAR	RETIREMENTS	AMOUNT PCT	AMOUNT	PCT	AMOUNT	PCT
1992	35,686	0	7,725	22	7,725	22
1993	56,989	0	30,100	53	30,100	53
1994	44,860	. 0	23,622	53	23,622	53
1995	78,123	0	22,725	29	22,725	29
1996	56,259	0	12,200	22	12,200	22
1997	69,671	0	20,365	29	20,365	29
1998	80,168	0	12,000	15	12,000	15
TOTAL	421,756	0	128,737	31	128,737	31
THREE-	YEAR MOVING AVE	ERAGES				
92-94	45,845	0	20,482	45	20,482	45
93-95	59,990	. 0	25,482	42	25,482	42
94-96	59,747	0	19,516	33	19,516	33
95-97	68,017	0	18,430	27	18,430	27
96-98	68,699	0	14,855	22	14,855	22
FIVE-Y	EAR AVERAGE					
94-98	65,816	0	18,182	28	18,182	28

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### ACCOUNT 396, POWER OPERATED EQUIPMENT

### SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL AMOUNT PCT	GROSS SALVAGE AMOUNT PC	NET SALVAGE C AMOUNT PCT
1992 1993	189	0	(	0 0
1994 1995 1996 1997 1998	302	0	52 1	7 52 17
TOTAL	491	0	52 13	52 11
THREE-	YEAR MOVING AVE	RAGES		
92-94 93-95 94-96 95-97 96-98	164 101 101	0 0 0	17 10 17 1 17 1	0 17 10 7 17 17 7 17 17
FIVE-Y	EAR AVERAGE			
94-98	60	0	10 1.	10 17

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### DETAILED DEPRECIATION CALCULATIONS

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### CALCULATED ACCRUED DEPRECIATION

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ACCOUNT 362 STATION EQUIPMENT - SCADA

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

(1)	DRIGINAL COST (2)	AVG. LIFE (3)	EXP. (4)	-ACCRUED FACTOR (5)	DEPREC AMOUNT (6)
SURVIVOR CUI NET SALVAGE	RVE IOWA PERCENT	10-S2 0			
1997	520,389	10.00	8.50	.1500	78,058
TOTAL	520,389				78,058

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ACCOUNT 364 POLES, TOWERS & FIXTURES

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR	ORIGINAL COST	AVG.	EXP.	-ACCRUED	DEPREC
(1)	(2)	(3)	(4)	(5)	(6)
(=)	(2)	(0)	(-)	(0)	(0)
SURVIVOR (	CURVE IOWA	27-R2			
NET SALVA	GE PERCENT	-45			
1951	3	27.00	0.68	.9748	3
1952	260	27.00	0.95	.9648	251
1953	193	27.00	1.22	.9548	184
1954	517	27.00	1.50	.9444	488
1955	9,478	27.00	1.79	.9337	8,850
1956	1,382	27.00	2.08	.9230	1,276
1957	1,292	27.00	2.37	.9122	1,179
1958	1,603	27.00	2.66	.9015	1,445
1959	2,163	27.00	2.95	.8907	1,927
1960	12,818	27.00	3.24	.8800	11,280
1961	9,409	27.00	3.54	.8689	8,175
1962	7,554	27.00	3.84	.8578	6,480
1963	17,303	27.00	4.16	.8459	14,637
1964	17,846	27.00	4.48	.8341	14,885
1965	7,799	27.00	4.82	.8215	6,407
1966	22,383	27.00	5.17	.8085	18,097
1967	31,496	27.00	5.55	.7944	25,020
1968	22,188	27.00	5.94	.7800	17,307
1969	77,827	27.00	6.35	.7648	59,522
1970	35,921	27.00	6.78	.7489	26,901
1971	49,197	27.00	7.23	.7322	36,022
1972	89,801	27.00	7.71	.7144	64,154
1973	81,399	27.00	8.21	.6959	56,646
1974	188,406	27.00	8.73	.6767	127,494
1975	176,598	27.00	9.27	.6567	115,972
1976	160,759	27.00	9.83	.6359	102,227
1977	327,924	27.00	10.42	.6141	201,378
1978	338,439	27.00	11.02	.5919	200,322
1979	294,210	27.00	11.65	.5685	167,258
1980	352,748	27.00	12.29	.5448	192,177
1981	470,406	27.00	12.95	.5204	244,799
1982	467,978	27.00	13.64	.4948	231,556
1983	408,119	27.00	14.33	.4693	191,530
1984	480,313	27.00	15.05	.4426	212,587
1985	392,907	27.00	15.78	.4156	163,292

ACCOUNT 364 POLES, TOWERS & FIXTURES

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST (2)	AVG. LIFE (3)	EXP. (4)	-ACCRUED FACTOR (5)	DEPREC AMOUNT (6)
SURVIVOR CU	RVE IOWA	27-R2			
NET SALVAGE	PERCENT	-45			
1986	333,623	27.00	16.53	.3878	129.379
1987	326,751	27.00	17.29	.3596	117,500
1988	463,875	27.00	18.07	.3307	153,403
1989	498,567	27.00	18.86	.3015	150,318
1990	630,215	27.00	19.67	.2715	171,103
1991	539,086	27.00	20.49	.2411	129,974
1992	542,321	27.00	21.32	.2104	114,104

616,795 27.00 22.16 .1793

27.00 23.02

27.00 24.76 .0830

27.00 25.65 .0500

27.00 26.55 .0167

27.00 23.88

.1474

.1156

TOTAL 12,269,499

NET SALVAGE ADJUSTMENT

721,258

717,874

904,938

538,473

877,084

1993

1994

1995

1996

1997

1998

5,675,416

3,914,080

1,761,336

110,591

106,313

82,986

75,110

26,924

14,647

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ACCOUNT 365 OVERHEAD CONDUCTORS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)
CITOVITY		20 21			
NET CN	JR CURVE IOWA	38-KT			
NET SA	JVAGE PERCENT	-25			
1940	7,249	38.00	5.67	.8508	6,167
1941	4,575	38.00	6.00	.8421	3,853
1942	42	38.00	6.34	.8332	35
1943	540	38.00	6.69	.8239	445
1944	373	38.00	7.05	.8145	304
1945	670	38.00	7.41	.8050	539
1946	3,939	38.00	7.78	.7953	3,133 <sup>.</sup>
1947	4,949	38.00	8.15	.7855	3,887
1948	5,105	38.00	8.53	.7755	3,959
1949	55,273	38.00	8.92	.7653	42,300
1950	22,032	38.00	9.32	.7547	16,628
1951	4,099	38.00	9.72	.7442	3,050
1952	14,758	38.00	10.13	.7334	10,824
1953	6,162	38.00	10.55	.7224	4,451
1954	34,544	38.00	10.98	.7111	24,564
1955	9,389	38.00	11.41	.6997	6,569
1956	19,632	38.00	11.86	.6879	13,505
1957	8,018	38.00	12.31	.6761	5,421
1958	15,128	38.00	12.77	.6639	10,043
1959	10,160	38.00	13.24	.6516	6,620
1960	69,849	38.00	13.71	.6392	44,647
1961	32,529	38.00	14.20	.6263	20,373
1962	18,636	38.00	14.69	.6134	11,431
1963	47,861	38.00	15.20	.6000	28,717
1964	50,724	38.00	15.71	.5866	29,755
1965	8,283	38.00	16.23	.5729	4,745
1966	61,511	38.00	16.77	.5587	34,366
1967	54,750	38.00	17.31	.5445	29,811
1968	19,303	38.00	17.86	.5300	10,231
1969	57,926	38.00	18.42	.5153	29,849
1970	34,658	38.00	18.98	.5005	17,346
1971	44,455	38.00	19.56	.4853	21,574
1972	102,842	38.00	20.15	.4697	48,305
1973	69,642	38.00	20.74	.4542	31,631
1974	168,582	38.00	21.34	.4384	73,906

ACCOUNT 365 OVERHEAD CONDUCTORS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

		ORIGIN	AL	AVG.		-ACCRUE	D DEPREC
YE	4R	COST	•	LIFE	EXP.	FACTOR	AMOUNT
(1	L)	(2)		(3)	(4)	(5)	(6)
					• •		
SUR	VIVOR CU	RVE	IOWA	38-R1			
NET	SALVAGE	E PERCE	NT	-25			
197	75	187,4	12	38.00	21.96	.4221	79,107
197	76	94,5	22	38.00	22.58	.4058	38,357
197	77	304,8	11	38.00	23.20	.3895	118,724
197	78	277,1	32	38.00	23.84	.3726	103,259
197	79	280,5	40	38.00	24.48	.3558	99,816
198	30	293,0	25	38.00	25.13	.3387	99,248
198	31	323,5	43	38.00	25.78	.3216	104,051
198	32	266,3	31	38.00	26.44	.3042	81,018
198	33	208,4	20	38.00	27.11	.2866	59,733
198	34	188,8	95	38.00	27.78	.2689	50,794
198	35	206,5	75	38.00	28.45	.2513	51,912
198	36	159,2	25	38.00	29.13	.2334	37,163
198	37	227,2	07	38.00	29.81	.2155	48,963
198	38	303,3	11	38.00	30.50	.1974	59,874
198	39	205,7	40	38.00	31.19	.1792	36,869
199	€0	408,2	06	38.00	31.89	.1608	65,640
199	91	205,9	91	38.00	32.59	.1424	29,333
199	92	·310,5	86	38.00	33.29	.1239	38,482
199	<del>)</del> 3	295,6	81	38.00	34.00	.1053	31,135
199	€4	443,0	87	38.00	34.71	.0866	38,371
199	€	552,7	64	38.00	35.43	.0676	37,367
199	96	839,3	33	38.00	36.16	.0484	40,624
199	7	568,4	75	38.00	36.89	.0292	16,599
199	98 1	,082,1	09	38.00	37.63	.0097	10,496
							1,979,919
NET	SALVAG	E ADJU	STMEN	T			494,980
			••				0 474 000
TOTA	2 بلا	9,301,1	09				2,474,899

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### ACCOUNT 367 UNDERGROUND CONDUCTORS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)
SURVIVOR C	URVE IOWA	25-L2		-	
NET SALVAG	E PERCENT	0			
1967	25	25.00	8.14	.6744	17
1968	264	25.00	8.39	.6644	175
1969	1,859	25.00	8.64	.6544	1,217
1971	1,116	25.00	9.13	.6348	708
1972	2,480	25.00	9.37	.6252	1,550
1973	1,511	25.00	9.61	.6156	930
1974	3,664	25.00	9.85	.6060	2,220
1975	1,119	25.00	10.09	.5964	667
1976	11,511	25.00	10.34	.5864	6,750
1977	8,975	25.00	10.60	.5760	5,170
1978	1,654	25.00	10.87	.5652	935
1979	17,111	25.00	11.17	.5532	9,466
1980	8,021	25.00	11.48	.5408	4,338
1981	3,400	25.00	11.83	.5268	1,791
1982	47,065	25.00	12.21	.5116	24,078
1983	7,768	25.00	12.64	.4944	3,840
1984	6,411	25.00	13.12	.4752	3,047
1985	3,950	25.00	13.65	.4540	1,793
1986	47,941	25.00	14.23	.4308	20,653
1987	55,755	25.00	14.88	.4048	22,570
1988	8,895	25.00	15.59	.3764	3,348
1989	47,907	25.00	16.34	.3464	16,595
1990	191,130	25.00	17.15	.3140	60,015
1991	46,648	25.00	17.98	.2808	13,099
1992	57,597	25.00	18.83	.2468	14,215
1993	126,218	25.00	19.72	.2112	26,657
1994	51,909	25.00	20.63	.1748	9,074
1995	220,837	25.00	21.57	.1372	30,299
1996	203,494	25.00	22.53	.0988	20,105
1997	227,983	25.00	23.51	.0596	13,588
1998	219,427	25.00	24.50	.0200	4,389
	•	•			
TOTAL	1,633,645				323,299
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### ACCOUNT 368 LINE TRANSFORMERS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)
SURVIVOR CU	RVE IOWA	41-R2			
NET SALVAGE	PERCENT	0			
1940	1,560	41.00	4.91	.8802	1,373
1941	1,733	41.00	5.21	.8729	1,513
1942	108	41.00	5.51	.8656	93
1943	· 364	41.00	5.81	.8583	312
1944	595	41.00	6.13	.8505	506
1945	1,179	41.00	6.44	.8429	994
1946	2,619	41.00	6.77	.8349	2,187
1947	8,370	41.00	7.10	.8268	6,920
1948	15,848	41.00	7.45	.8183	12,968
1949	13,655	41.00	7.80	.8098	11,058
1950	12,491	41.00	8.17	.8007	10,002
1951	11,169	41.00	8.55	.7915	8,840
1952	12,036	41.00	8.94	.7820	9,412
1953	12,792	41.00	9.35	.7720	9,875
1954 <sup>,</sup>	22,525	41.00	9.77	.7617	17,157
1955	25,979	41.00	10.20	.7512	19,515
1956	20,481	41.00	10.64	.7405	15,166
1957	20,754	41.00	11.11	.7290	15,130
1958	25,201	41.00	11.58	.7176	18,084
1959	33,478	41.00	12.07	.7056	23,622
1960	28,509	41.00	12.58	.6932	19,762
1961	23,493	41.00	13.10	.6805	15,987
1962	30,384	41.00	13.63	.6676	20,284
1963	30,694	41.00	14.18	.6541	20,077
1964	24,473	41.00	14.74	.6405	15,675
1965	24,294	41.00	15.32	.6263	15,215
1966	39,335	41.00	15.91	.6120	24,073
1967	53,016	41.00	16.51	.5973	31,666
1968	54,982	41.00	17.13	.5822	32,011
1969	54,671	41.00	17.76	.5668	30,988

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41.00 18.40 .5512

41.00 19.72 .5190

41.00 20.40 .5024

41.00 21.09 .4856

.5354

41.00 19.05

40,466

42,676

59,647

35,897

30,954

1970

1971

1972

1973 1974 73,414

79,708

114,926

71,451

63,744

### ACCOUNT 368 LINE TRANSFORMERS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	(	ORIGINAL	AVG.		-ACCRUED	DEPREC	
YEZ	4R	COST	LIFE	EXP.	FACTOR	AMOUNT	
(1	L)	(2)	(3)	(4)	(5)	(6)	
SUR	VIVOR CUI	RVE IOWA	41-R2				
NET	SALVAGE	PERCENT	0				
197	75	115,765	41.00	21.79	.4685	54,236	
197	76	23,166	41.00	22.51	.4510	10,448	
197	77	65,603	41.00	23.23	.4334	28,432	
197	78	143,244	41.00	23.97	.4154	59,504	
197	79	276,932	41.00	24.71	.3973	110,025	
198	30	255,143	41.00	25.47	.3788	96,648	
198	31	230,456	41.00	26.23	.3602	83,010	
198	32	179,174	41.00	27.01	.3412	61,134	
198	33	126,418	41.00	27.79	.3222	40,732	
198	34	158,476	41.00	28.58	.3029	48,002	
198	35	340,387	41.00	29.39	.2832	96,398	
198	36	349,195	41.00	30.20	.2634	91,978	
198	37	346,283	41.00	31.02	.2434	84,285	
198	38	884,876	41.00	31.85	.2232	197,504	
198	39	555,164	41.00	32.68	.2029	112,643	
199	90	401,931	41.00	33.53	.1822	73,232	
199	91	348,272	41.00	34.38	.1615	56,246	
199	92	476,623	41.00	35.24	.1405	66,966	
199	93	425,480	41.00	36.11	.1193	50,760	
199	94	471,829	41.00	36.98	.0980	46,239	
199	95	469,987	41.00	37.86	.0766	36,001	
199	96	670,975	41.00	38.75	.0549	36,837	
199	97	685,422	41.00	39.65	.0329	22,550	
199	98	734,942	41.00	40.55	.0110	8,084	
		-				-	

TOTAL 9,745,774

2,191,999

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### ACCOUNT 369 SERVICES

## CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

(1)	YEAR	
(2)	COST	ORIGINAL
(3)	LIFE	AVG.
(4)	EXP.	
(5)	FACTOR	-ACCRUED
(6)	AMOUNT	DEPREC

SURVIVOR CURVE.. IOWA 27-R0.5 NET SALVAGE PERCENT.. -20

1985 1984 1983 1982 1981 1980 1979 1978 1977 1976 1975 1974 1973 1972 1971 1970 1969 1968 1967 1966 1965 1964 1963 1962 1961 1959 1958 1960 1957 1956 1955 1954 1953 1951 1952 102,445 107,848 102,299 73,540 76,664 71,551 60,622 37,977 36,409 61,874 75,724 49,341 19,423 24,803 15,806 8,296 6,093 7,199 2,612 1,905 1,716 1,520 7,985 2,338 2,402 1,288 837 604 468 363 104 119 112 153 œ 27.00 17.72 13.39 10.95 18 18.29 17.15 16.5 15.49 14.96 14.42 12.88 12.39 11.90 11.42 10.48 10.03 16.04 13.90 9.58 8.71 9.14 8.29 7.87 7.45 7.05 6.64 6.24 5.84 5.45 4.25 5.05 4.65 3.02 .00 . 85 . 44 -1 Ö .3011 .3226 .3437 .3856 .4263 .4459 .4659 .5041 .5944 .6285 .6930 .3648 4059 4852 .5230 5411 .5593 . 5770 .6119 .6452 .6615 6774 7085 7241 7389 7541 7689 7837 7981 8130 8278 8426 8574 , 8726 .8881 32,281 35,160 29, 19,144 30, 34, 26, 28, 23, 25,115 31,905 19,042 13,421 10,863 4,931 4,525 9,120 4,886 3,931 1, 1,584 1,665 1,101 1,350 1,268 846 562 792 827 244 940 728 971 644 473 374 295 100 134 ,8 6 96

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### ACCOUNT 369 SERVICES

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

(	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)
SURVIVOR CUI	RVE IOWA	27-R0.	. 5		
NET SALVAGE	PERCENT	-20			
1986	123,777	27.00	19.46	.2793	34,571
1987	144,205	27.00	20.04	.2578	37,176
1988	155,221	27.00	20.63	.2359	36,617
1989	201,991	27.00	21.23	.2137	43,165
1990	213,341	27.00	21.82	.1919	40,940
1991	195,843	27.00	22.42	.1696	33,215
1992	193,288	27.00	23.02	.1474	28,491
1993	236,358	27.00	23.63	.1248	29,497
1994	226,642	27.00	24.23	.1026	23,253
1995	258,489	27.00	24.84	.0800	20,679
1996	337,992	27.00	25.46	.0570	19.266
1997	264,789	27.00	26.07	.0344	9,109
1998	359,810	27.00	26.69	.0115	4,138

### NET SALVAGE ADJUSTMENT

3,874,194

TOTAL

912,634

760,528

152,106

### ACCOUNT 370 METERS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)

### SURVIVOR CURVE.. IOWA 32-R2.5 NET SALVAGE PERCENT.. 0

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1972	3,328	32.00	10.57	.6697	2,229
1973	14,775	32.00	11.18	.6506	9,613
1974	14,539	32.00	11.82	.6306	9,168
1975	20,265	32.00	12.47	.6103	12,368
1976	20,161	32.00	13.14	.5894	11,883
1977	9,016	32.00	13.83	.5678	5,119
1978	34,687	32.00	14.54	.5456	18,925
1979	16,432	32.00	15.27	.5228	8,591
1980	14,155	32.00	16.01	.4997	7,073
1981	20,860	32.00	16.77	.4759	9,927
1982	19,176	32.00	17.55	.4516	8,660
1983	51,448	32.00	18.33	.4272	21,979
1984	66,276	32.00	19.13	.4022	26,656
1985	63,686	32.00	19.95	.3766	23,984
1986	63,446	32.00	20.78	.3506	22,244
1987	59,531	32.00	21.62	.3244	19,312
1988	78,923	32.00	22.47	.2978	23,503
1989	375,729	32.00	23.34	.2706	101,672
1990	104,964	32.00	24.21	.2434	25,548
1991	74,319	32.00	25.10	.2156	16,023
1992	29,822	32.00	25.99	.1878	5,601
1993	35,975	32.00	26.89	.1597	5,745
1994	49,941	32.00	27.81	.1309	6,537
1995	39,352	32.00	28.73	.1022	4,022
1996	48,045	32.00	29.65	.0734	3,527
1997	85,279	32.00	30.59	.0441	3,761
1998	82,238	32.00	31.53	.0147	1,209

TOTAL 1,496,368

414,879

### ACCOUNT 371 INSTALLATION ON CONSUMER PREMISES

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)
SURVIVOR	CURVE IOWA	31-R0.	. 5		
NET SALV	AGE PERCENT	-5			
1962	17,915	31.00	10.86	.6497	11,639
1963	3,473	31.00	11.30	.6355	2,207
1964	3,381	31.00	11.75	.6210	2,100
1965	3,524	31.00	12.21	.6061	2,136
1966	3,227	31.00	12.67	.5913	1,908
1967	6,880	31.00	13.15	.5758	3,962
1968	8,338	31.00	13.63	.5603	4,672
1969	6,519	31.00	14.11	.5448	3,552
1970	6,610	31.00	14.61	.5287	3,495
1971	9,015	31.00	15.11	.5126	4,621
1972	10,445	31.00	15.62	.4961	5,182
1973	13,292	31.00	16.14	.4794	6,372
1974	15,845	31.00	16.66	.4626	7,330
1975	13,213	31.00	17.19	.4455	5,886
1976	23,250	31.00	17.73	.4281	9,953
1977	21,521	31.00	18.27	.4106	8,837
1978	22,169	31.00	18.83	.3926	8,704
1979	22,732	31.00	19.38	.3748	8,520
1980	23,463	31.00	19.95	.3565	8,365
1981	18,025	31.00	20.52	.3381	6,094
1982	14,251	31.00	21.09	.3197	4,556
1983	12,467	31.00	21.67	.3010	3,753
1984	17,695	31.00	22.25	.2823	4,995
1985	14,924	31.00	22.84	.2632	3,928
1986	16,516	31.00	23.43	.2442	4,033
1987	21,249	31.00	24.02	.2252	4,785
1988	27,025	31.00	24.61	.2061	5,570
1989	27,053	31.00	25.21	.1868	5,054
1990	31,778	31.00	25.81	.1674	5,320
1991	31,852	31.00	26.41	.1481	4,717
1992	32,915	31.00	27.02	.1284	4,226
1993	37,534	31.00	27.62	.1090	4,091
1994	38,490	31.00	28.23	.0894	3,441
1995	51,516	31.00	28.84	.0697	3,591
1996	69,103	31.00	29.45	.0500	3,455

ACCOUNT 371 INSTALLATION ON CONSUMER PREMISES

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST (2)	AVG. LIFE EXP. (3) (4)	-ACCRUED FACTOR (5)	DEPREC AMOUNT (6)
SURVIVOR NET SALVA	CURVE IOWA GE PERCENT	31-R0.5 -5		
1997 1998	57,031 78,463	31.00 30.07 31.00 30.69	.0300	1,711 785
NET SALV	AGE ADJUSTME	NT		183,546 9,177

TOTAL 832,699 192,723
#### ACCOUNT 372 TEMPORARY METER POLES

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)

SURVIVOR CURVE.. 15-SQUARE NET SALVAGE PERCENT.. 0

1994		30,003	15.00	10.50	.3000	9,001
1995		4,228	15.00	11.50	.2333	986
1996		926	15.00	12.50	.1667	154
1997	1	5,704	15.00	13.50	.1000	570
1998		9,027	15.00	14.50	.0333	301
TOTAL		49,888				11,012

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## ACCOUNT 373 STREET LIGHTS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)

SURVIVOR CURVE.. IOWA 31-R0.5 NET SALVAGE PERCENT.. -5

1959	820	31.00	9.56	.6916	567
1960	795	31.00	9.99	.6777	539
1961	12,490	31.00	10.42	.6639	8,292
1962	463	31.00	10.86	.6497	301
1963	31	31.00	11.30	.6355	20
1964	648	31.00	11.75	.6210	402
1965	471	31.00	12.21	.6061	285
1966	285	31.00	12.67	.5913	169
1967	513	31.00	13.15	.5758	295
1968	248	31.00	13.63	.5603	139
1969	291	31.00	14.11	.5448	159
1970	174	31.00	14.61	.5287	92
1971	507	31.00	15.11	.5 <u>12</u> 6	260
1972	127	31.00	15.62	.4961	63
1973	1,633	31.00	16.14	.4794	783
1974	240	31.00	16.66	.4626	111
1975	1,572	31.00	17.19	.4455	700
1976	867	31.00	17.73	.4281	371
1977	2,176	31.00	18.27	.4106	893
1978	2,529	31.00	18.83	.3926	993
1979	5,429	31.00	19.38	.3748	2,035
1980	2,731	31.00	19.95	.3565	974
1981	1,373	31.00	20.52	.3381	464
1982	2,953	31.00	21.09	.3197	944
1983	3,777	31.00	21.67	.3010	1,137
1984	3,358	31.00	22.25	.2823	948
1985	1,920	31.00	22.84	.2632	505
1986	10,640	31.00	23.43	.2442	2,598
1987	12,332	31.00	24.02	.2252	2,777
1988	18,686	31.00	24.61	.2061	3,851
1989	16,346	31.00	25.21	.1868	3,053
1990	6,430	31.00	25.81	.1674	1,076
19 <b>9</b> 1	5,303	31.00	26.41	.1481	785
1992	8,833	31.00	27.02	.1284	1,134
1993	7,206	31.00	27.62	.1090	785

## ACCOUNT 373 STREET LIGHTS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)
SURVIVOR CU	RVE IOWA	31-R0.	. 5		
NET SALVAGE	PERCENT	-5			
1994	8,426	31.00	28.23	.0894	753
1995	11,687	31.00	28.84	.0697	815
1996	10,506	31.00	29.45	.0500	525
1997	11,385	31.00	30.07	.0300	342
1998	14,011	31.00	30.69	.0100	140
					41,075
NET SALVAG	E ADJUSTMEN	T			2,054
TOTAL ·	190,212				43,129

ACCOUNT 391.1 OFFICE FURNITURE & EQUIPMENT - FURNITURE

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)

SURVIVOR CURVE.. 20-SQUARE NET SALVAGE PERCENT.. 0

1993	1,199	20.00 14.50	.2750	330
1994	968	20.00 15.50	.2250	218
1996	3,600	20.00 17.50	.1250	450
1997	298,650	20.00 18.50	.0750	22,399
1998	2,964	20.00 19.50	.0250	74

TOTAL	307,381	23,471
TOTAL	307,381	23,471

ACCOUNT 391.2 OFFICE FURNITURE & EQUIPMENT - ELECT. EQUIP.

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)

SURVIVOR CURVE.. 5-SQUARE NET SALVAGE PERCENT.. 0

1993	24 900			1 0000	24 000
1993	24,900			T.0000	24,900
1994	24,365	5.00	0.50	.9000	21,929
1995	29,235	5.00	1.50	.7000	20,465
1996	65,010	5.00	2.50	.5000	32,505
1997	178,087	5.00	3.50	.3000	53,426
1998	176,092	5.00	4.50	.1000	17,609
TOTAL	497,689				170,834

ACCOUNT 391.3 OFFICE FURNITURE & EQUIPMENT - SOFTWARE

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)

SURVIVOR CURVE.. 10-SQUARE NET SALVAGE PERCENT.. 0

1994	24,640	10.00	5.50	.4500	11,088
1995	9,907	10.00	6.50	.3500	3,467
TOTAL	34,547				14,555

ACCOUNT 392.1 TRANSPORTATION EQUIPMENT - PASSANGER CARS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC			
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT			
(1)	(2)	(3)	(4)	(5)	(6)			
SURVIVOR CURVE IOWA 5-R3								
NET SALVA	GE PERCENT	+25						
1993	15,890	5.00	0.80	.8400	13,348			
1994	19,404	5.00	1.27	.7460	14,475			
1995	16,806	5.00	1.91	.6180	10,386			
1996	18,998	5.00	2.69	.4620	8,777			
1997	51,178	5.00	3.56	.2880	14,739			
					61,725			
NET SALV	AGE ADJUSTME	NT			15,431-			
TOTAL	122,276				46,294			

ACCOUNT 392.2 TRANSPORTATION EQUIPMENT - LIGHT TRUCKS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST (2)	AVG. LIFE (3)	EXP. (4)	-ACCRUED FACTOR (5)	DEPREC AMOUNT (6)
SURVIVOR	CURVE IOWA	5-R3			
NET SALVA	GE PERCENT	+30			
1991	13,441	5.00	0.23	.9540	12,823
1992	11,005	5.00	0.49	.9020	9,927
1993	56,374	5.00	0.80	.8400	47,354
1994	24,507	5.00	1.27	.7460	18,282
1995	61,887	5.00	1.91	.6180	38,246
1996	96,279	5.00	2.69	.4620	44,481
1997	96,597	5.00	3.56	.2880	27,820
1998	51,865	5.00	4.51	.0980	5,083
					204,016
NET SALV	AGE ADJUSTME	NT			61,205-
TOTAL	411,955				142,811 '

ACCOUNT 392.3 TRANSPORTATION EQUIPMENT - HEAVY TRUCKS

CALCULATED ACCRUED DEPRECIATION RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.		-ACCRUED	DEPREC
YEAR	COST	LIFE	EXP.	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)

SURVIVOR CURVE.. IOWA 10-L2.5 NET SALVAGE PERCENT.. +15

1986	72,811	10.00	2.94	.7060	51,405
1988	82,528	10.00	3.36	.6640	54,799
1990	159,836	10.00	3.77	.6230	99,578
1991	85,575	10.00	4.08	.5920	50,660
1993	85,914	10.00	5.12	.4880	41,926
1997	260,370	10.00	8.52	.1480	38,535
1998	244,744	10.00	9.50	.0500	12,237

NET SALVAGE ADJUSTMENT

349,140 52,371-

296,769

TOTAL 991,778

III-65

III-66

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# COMPOSITE REMAINING LIVES

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ACCOUNT 362 STATION EQUIPMENT - SCADA

#### CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST . (2)	AVGANN LIFE RATE (3) (4)	JAL ACCRUAL AMOUNT (5)	REM. LIFE (6)	-FUTURE FACTOR (7)	ACCRUALS- AMOUNT (8)
SURVIVOR NET SALV	CURVE ION VAGE PERCENT	NA 10-S2 0			•	
1997	520,389	10.00 10.00	52,038.90	8.50	.8500	442,331
TOTAL	520,389		52,038.90			442,331

#### COMPOSITE REMAINING LIFE, YEARS... 8.50

ACCOUNT 364 POLES, TOWERS & FIXTURES

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CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVOR	CURVE ION	WA 27-R2					
NET SALV	AGE PERCENT	45					
1951	3	27.00	3.70	0.11	0.68	.0252	
1952	260	27.00	3.70	9.62	0.95	.0352	9
1953	193	27.00	3.70	7.14	1.22	.0452	9
1954	517	27.00	3.70	19.13	1.50	.0556	29
1955	9,478	27.00	3.70	350.69	1.79	.0663	628
1956	1,382	27.00	3.70	51.13	2.08	.0770	106
1957	1,292	27.00	3.70	47.80	2.37	.0878	113
1958	1,603	27.00	3.70	59.31	2.66	.0985	158
1959	2,163	27.00	3.70	80.03	2.95	.1093	236
1960	12,818	27.00	3.70	474.27	3.24	.1200	1,538
1961	9,409	27.00	3.70	348.13	3.54	.1311	1,234
1962	7,554	27.00	3.70	279.50	3.84	.1422	1,074
1963	17,303	27.00	3.70	640.21	4.16	.1541	2,666
1964	17,846	27.00	3.70	660.30	4.48	.1659	2,961
1965	7,799	27.00	3.70	288.56	4.82	.1785	1,392
1966	22,383	27.00	3.70	828.17	5.17	.1915	4,286
1967	31,496	27.00	3.70	1,165.35	5.55	.2056	6,476
1968	22,188	27.00	3.70	. 820.96	5.94	.2200	4,881
1969	77.827	27.00	3.70	2.879.60	6.35	.2352	18,305
1970	35,921	27.00	3.70	1.329.08	6.78	.2511	9.020
1971	49,197	27.00	3.70	1.820.29	7.23	.2678	13,175
1972	89,801	27.00	3.70	3,322,64	7.71	.2856	25,647
1973	81.399	27.00	3.70	3,011,76	8.21	.3041	24.753
1974	188,406	27.00	3.70	6,971,02	8.73	.3233	60,912
1975	176,598	27.00	3.70	6.534.13	9.27	.3433	60,626
1976	160.759	27.00	3.70	5,948,08	9.83	- 3641	58,532
1977	327,924	27 00	3 70	12,133,19	10 42	3859	126,546
1978	338 439	27 00	3 70	12, 100, 10	11 02	4081	138,117
1979	294 210	27.00	3 70	10 885 77	11 65	4315	126 952
1990	252 749	27.00	3.70	12 051 69	12 29	4552	160 571
1991	470 406	27.00	3.70	17 405 02	12.25	4796	225 607
1007	467 970	27.00	3 70	17 315 10	13 64	5052	225,007
1007	407,370	27.00	3.70	15 100 40	14 22	5307	230,422
100/	400,113	27.00	3.70	17 771 50	15 05	5574	210,009
1005	400,313 202 007	27.00	3.70	1/ 577 56	15.03	.5574	201,120
TARD	/ 90/	∠/.00	5.10	14,03/.00	T2./Q	. 3044	223,015

ACCOUNT 364 POLES, TOWERS & FIXTURES

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	- FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURV	IVOR CURVE IO	WA 27-R2	2				T
NET	SALVAGE PERCENT	45					
1986	333.623	27 00	3 70	12 344 05	16 53	6122	204 244
1987	326,751	27 00	3 70	12,044.00	17 29	6404	201,211
1988	463,875	27 00	3 70	17 163 38	18 07	6693	310 472
1989	498.567	27.00	3.70	18,446 98	18.86	.6985	348,249
1990	630,215	27.00	3.70	23.317.96	19.67	.7285	459,112
1991	539,086	27.00	3.70	19,946,18	20.49	.7589	409.112
1992	542,321	27.00	3.70	20,065.88	21.32	.7896	428,217
1993	616,795	27.00	3.70	22,821.42	22.16	.8207	506,204
1994	721,258	27.00	3.70	26,686.55	23.02	.8526	614,945
1995	717,874	27.00	3.70	26,561.34	23.88	.8844	634,888
1996	904,938	27.00	3.70	33,482.71	24.76	.9170	829,828
1997	538,473	27.00	3.70	19,923.50	25.65	.95.00	511,549
1998	877,084	27.00	3.70	32,452.11	26.55	.9833	862,437
TOTAL	12,269,499			453,971.49			8,355,419
NET	SALVAGE ADJUSTM	ENT	:	204,287.17			3,759,939
TOTAL	12,269,499			658,258.66			12,115,358

COMPOSITE REMAINING LIFE, YEARS... 18.41

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# ACCOUNT 365 OVERHEAD CONDUCTORS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
							(-)
SURVIVOR	CURVE ION	VA 38-R1	-				
NET SALV	AGE PERCENT.	25					
1940	7,249	38.00	2.63	190.65	5.67	.1492	1.082
1941	4,575	38.00	2.63	120.32	6.00	.1579	722
1942	42	38.00	2.63	1.10	6.34	.1668	7
1943	540	38.00	2.63	14.20	6.69	.1761	95
1944	373	38.00	2.63	9.81	7.05	.1855	69
1945	670	38.00	2.63	17.62	7.41	.1950	131
1946	3,939	38.00	2.63	103.60	7.78	.2047	806
1947	4,949	38.00	2.63	130.16	8.15	.2145	1,062
1948	5,105	38.00	2.63	134.26	8.53	.2245	1,146
1949	55,273	38.00	2.63	1,453.68	8.92	.2347	12,973
1950	22,032	38.00	2.63	579.44	9.32	.2453	5,404
1951	4,099	38.00	2.63	107.80	9.72	.2558	1,049
1952	14,758	38.00	2.63	388.14	10.13	.2666	3,934
1953	6,162	38.00	2.63	162.06	10.55	.2776	1,711
1954	34,544	38.00	2.63	908.51	10.98	.2889	9,980
1955	9,389	38.00	2.63	246.93	11.41	.3003	2,820
1956	19,632	38.00	2.63	516.32	11.86	.3121	6,127
1957	8,018	38.00	2.63	210.87	12.31	.3239	2,597
1958	15,128	38.00	2.63	397.87	12.77	.3361	5,085
1959	10,160	38.00	2.63	267.21	13.24	.3484	3,540
1960	69,849	38.00	2.63	1,837.03	13.71	.3608	25,202
1961	32,529	38.00	2.63	855.51	14.20	.3737	12,156
1962	18,636	38.00	2.63	490.13	14.69	.3866	7,205
1963	47,861	38.00	2.63	1,258.74	15.20	.4000	19,144
1964	50,724	38.00	2.63	1,334.04	15.71	.4134	20,969
1965	8,283	38.00	2.63	217.84	16.23	.4271	3,538
1966	61,511	38.00	2.63	1,617.74	16.77	.4413	27,145
1967	54,750	38.00	2.63	1,439.93	17.31	.4555	24,939
1968	19,303	38.00	2.63	507.67	17.86	.4700	9,072
1969	57,926	38.00	2.63	1,523.45	18.42	.4847	28,077
1970	34,658	38.00	2.63	911.51	18.98	.4995	17,312
1971	44,455	38.00	2.63	1,169.17	19.56	.5147	22,881
1972	102,842	38.00	2.63	2,704.74	20.15	.5303	54,537
1973	69,642	38.00	2.63	1,831.58	20.74	.5458	38,011
1974	168,582	38.00	2.63	4,433.71	21.34	.5616	94,676

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#### ACCOUNT 365 OVERHEAD CONDUCTORS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVOR	CURVE IOV	VA 38-R1					
NET SALV	AGE PERCENT.	25					
1975	187,412	38.00	2.63	4,928,94	21.96	.5779	108,305
1976	94,522	38.00	2.63	2,485.93	22.58	.5942	56,165
1977	304,811	38.00	2.63	8,016.53	23.20	.6105	186,087
1978	277,132	38.00	2.63	7,288.57	23.84	.6274	173,873
1979	280,540	38.00	2.63	7,378.20	24.48	.6442	180,724
1980	293,025	38.00	2.63	7,706.56	25.13	.6613	193,777
1981	323,543	38.00	2.63	8,509.18	25.78	.6784	219,492
1982	266,331	38.00	2.63	7,004.51	26.44	.6958	185,313
1983	208,420	38.00	2.63	5,481.45	27.11	.7134	148,687
1984	188,895	38.00	2.63	4,967.94	27.78	.7311	138,101
1985	206,575	38.00	2.63	5,432.92	28.45	.7487	154,663
1986	159,225	38.00	2.63	4,187.62	29.13	.7666	122,062
1987	227,207	38.00	2.63	5,975.54	29.81	.7845	178,244
1988	303,311	38.00	2.63	7,977.08	30.50	.8026	243,437
1989	205,740	38.00	2.63	5,410.96	31.19	.8208	168,871
1990	408,206	38.00	2.63	10,735.82	31.89	.8392	342,566
1991	205,991	38.00	2.63	5,417.56	32.59	.8576	176,658
1992	310,586	38.00	2.63	8,168.41	33.29	.8761	272,104
1993	295,681	38.00	2.63	7,776.41	34.00	.8947	264,546
1994	443,087	38.00	2.63	11,653.19	34.71	.9134	404,716
1995	552,764	38.00	2.63	14,537.69	35.43	.9324	515,397
1996	839,333	38.00	2.63	22,074.46	36.16	.9516	798,709
1997	568,475	38.00	2.63	14,950.89	36.89	.9708	551,876
1998	1,082,109	38.00	2.63	28,459.47	37.63	.9903	1,071,613
TOTAL	9,301,109		:	244,619.17			7,321,190
NET SALV	AGE ADJUSTM	ENT		61,154.79			1,830,298
TOTAL	9,301,109		:	305,773.96			9,151,488

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COMPOSITE REMAINING LIFE, YEARS... 29.93

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#### ACCOUNT 367 UNDERGROUND CONDUCTORS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	- FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
GIIDVITVOI		ND 05-T'	<b>-</b>				
NET CALL	CORVE ION	NA 25-11	2				ť
NEI SALV	AGE PERCENT.	. U					•
1967	25	25.00	4.00	1.00	8.14	.3256	. 8
1968	264	25.00	4.00	10.56	8.39	.3356	89
1969	1,859	25.00	4.00	74.36	8.64	.3456	642
1971	1,116	25.00	4.00	44.64	<sup>.</sup> 9.13	.3652	408
1972	2,480	25.00	4.00	99.20	9.37	.3748	930
1973	1,511	25.00	4.00	60.44	9.61	.3844	581
1974	3,664	25.00	4.00	146.56	9.85	.3940	1,444
1975	1,119	25.00	4.00	44.76	10.09	.4036	452
1976	11,511	25.00	4.00	460.44	10.34	.4136	4,761
1977	8,975	25.00	4.00	359.00	10.60	.4240	3,805
1978	1,654	25.00	4.00	66.16	10.87	.4348	719
1979	17,111	25.00	4.00	684.44	11.17	.4468	7,645
1980	8,021	25.00	4.00	320.84	11.48	.4592	3,683
1981	3,400	25.00	4.00	136.00	11.83	.4732	1,609
1982	47,065	25.00	4.00	1,882.60	12.21	.4884	22,987
1983	7,768	25.00	4.00	310.72	12.64	.5056	3,928
1984	6,411	25.00	4.00	256.44	13.12	.5248	3,364
1985	3,950	25.00	4.00	158.00	13.65	.5460	2,157
1986	47,941	25.00	4.00	1,917.64	14.23	.5692	27,288
1987	55,755	25.00	4.00	2,230.20	14.88	.5952	33,185
1988	8,895	25.00	4.00	355.80	15.59	.6236	5,547
1989	47,907	25.00	4.00	1,916.28	16.34	.6536	31,312
1990	191,130	25.00	4.00	7,645.20	17.15	.6860	131,115
1991	46,648	25.00	4.00	1,865.92	17.98	.7192	33,549
1992	57,597	25.00	4.00	2,303.88	18.83	.7532	43,382
1993	126,218	25.00	4.00	5,048.72	19.72	.7888	99,561
1994	51,909	25.00	4.00	2,076.36	20.63	.8252	42,835
1995	220,837	25.00	4.00	8,833.48	21.57	.8628	190,538
1996	203,494	25.00	4.00	8,139.76	22.53	.9012	183,389
1997	227,983	25.00	4.00	9,119.32	23.51	.9404	214,395
1998	219,427	25.00	4.00	8,777.08	24.50	.9800	215,038
TOTAL	1,633.645			65,345.80			1,310.346
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COMPOSITE REMAINING LIFE, YEARS... 20.05

#### ACCOUNT 368 LINE TRANSFORMERS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	– FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVOR	CURVE IOW	VA 41-R2					
NET SALVA	GE PERCENT.	. 0					
1940	1,560	41.00	2.44	38.06	4.91	.1198	187
1941	1,733	41.00	2.44	42.29	5.21	.1271	220
1942	108	41.00	2.44	2.64	5.51	.1344	15
1943	364	41.00	2.44	8.88	5.81	.1417	52
1944	595	41.00	2.44	14.52	6.13	.1495	89
1945	1,179	41.00	2.44	28.77	6.44	.1571	185
1946	2,619	41.00	2.44	63.90	6.77	.1651	432
1947	8,370	41.00	2.44	204.23	7.10	.1732	1,450
1948	15,848	41.00	2.44	386.69	7.45	.1817	2,880
1949	13,655	41.00	2.44	333.18	7.80	.1902	2,597
1950	12,491	41.00	2.44	304.78	8.17	.1993	2,489
1951	11,169	41.00	2.44	272.52	8.55	.2085	2,329
1952	12,036	41.00	2.44	293.68	8.94	.2180	2,624
1953	12,792	41.00	2.44	312.12	9.35	.2280	2,917
1954	22,525	41.00	2.44	549.61	9.77	.2383	5,368
1955	25,979	41.00	2.44	633.89	10.20	.2488	6,464
1956	20,481	41.00	2.44	499.74	10.64	.2595	5,315
1957	20,754	41.00	2.44	506.40	11.11	.2710	5,624
1958	25,201	41.00	2.44	614.90	11.58	.2824	7,117
1959	33,478	41.00	2.44	816.86	12.07	.2944	9,856
1960	28,509	41.00	2.44	695.62	12.58	.3068	8,747
1961	23,493	41.00	2.44	573.23	13.10	.3195	7,506
1962	30,384	41.00	2.44	741.37	13.63	.3324	10,100
1963	30,694	41.00	2.44	748.93	14.18	.3459	10,617
1964	24,473	41.00	2.44	597.14	14.74	.3595	8,798
1965	24,294	41.00	2.44	592.77	15.32	.3737	9,079
1966	39,335	41.00	2.44	959.77	15.91	.3880	15,262
1967	53,016	41.00	2.44	1,293.59	16.51	.4027	21,350
1968	54,982	41.00	2.44	1,341.56	17.13	.4178	22,971
1969	54,671	41.00	2.44	1,333.97	17.76	.4332	23,683
1970	73,414	41.00	2.44	1,791.30	18.40	.4488	32,948
1971	79,708	41.00	2.44	1,944.88	19.05	.4646	37,032
1972	114,926	41.00	2.44	2,804.19	19.72	.4810	55,279
1973	71,451	41.00	2.44	1,743.40	20.40	.4976	35,554
1974	63,744	41.00	2.44	1,555.35	21.09	.5144	32,790

#### ACCOUNT 368 LINE TRANSFORMERS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	- FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVO	R CURVE ION	VA 41-R2	2				
NET SAL	VAGE PERCENT.	. 0					
1975	115,765	41.00	2.44	2,824.67	21.79	.5315	61,529
1976	23,166	41.00	2.44	565.25	22.51	.5490	12,718
1977	65,603	41.00	2.44	1,600.71	23.23	.5666	37,171
1978	143,244	41.00	2.44	3,495.15	23.97	.5846	83,740
1979	276,932	41.00	2.44	6,757.14	24.71	.6027	166,907
1980 '	255,143	41.00	2.44	6,225.49	25.47	.6212	158,495
1981	230,456	41.00	2.44	5,623.13	26.23	.6398	147,446
1982	179,174	41.00	2.44	4,371.85	27.01	.6588	118,040
1983	126,418	41.00	2.44	3,084.60	27.79	.6778	85,686
1984	158,476	41.00	2.44	3,866.81	28.58	.6971	110,474
1985	340,387	41.00	2.44	8,305.44	29.39	.7168	243,989
1986	349,195	41.00	2.44	8,520.36	30.20	.7366	257,217
1987	346,283	41.00	2.44	8,449.31	31.02	.7566	261,998
1988	884,876	41.00	2.44	21,590.97	31.85	.7768	687,372
1989	555,164	41.00	2.44	13,546.00	32.68	.7971	442,521
1990	401,931	41.00	2.44	9,807.12	33.53	.8178	328,699
1991	348,272	41.00	2.44	8,497.84	34.38	.8385	292,026
1992	476,623	41.00	2.44	11,629.60	35.24	.8595	409,657
1993	425,480	41.00	2.44	10,381.71	36.11 <sup>,</sup>	.8807	374,720
1994	471,829	41.00	2.44	11,512.63	36.98	.9020	425,590
1995	469,987	41.00	2.44	11,467.68	37.86	.9234	433,986
1996	670,975	41.00	2.44	16,371.79	38.75	.9451	634,138
1997	685,422	41.00	2.44	16,724.30	39.65	.9671	662,872
1998	734,942	41.00	2.44	17,932.58	40.55	.9890	726,858
TOTAL	9,745,774			237,796.86			7,553,775

COMPOSITE REMAINING LIFE, YEARS... 31.77

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## ACCOUNT 369 SERVICES

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVOR	CURVE IO	WA 27-RC	.5				
NET SALV	AGE PERCENT	20					
1951	8	27.00	3.70	0.30	3.02	.1119	1
1952	153	27.00	3.70	5.66	3.44	.1274	19
1953	112	27.00	3.70	4.14	3.85	.1426	16
1954	119	27.00	3.70	4.40	4.25	.1574	19
1955	104	27.00	3.70	3.85	4.65	.1722	18
1956	363	27.00	3.70	13.43	5.05	.1870	68
1957	468	27.00	3.70	17.32	5.45	.2019	94
1958	604	27.00	3.70	22.35	5.84	.2163	131
1959	837	27.00	3.70	30.97	6.24	.2311	193
1960	í,288	27.00	3.70	47.66	6.64	.2459	317
1961	1,716	27.00	3.70	63.49	7.05	.2611	<b>448</b>
1962	1,520	27.00	3.70	56.24	7.45	.2759	419
1963	1,905	27.00	3.70	70.49	7.87	.2915	555
1964	2,402	27.00	3.70	88.87	8.29	.3070	737
1965	2,338	27.00	3.70	86.51	8.71	.3226	754
1966	2,612	27.00	3.70	96.64	9.14	.3385	884
1967	6,093	27.00	3.70	225.44	9.58	.3548	2,162
1968	7,199	27.00	3.70	266.36	10.03	.3715	2,674
1969	7,985	27.00	3.70	295.45	10.48	.3881	3,099
1970	8,296	27.00	3.70	306.95	10.95	.4056	3,365
1971	15,806	27.00	3.70	584.82	11.42	.4230	6,686
1972	19,423	27.00	3.70	718.65	11.90	.4407	8,560
1973	24,803	27.00	3.70	917.71	12.39	.4589	11,382
1974	36,409	27.00	3.70	1,347.13	12.88	.4770	17,367
1975	37,977	27.00	3.70	1,405.15	13.39	.4959	18,833
1976	49,341	27.00	3.70	1,825.62	13.90	.5148	25,401
1977	60,622	27.00	3.70	2,243.01	14.42	.5341	32,378
1978	71,551	27.00	3.70	2,647.39	14.96	.5541	39,646
1979	75,724	27.00	3.70	2,801.79	15.49	.5737	43,443
1980	61,874	27.00	3.70	2,289.34	16.04	.5941	36,759
1981	76,664	27.00	3.70	2,836.57	16.59	.6144	47,102
1982	73,540	27.00	3.70	2,720.98	17.15	.6352	46,713
1983	102,299	27.00	3.70	3,785.06	17.72	.6563	67,139
1984	107,848	27.00	3.70	3,990.38	18.29	.6774	73,056
1985	102,445	27.00	3.70	3,790.47	18.87	.6989	71,599

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#### ACCOUNT 369 SERVICES

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	YEAR	ORIGINAL COST	AVG. LIFE	ANNUAL RATE	ACCRUAL AMOUNT	REM. LIFE	- FUTURE FACTOR	ACCRUALS- AMOUNT
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SURVIVOR C	URVE IOW	A 27-R0	.5				
	NET SALVAG	E PERCENT.	-20					
	1986	123,777	27.00	3.70	4.579.75	19.46	.7207	89,206
	1987	144,205	27.00	3.70	5,335.59	20.04	.7422	107,029
	1988	155,221	27.00	3.70	5,743.18	20.63	.7641	118,604
	1989	201,991	27.00	3.70	7,473.67	21.23	.7863	158,826
	1990	213,341	27.00	3.70	7,893.62	21.82	.8081	172,401
	1991	195,843	27.00	3.70	7,246.19	22.42	.8304	162,628
	1992	193,288	27.00	3.70	7,151.66	23.02	.8526	164,797
	1993	236,358	27.00	3.70	8,745.25	23.63	.8752	206,861
	1994	226,642	27.00	3.70	8,385.75	24.23	.8974	203,389
	1995	258,489	27.00	3.70	9,564.09	24.84	.9200	237,810
	1996	337,992	27.00	3.70	12,505.70	25.46	.9430	318,726
	1997	264,789	27.00	3.70	9,797.19	26.07	.9656	255,680
	1998	359,810	27.00	3.70	13,312.97	26.69	.9885	355,672
т	OTAL 3	,874,194			143,345.20			3,113,666
	NET SALVAG	E ADJUSTMEN	T		28,669.04			622,733
т	OTAL 3	,874,194			172,014.24			3,736,399

COMPOSITE REMAINING LIFE, YEARS... 21.72

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#### ACCOUNT 370 METERS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
CIDITIOD		רת רב הה	F				
SURVIVOR	CURVE IU	VA 32-R2	. 5				
NET SALV	AGE PERCENT.	0					
1972	3,328	32.00	3.13	104.17	10.57	.3303	1,099
1973	14,775	32.00	3.13	462.46	11.18	.3494	5,162
1974	14,539	32.00	3.13	455.07	11.82	.3694	5,371
1975	20,265	32.00	3.13	634.29	12.47	.3897	7,897
1976	20,161	32.00	3.13	631.04	13.14	.4106	8,278
1977 <sup>,</sup>	<sup>'</sup> 9,016	32.00	3.13	282.20	13.83	.4322	3,897
1978	34,687	32.00	3.13	1,085.70	14.54	.4544	15,762
1979	16,432	32.00	3.13	514.32	15.27	.4772	7,841
1980	14,155	32.00	3.13	443.05	16.01	.5003	7,082
1981	20,860	32.00	3.13	652.92	16.77	.5241	10,933
1982	19,176	32.00	3.13	600.21	17.55	.5484	10,516
1983	51,448	32.00	3.13	1,610.32	18.33	.5728	29,469
1984	66,276	32.00	3.13	2,074.44	19.13	.5978	39,620
1985	63,686	32.00	3.13	1,993.37	19.95	.6234	39,702
1986	63,446	32.00	3.13	1,985.86	20.78	.6494	41,202
1987	59,531	32.00	3.13	1,863.32	21.62	.6756	40,219
1988	78,923	32.00	3.13	2,470.29	22.47	.7022	55,420
1989	375,729	32.00	3.13	11,760.32	23.34	.7294	274,057
1990	104,964	32.00	3.13	3,285.37	24.21	.7566	79,416
1991	74,319	32.00	3.13	2,326.18	25.10	.7844	58,296
1992	29,822	32.00	3.13	933.43	25.99	.8122	24,221
1993	35,975	32.00	3.13	1,126.02	26.89	.8403	30,230
1994	49,941	32.00	3.13	1,563.15	27.81	.8691	43,404
1995	39,352	32.00	3.13	1,231.72	28.73	.8978	35,330
1996	48,045	32.00	3.13	1,503.81	29.65	.9266	44,518
1997	85,279	32.00	3.13	2,669.23	30.59	.9559	81,518
1998	82,238	32.00	3.13	2,574.05	31.53	.9853	81,029
<u>ም</u> ርምአፒ.	1 496 369			46.836.31			1.081.489
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COMPOSITE REMAINING LIFE, YEARS... 23.09

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ACCOUNT 371 INSTALLATION ON CONSUMER PREMISES

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
							• - •
SURVIVOR	CURVE ION	VA 31-RO	0.5				
NET SALV	AGE PERCENT.	5					
1962	17,915	31.00	3.23	578.65	10.86	.3503	6,276
1963	3,473	31.00	3.23	112.18	11.30	.3645	1,266
1964	3,381	31.00	3.23	109.21	11.75	.3790	1,281
1965	3,524	31.00	3.23	113.83	12.21	.3939	1,388
1966	3,227	31.00	3.23	104.23	12.67	.4087	1,319
1967	6,880	31.00	3.23	222.22	13.15	.4242	2,918
1968	8,338	31.00	3.23	269.32	13.63	.4397	3,666
1969	6,519	31.00	3.23	210.56	14.11	.4552	2,967
1970	6,610	31.00	3.23	213.50	14.61	.4713	3,115
1971	9,015	31.00	3.23	291.18	15.11	.4874	4,394
1972	10,445	31.00	3.23	337.37	15.62	.5039	5,263
1973	13,292	31.00	3.23	429.33	16.14	.5206	6,920
1974	15,845	31.00	3.23	511.79	16.66	.5374	8,515
1975	13,213	31.00	3.23	426.78	17.19	.5545	7,327
1976	23,250	31.00	3.23	750.98	17.73	.5719	13,297
1977	21,521	31.00	3.23	695.13	18.27	.5894	12,684
1978	22,169	31.00	3.23	716.06	18.83	.6074	13,465
1979	22,732	31.00	3.23	734.24	19.38	.6252	14,212
1980	23,463	31.00	3.23	757.85	19.95	.6435	15,098
1981	18,025	31.00	3.23	582.21	20.52	.6619	11,931
1982	14,251	31.00	3.23	460.31	21.09	.6803	9,695
1983	12,467	31.00	3.23	402.68	21.67	.6990	8,714
1984	17,695	31.00	3.23	571.55	22.25	.7177	12,700
1985	14,924	31.00	3.23	482.05	22.84	.7368	10,996
1986	16,516	31.00	3.23	533.47	23.43	.7558	12,483
1987	21,249	31.00	3.23	686.34	24.02	.7748	16,464
1988	27,025	31.00	3.23	872.91	24.61	.7939	21,455
1989	27,053	31.00	3.23	873.81	25.21	.8132	21,999
1990	31,778	31.00	3.23	1,026.43	25.81	.8326	26,458
1991	31,852	31.00	3.23	1,028.82	26.41	.8519	27,135
1992	32,915	31.00	3.23	1,063.15	27.02	.8716	28,689
1993	37,534	31.00	3.23	1,212.35	27.62	.8910	33,443
1994	38,490	31.00	3.23	1,243.23	28,23	.9106	35,049
1995	51,516	31.00	3.23	1,663.97	28.84	.9303	47,925
1996	69,103	31.00	3.23	2,232.03	29.45	.9500	65,648

ACCOUNT 371 INSTALLATION ON CONSUMER PREMISES

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST (2)	AVG. LIFE (3)	ANNUAL RATE (4)	ACCRUAL AMOUNT (5)	REM. LIFE (6)	-FUTURE FACTOR (7)	ACCRUALS- AMOUNT (8)
SURVIVOR NET SALV	CURVE ION AGE PERCENT	VA 31-RC 5	).5				
1997 1998	57,031 78,463	31.00 31.00	3.23 3.23	1,842.10 2,534.35	30.07 30.69	.9700 .9900	55,320 77,678
TOTAL NET SALV	832,699 AGE ADJUSTMI	ENT		26,896.17 1,344.81			649,153 32,458
TOTAL	832,699			28,240.98			681,611

COMPOSITE REMAINING LIFE, YEARS... 24.14

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#### ACCOUNT 372 TEMPORARY METER POLES

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST (2)	AVG. LIFE (3)	ANNUAL RATE (4)	ACCRUAL AMOUNT (5)	REM. LIFE (6)	-FUTURE FACTOR (7)	ACCRUALS- AMOUNT (8)
SURVIVOR NET SALVA	CURVE 15- AGE PERCENT.	-SQUARE					
1994	30,003	15.00	6.67	2,001.20	10.50	.7000	21,002
1995	4,228	15.00	6.67	282.01	11.50	.7667	3,242
1996	926	15.00	6.67	61.76	12.50	.8333	772
1997	5,704	15.00	6.67	380.46	13.50	.9000	5,134
1998	9,027	15.00	6.67	602.10	14.50	.9667	8,726
TOTAL	49,888			3,327.53			38,876

COMPOSITE REMAINING LIFE, YEARS... 11.68

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#### ACCOUNT 373 STREET LIGHTS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		י סת דר גדי	F				
SURVIVOR	CURVE IO	NA 31-RU	.5				
NET SALVA	AGE PERCENT	5					
1959	820	31.00	3.23	26.49	9.56	.3084	253
1960	795	31.00	3.23	25.68	9.99	.3223	256
1961	12,490	31.00	3.23	403.43	10.42	.3361	4,198
1962	463	31.00	3.23	14.95	10.86	.3503	162
1963	31	31.00	3.23	1.00	11.30	.3645	11
1964	648	31.00	3.23	20.93	11.75	.3790	246
1965	471	31.00	3.23	15.21	12.21	.3939	186
1966	285	31.00	3.23	9.21	12.67	.4087	116
1967	513	31.00	3.23	16.57	13.15	.4242	218
1968	248	31.00	3.23	8.01	13.63	.4397	109
1969	291	31.00	3.23	9.40	14.11	.4552	132
1970	174	31.00	3.23	5.62	14.61	.4713	82
1971	507	31.00	3.23	16.38	15.11	.4874	247
1972	j 127	31.00	3.23	4.10	15.62	.5039	64
1973	1,633	31.00	3.23	52.75	16.14	.5206	850
1974	240	31.00	3.23	7.75	16.66	.5374	129
1975	1,572	31.00	3.23	50.78	17.19	.5545	872
1976	867	31.00	3.23	28.00	17.73	.5719	496
1977	2,176	31.00	3.23	70.28	18.27	.5894	1,283
1978	2,529	31.00	3.23	81.69	18.83	.6074	1,536
1979	5,429	31.00	3.23-	175.36	19.38	.6252	3,394
1980	2,731	31.OÒ	3.23	88.21	19.95	.6435	1,757
1981	1,373	31.00	3.23	44.35	20.52	.6619	909
1982	2,953	31.00	3.23	95.38	21.09	.6803	2,009
1983	3,777	31.00	3.23	122.00	21.67	.6990	2,640
1984	3,358	31.00	3.23	108.46	22.25	.7177	2,410
1985	1,920	31.00	3.23	62.02	22.84	.7368	1,415
1986	10,640	31.00	3.23	343.67	23.43	.7558	8,042
1987	12,332	31.00	3.23	398.32	24.02	.7748	9,555
1988	18,686	31.00	3.23	603.56	24.61	.7939	14,835
1989	16,346	31.00	3.23	527.98	25.21	.8132	13,293
1990	<pre>6,430</pre>	31.00	3.23	207.69	25.81	.8326	5,354
1991	5,303	31.00	3.23	171.29	26.41	.8519	4,518
1992	8,833	31.00	3.23	285.31	27.02	.8716	7,699
1993	7,206	31.00	3.23	232.75	27.62	.8910	6,421

#### ACCOUNT 373 STREET LIGHTS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	- FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	('З́)	(4)	(5)	(6)	(7)	(8)
SURVIVOR	CURVE ION	VA 31-R	0.5				
NET SALVA	AGE PERCENT	5					
1994	8,426	31.00	3.23	272.16	28.23	.9106	7,673
1995	11,687	31.00	3.23	377.49	28.84	.9303	10,872
1996	10,506	31.00	3.23	339.34	29.45	.9500	9,981
1997	11,385	31.00	3.23	367.74	30.07	.9700	11,043
1998	14,011	31.00	3.23	452.56	30.69	.9900	13,871
TOTAL	190,212			6,143.87			149,137
NET SALVA	AGE ADJUSTMI	ENT		307.19			7,457
TOTAL	190,212			6,451.06			156,594

COMPOSITE REMAINING LIFE, YEARS... 24.27

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NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

ACCOUNT 390.1 STRUCTURES & IMPROVEMENTS - NEW HQ

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	– FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

INTERIM SURVIVOR CURVE.. IOWA 100-R2 PROBABLE RETIREMENT YEAR.. 6-2047 NET SALVAGE PERCENT.. 0

1997	5,805,175	47.90	2.09	121,328.16	46.47	.9701	5,631,600
1998	143,145	47.01	2.13	3,048.99	46.53	.9898	141,685
TOTAL	5,948,320			124,377.15			5,773,285

COMPOSITE REMAINING LIFE, YEARS... 46.42

ACCOUNT 391.1 OFFICE FURNITURE & EQUIPMENT - FURNITURE

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVOR	R CURVE 20-	SQUARE					• •
NET SALV	AGE PERCENT.	. 0	·				
1993	1,199	20.00	5.00	59.95	14.50	.7250	869
1994	、 <b>968</b>	20.00	5.00	48.40	15.50	.7750	750
1996	3,600	20.00	5.00	180.00	17.50	.8750	3,150
1997	298,650·	20.00	5.00	14,932.50	18.50	.9250	276,251
1998	2,964	20.00	5.00	148.20	19.50	.9750	2,890
TOTAL	307,381			15,369.05			283,910

COMPOSITE REMAINING LIFE, YEARS... 18.47

# ACCOUNT 391.2 OFFICE FURNITURE & EQUIPMENT - ELECT. EQUIP.

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CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

(	DRIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVOR CU	JRVE 5-SQ	UARE					
NET SALVAGI	E PERCENT	0					
1993	24,900						
1994	24,365	5.00	20.00	4,873.00	0.50	.1000	2,437
1995	29,235	5.00	20.00	5,847.00	1.50	.3000	8,771
1996	65,010	5.00	20.00	13,002.00	2.50	.5000	32,505
1997	178,087	5.00	20.00	35,617.40	3.50	.7000	124,661
1998	176,092	5.00	20.00	35,218.40	4.50	.9000	158,483
TOTAL	497,689			94,557.80			326,857

COMPOSITE REMAINING LIFE, YEARS... 3.46

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ACCOUNT 391.3 OFFICE FURNITURE & EQUIPMENT - SOFTWARE

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CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST (2)	AVG. LIFE (3)	ANNUAL RATE (4)	ACCRUAL AMOUNT (5)	REM. LIFE (6)	-FUTURE FACTOR (7)	ACCRUALS - AMOUNT (8)
SURVIVOR NET SALVA	CURVE 10- AGE PERCENT.	SQUARE					
1994 1995	24,640 9,907	10.00 10.00	10.00 10.00	2,464.00 990.70	5.50 6.50	.5500 .6500	13,552 6,440
TOTAL	34,547			3,454.70			19,992

COMPOSITE REMAINING LIFE, YEARS... 5.79

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ACCOUNT 392.1 TRANSPORTATION EQUIPMENT - PASSANGER CARS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST (2)	AVG. LIFE (3)	ANNUAL RATE (4)	ACCRUAL AMOUNT (5)	REM. LIFE (6)	-FUTURE FACTOR (7)	ACCRUALS- AMOUNT (8)
SURVIVOR	CURVE IOW	IA 5-R3					
NET SALVA	GE PERCENT.	. +25					
1993	15,890	5.00	20.00	3,178.00	0.80	.1600	2,542
1994	19,404	5.00	20.00	3,880.80	1.27	.2540	4,929
1995	16,806	5.00	20.00	3,361.20	1.91	.3820	6,420
1996	18,998	5.00	20.00	3,799.60	.2.69	.5380	10,221
1997	51,178	5.00	20.00	10,235.60	3.56	.7120	36,439
TOTAL	122,276			24,455.20			60,551
NET SALVA	GE ADJUSTME	INT		6,113.80-			15,138-
TOTAL	122,276			18,341.40			45,413

COMPOSITE REMAINING LIFE, YEARS... 2.48

ACCOUNT 392.2 TRANSPORTATION EQUIPMENT - LIGHT TRUCKS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

		ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
	YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
				•				
	SURVIVOR (	CURVE IOWA	A 5-R3					
	NET SALVAC	GE PERCENT.	+30					
	1991	13,441	5.00	20.00	2,688.20	0.23	.0460	618
	1992	11,005	5.00	20.00	2,201.00	0.49	.0980	1,078
	1993	56,374	5.00	20.00	11,274.80	0.80	.1600	9,020
	1994	24,507	5.00	20.00	4,901.40	1.27	.2540	6,225
	1995	61,887	5.00	20.00	12,377.40	1.91	.3820	23,641
	1996	96,279	5.00	20.00	19,255.80	2.69	.5380	51,798
	1997	96,597	5.00	20.00	19,319.40	3.56	.7120	68,777
	1998	51,865	5.00	20.00	10,373.00	4.51	.9020	46,782
	TOTAL	411,955			82,391.00			207,939
	NET SALVAC	ge adjustmen	ЛТ		24,717.30-			62,382-
•	FOTAL	411,955			57.673.70			145,557
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COMPOSITE REMAINING LIFE, YEARS... 2.52

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# NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

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# ACCOUNT 392.3 TRANSPORTATION EQUIPMENT - HEAVY TRUCKS

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST (2)	AVG. LIFE (3)	ANNUAI RATE (4)	ACCRUAL AMOUNT (5)	REM. LIFE (6)	-FUTURE FACTOR (7)	ACCRUALS - AMOUNT (8)
SURVIVO NET SALV	R CURVE ION VAGE PERCENT.	∛A 10-L: +15	2.5				
1996	70 011	10.00					
1988	/2,811	10.00	10.00	7,281.10	2.94	.2940	21,406
1988	82,528	10.00	10.00	8,252.80	3.36	.3360	27,729
1990 ·	159,836	10.00	10.00	15,983.60	3.77	.3770	60,258
1991	85,575	10.00	10.00	8,557.50	4.08	.4080	34,915
1993	85,914	10.00	10.00	8,591.40	5.12	.5120	43,988
1997	260,370	10.00	10.00	26,037.00	8.52	.8520	221,835
1998	244,744	10.00	10.00	24,474.40	9.50	.9500	232,507
TOTAL	991,778			99,177.80			642,638
NET SALV	AGE ADJUSTME	INT		14,876.67-			96,396-
TOTAL	991,778			84,301.13			546,242

COMPOSITE REMAINING LIFE, YEARS... 6.48

#### ACCOUNT 393 STORES EQUIPMENT

#### CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	- FUTURE	ACCRUALS-					
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)					
SURVIVOR CURVE 15-SQUARE												
NET SALVA	GE PERCENT.	. 0										
1967	35											
1968	432											
1972	3,846											
1973	74											
1974	611											
1976	352			····								
1986	1,972	15.00	6.67	131.53	2.50	.1667	329					
1987	1,003	15.00	6.67	66.90	3.50	.2333	234					
1988	998	15.00	6.67	66.57	4.50	.3000	299					
1989	19,203	15.00	6.67	1,280.84	5.50	.3667	7,042					
1993	1,827	15.00	6.67	121.86	9.50	.6333	1,157					
1997	3,432	15.00	6.67	228.91	13.50	.9000	3,089					
1998	2,767	15.00	6.67	184.56	14.50	.9667	2,675					
ͲϽͲϠͳ	36 553			2 081 17			14.825					
TOTYD	20,222			2,001.11			,					

## COMPOSITE REMAINING LIFE, YEARS... 7.12

# ACCOUNT 394 SHOP EQUIPMENT

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

·	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-				
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)				
SURVIVOR CURVE 20-SQUARE											
NET SALVA	GE PERCENT.	. 0									
1940	33										
1941	74										
1945	11										
1946	123										
1948	301										
1949	250			•							
1963	139										
1965	3,750										
1966	116										
1967	310										
1968	294										
1969	293				,						
1970	228										
1971	961										
1972	1,577										
1973	723										
1974	1,890										
1975	494										
1976	1,420										
1977	258										
1978	1,534										
1979	2,206	20.00	5.00	110.30	0.50	.0250	55				
1980	2,183	20.00	5.00	109.15	1.50	.0750	164				
1981	138	20.00	5.00	6.90	2.50	.1250	17				
1983	2,314	20.00	5.00	115.70	4.50	.2250	521				
1984	351	20.00	5.00	17.55	5.50	.2750	97				
1985	492	20.00	5.00	24.60	6.50	.3250	160				
1986	168	20.00	5.00	8.40	7.50	.3750	63				
1987	1,080	20.00	5.00	54.00	8.50	.4250	459				
1988	901	20.00	5.00	45.05	9.50	.4750	428				
1989	3,479	20.00	5.00	173.95	10.50	.5250	1,826				
1990	2,447	20.00	5.00	122.35	11.50	.5750	1,407				
1991	2,270	20.00	5.00	113.50	12.50	.6250	1,419				
1992	1,576	20.00	5.00	78.80	13.50	.6750	1,064				
1993	8,725	20.00	5.00	436.25	14.50	.7250	6,326				

## ACCOUNT 394 SHOP EQUIPMENT

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

YEAR (1)	ORIGINAL COST (2)	AVG. LIFE (3)	ANNUAL RATE (4)	ACCRUAL AMOUNT (5)	REM. LIFE (6)	-FUTURE FACTOR (7)	ACCRUALS- AMOUNT (8)
SURVIVOI NET SALV	R CURVE 20- VAGE PERCENT.	-SQUARE					
1994	9,684	20.00	5.00	484.20	15.50	.7750	7,505
1996	3,609	20.00	5.00	180.45	17.50	.8750	3,158
1997	34,463	20.00	5.00	1,723.15	18.50	.9250	31,878
1998	13,160	20.00	5.00	658.00	19.50	.9750	12,831
TOTAL	104,025			4,462.30			69,378

COMPOSITE REMAINING LIFE, YEARS... 15.55
#### NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

#### ACCOUNT 395 LABORATORY EQUIPMENT

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIV	OR CURVE 15-	SQUARE	1				,
NET SA	LVAGE PERCENT.	. 0					
1940	28				r		
1941	172			~			
1943	66						
1945	70						
1947	33						
1948	412						
1950	99						•
1953	22						
1959	131						
1962	170						
1963	627						
1967	63						
1968	67						
1969	824						
1970	290						
1974	2,604						
1975	115						
1977	440						
1978	2,393						
1980	15,687						
1981	690						
1983	5,548						
1984	3,292	15.00	6.67	219.58	0.50	.0333	110
1985	3,938	15.00	6.67	262.66	1.50	.1000	394
1986	16,470	15.00	6.67	1,098.55	2.50	.1667	2,746
1987	200	15.00	6.67	13.34	3.50	.2333	47
1988	18,614	15.00	6.67	1,241.55	4.50	.3000	5,584
1989	2,795	15.00	6.67	186.43	/ 5.50	.3667	1,025
1991	1,802	15.00	6.67	120.19	7.50	.5000	901
1992	2,206	15.00	6.67	147.14	8.50	.5667	1,250
1993	2,804	15.ÒO	6.67	187.03	9.50	.6333	1,776
1995	2,735	15.00	6.67	182.42	11.50	.7667	2,097
1996	5,582	15.00	6.67	372.32	12.50	.8333	4,651
1997	628	15.00	6.67	41.89	13.50	.9000	565
1998	7,599	15.00	6.67	506.85	14.50	.9667	7,346
TOTAL	99,216			4,579.95		:	28,492

COMPOSITE REMAINING LIFE, YEARS... 6.22

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#### NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

ACCOUNT 396 POWER OPERATED EQUIPMENT

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVOR	CURVE IOW	VA 12-L2					
NET SALV	AGE PERCENT.	. 0					
1947	1,569						
1948	275						
1953	220						
1960	3,651						
1961	902						
1962	78						
1988	9,273	12.00	8.33	772.44	5.04	.4200	3,895
1989	1,427	12.00	8.33	118.87	5.32	.4433	633
1990	4,052	12.00	8.33	337.53	5.64	.4700	1,904
1993	5,057	12.00	8.33	421.25	7.16	.5967	3,018
1995	1,060	12.00	8.33	88.30	8.71	.7258	769
1996	3,714	12.00	8.33	309.38	9.59	.7992	2,968
1997	33,160	12.00	8.33	2,762.23	10.52	.8767	29,071
1998	12,606	12.00	8.33	1,050.08	11.50	.9583	12,080
TOTAL	77,044			5,860.08			54,338

COMPOSITE REMAINING LIFE, YEARS... 9.27

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#### NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

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#### ACCOUNT 397 COMMUNICATIONS EQUIPMENT

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SURVIVO	R CURVE 10-	SQUARE			•		
NET SAL	JAGE PERCENT	0					
1959	144						
1960	359						
1962	4						
1963	1,577						
1967	1,912						
1969	982						
1970	219						
1971	105						
1972	530	•					
1974	210						
1976	4,591						
1977	189						
1979	1,170						
1981	1,028						
1982	1,896						
1983	371						
1984	509						
1987	5,905						
1988	3,566						
1989	15,538	10.00	10.00	1,553.80	0.50	.0500	777
1990	17,393	10.00	10.00	1,739.30	1.50	.1500	2,609
1991	8,773	10.00	10.00	877.30	2.50	.2500	2,193
1992	28,143	10.00	10.00	2,814.30	3.50	.3500	9,850
1993	10,437	10.00	10.00	1,043.70	4.50	.4500	4,697
1994	7,185	10.00	10.00	718.50	5.50	.5500	3,952
1995	949	10.00	10.00	94.90	6.50	.6500	617
1996	27,668	10.00	10.00	2,766.80	7.50	.7500	20,751
1997	114,105	10.00	10.00	11,410.50	8.50	.8500	96,989
1998	19,914	10.00	10.00	1,991.40	9.50	.9500	18,918
TOTAL	275,372			25,010.50			161,353

COMPOSITE REMAINING LIFE, YEARS... 6.45

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NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

#### ACCOUNT 398 MISCELLANEOUS EQUIPMENT

CALCULATION OF COMPOSITE REMAINING LIFE RELATED TO ORIGINAL COST AS OF DECEMBER 31, 1998

	ORIGINAL	AVG.	ANNUAL	ACCRUAL	REM.	-FUTURE	ACCRUALS-
YEAR	COST	LIFE	RATE	AMOUNT	LIFE	FACTOR	AMOUNT
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
							٢
SURVIVOR	CURVE 20-	-SQUARE					
NET SALV	AGE PERCENT.	0		1			
1964	231						,
1965	154						
1966	721						
1967	1 249						
1969	1 220						
1969	1,220						•
1972	204						
1972	103						
1973	500						
1975	598						
1975	1 251						
1977	1,251						
1979	2 22						
1979	2,131	20 00	5 00	147 95	0 50	0250	74
1980	3 910	20.00	5.00	195 50	1 50	0750	293
1982	1 264	20.00	5.00	63 20	3 50	1750	200
1983	2 989	20.00	5.00	149 45	4 50	2250	673
1986	3 440	20.00	5.00	172 00	7 50	3750	1,290
1987	3 012	20.00	5 00	150 60	8 50	4250	1,280
1989	455	20.00	5.00	22.75	10.50	. 5250	239
1990	936	20.00	5.00	46.80	11.50	.5750	538
1991	3.267	20.00	5.00	163.35	12.50	.6250	2.042
1992	1,251	20.00	5.00	62.55	13.50	.6750	844
1993	1,791	20.00	5.00	89.55	14.50	.7250	1,298
1994	470	20.00	5.00	23.50	15.50	.7750	364
1995	625	20.00	5.00	31.25	16.50	.8250	516
1996	350	20.00	5.00	17.50	17.50	.8750	306
1997	12,463	20.00	5.00	623.15	18.50	.9250	11,528
1998	1,326	20.00	5.00	66.30	19.50	.9750	1,293
TOTAL	50,654			2,025.40			22,799

COMPOSITE REMAINING LIFE, YEARS... 11.26



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#### United States Department of Agriculture Rural Development

Rural Business-Cooperative Service • Rural Housing Service • Rural Utilities Service Washington, DC 20250

Mr. Michael L. Miller President & CEO Nolin Rural Electric Cooperative Corporation 411 Ring Road Elizabethtown, Kentucky 42701-8701



August 22, 2000

Dear Mr. Miller:

We have reviewed the depreciation study performed by Gannett Fleming for Nolin Rural Electric Cooperative Corporation (Nolin). The study requests the Rural Utilities Service's approval of depreciation rates for distribution and general plant that vary from those prescribed in RUS Bulletin 183-1, Depreciation Rates and Procedures.

Based upon the information provided in the study and in response to your request, RUS hereby approves the utilization of the following depreciation rates for the primary plant accounts detailed below:

Account No.	Account Title	Annual Depreciation Rate
Distribution:		
362	Station Equipment-SCADA	10.25
364	Poles, Towers and Fixtures	5.72
365	Overhead Conductors	
367	Underground Conductors	4.14
368	Line Transformers	2.54
369	Services	4.60
370	Meters	3.30
371	Installation on Customer Premises	3.53
372	Temporary Meter Poles	6.94
373	Street Lights	3.53

These rates are approved for a 5-year period beginning January 1, 2000. If Nolin wishes to continue to utilize depreciation rates that fall outside of RUS' prescribed ranges of rates beyond this 5-year period, a revised depreciation study updating this information must be submitted to RUS.

Rural Development is an Equal Opportunity Lender Complaints of discrimination should be sent to: Secretary of Agriculture, Washington, DC 20250 Mr. Michael L. Miller, President and CEO

#### **General Plant:**

The rates presented for general plant appear to be acceptable. However, specific approval is not required for general plant items as long as the rates are based upon the experience of the cooperative and represent the estimated service life and salvage.

If you have any questions or if we can be of further assistance, please contact Ms. Sally Price, Director, Northern Regional Division, 1400 Independence Ave. SW, Stop 1566, Washington, D.C. 20250-1566.

Sincerely,

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ALFRED RODGERS <sup>1/2</sup> Deputy Assistant Administrator Electric Program



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#### United States Department of Agriculture Rural Development

Rural Business-Cooperative Service • Rural Housing Service • Rural Utilities Service Washington, DC 20250

August 22, 2000

Mr. Michael L. Miller President & CEO Nolin Rural Electric Cooperative Corporation 411 Ring Road Elizabethtown, Kentucky 42701-8701



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Based upon the information provided in the study and in response to your request, RUS hereby approves the utilization of the following depreciation rates for the primary plant accounts detailed below:

Account No.	Account Title	Annual <u>Depreciation Rate</u>
Distribution:		
362	Station Equipment-SCADA	10.25
364	Poles, Towers and Fixtures	5.72
365	Overhead Conductors	3.41
367	Underground Conductors	4.14
368	Line Transformers	2.54
369	Services	4.60
370	Meters	3.30
371	Installation on Customer Premises	3.53
372	Temporary Meter Poles	6.94
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If you have any questions or if we can be of further assistance, please contact Ms. Sally Price, Director, Northern Regional Division, 1400 Independence Ave. SW, Stop 1566, Washington, D.C. 20250-1566.

Sincerely,

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ALFRED RODGERS <sup>(1)</sup> Deputy Assistant Administrator Electric Program

#### Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

#### 6. Refer to the application, Exhibit 8.

a. Refer to page 1. Explain why expenses associated with the Kentucky Association of Electric Cooperative, Inc.'s ("KAEC") annual meeting and a legislative conference are excluded for ratemaking purposes.

#### **Response:**

The expenses removed for the KAEC annual meeting are for directors who are not the KAEC representative. The expenses for the legislative conference are removed because Nolin believes the Commission considers this type of activity/expense in the nature of lobbying and thus inappropriate for recovery through rates.

b. Refer to page 1; page 3, line 77; and page 10, line 70. Explain why expenses associated with the KAEC annual meeting are not excluded for Directors David Brown or Lawrence Ireland.

#### **Response:**

Director Brown is Nolin's designated KAEC representative, and thus his expenses for the KAEC annual meeting are appropriately included for ratemaking purposes. The expenses of Director Ireland for the KAEC annual meeting were mistakenly included for ratemaking purposes when they should have been excluded; thus, the expenses for Director Ireland should be removed.

c. Refer to page 22. Provide information for Director Lawrence Ireland as provided for the other directors.

#### **Response:**

The information for Director Lawrence Ireland, which was inadvertently omitted from the application, Exhibit 8, is below. This information, like the similar information originally filed as part of Exhibit 8, is subject to a Motion for Confidential Treatment filed herein on December 29, 2016.

Name and Address



#### Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Commission Staff's Fourth Request for Information

- 7. Refer to the application, Exhibit 10.
  - a. Refer to page 4, line 131. Explain whether this expense is for Director Raymond Thomas and confirm that it is not also included in Exhibit 8.

#### **Response:**

The expense listed on page 4, line 131 is for Director Raymond Thomas. This amount has not been included in Exhibit 8.

 b. Refer to page 4, line 158, and Nolin's response to Commission Staff's Third Request for Information ("Staff's Third Request"), Item 3.a., Attachment 3A.
 Confirm that this item is not included in Industry Association Dues. If confirmed, provide a complete description of this expenditure.

#### **Response:**

The amount listed on page 4, line 158 is not included in Staff's Third Request Item 3.a., Attachment 3A as part of Industry Association Dues. The expenditure of \$300 represents the dues to the KAEC Manager's Association for the 2016 calendar year. The Manager's Association provides excellent opportunities for interaction and discussion between leaders of the various KAEC members, most notably at CEO meetings supported by the dues and held in the Fall and Spring of each year.

c. Refer to page 6, line 41. Explain whether BILL CREDITS are prizes and explain why this item should be included for ratemaking purposes.

#### Response:

The entry listed on page 6, line 41 as BILL CREDITS are prizes at the Nolin annual meeting and should have been removed for ratemaking purposes.

#### Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

8. Refer to Nolin's response to Commission Staff's First Request for Information ("Staff's First Request"), Item 24. Confirm that it is Nolin's intent not to propose an adjustment for franchise fees and operating taxes, including property taxes. If this is not confirmed, provide Nolin's proposed adjustment and all supporting documentation and calculations.

#### **Response:**

It is Nolin's intent not to propose an adjustment for franchise fees and operating taxes, included property taxes.

#### Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

- 9. Refer to Nolin's response to Staff's First Request, Item 24.a.
  - a. Provide the information for the test year.

#### **Response:**

In Nolin's original response to Staff's First Request, Item 24.a., it mistakenly provided a schedule that reflected (i) the property taxes it paid to the state of Kentucky and various counties and cities during calendar year 2014 and calendar year 2015; and (ii) the Kentucky Public Service Commission assessments it paid in 2014 and 2015. Upon further review, it is clear that Staff instead requested a "schedule of franchise fees paid to cities, towns or municipalities during the test year, including the basis of these fees." This information is provided in the document attached hereto as Attachment 9.

b. Explain the payments identified as "Ky State Treasurer" and "Rev Cab – PSC Assess."

#### Response:

In Nolin's original response to Staff's First Request, Item 24.a., the payments designated as "Ky State Treasurer" represent the state assessment for Nolin's property taxes. The payments designated as "Rev Cab-PSC Assess" represented the assessment by the Kentucky Public Service Commission for public service company operating revenues, less 50% of the power cost.

c. Confirm that the remaining payments are franchise fees.

#### **Response:**

Please see Nolin's response to subpart (a.) of this request, above.

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	TAXING DISTRICT					
	City of	City of Vine				
	Elizabethtown	Grove	City of Radcliff	City of Sonora		
Month						
May-15	\$17,307.75	\$4,019.92	\$19,358.78	\$67.40		
Jun-15	\$20,564.85	\$5,039.24	\$22,405.24	\$73.90		
Jul-15	\$24,812.40	\$5,745.97	\$26,684.46	\$93.25		
Aug-15	\$25,284.06	\$5,649.47	\$25,280.10	\$81.89		
Sep-15	\$21,162.82	\$4,590.83	\$20,036.71	\$60.24		
Oct-15	\$18,438.83	\$3,919.91	\$18,472.46	\$64.71		
Nov-15	\$16,792.18	\$4,575.11	\$21,094.32	\$85.87		
Dec-15	\$19,101.09	\$5,258.02	\$24,824.18	\$122.47		
Jan-16	\$23,682.44	\$7,737.61	\$33,616.56	\$160.90		
Feb-16	\$23,618.30	\$6,302.10	\$25,886.87	\$91.46		
Mar-16	\$19,842.04	\$4,571.95	\$20,304.99	\$73.18		
Apr-16	\$16,963.40	\$4,216.96	\$18,248.90	\$59.02		
	\$247.570.16	\$61.627.09	\$276.213.57	\$1.034.29		

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The Franchise fee for the Cities of Elizabethtown, Vine Grove, Sonora, and Radcliff is 3%. The fee is applied to all revenue including kwh, environmental surcharge and demand on each monthly bill. It is collected monthly and remitted quarterly to the individual taxing districts.

#### Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

10. Refer to Nolin's response to Staff's First Request, Item 24.b. Explain the entries for Kentucky Retail in the amount of \$815,885.56 and Other Taxes in the amount of \$64,548.87.

#### **Response:**

The entry for Kentucky Retail in the amount of \$815,885.56 listed in Nolin's response to Staff's First Request, Item 24.b. includes the amount of sales tax collected from the sale of electricity and submitted to the Kentucky Revenue Cabinet by Nolin. This amount also includes use tax paid directly to the Kentucky Revenue Cabinet. Various vendors do not include sales tax on the original invoice. Nolin is able to calculate this amount on those taxable purchases through our accounting software. This amount is accumulated and submitted directly to the state of Kentucky monthly. Other Taxes totaling \$64,548.87 shown in Nolin's response to Staff's First Request, Item 24.b. reflects the Occupational Payroll taxes collected from employees through the payroll system calculation and subsequently submitted to the various taxing districts.

#### Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

- 11. Refer to Nolin's response to Commission Staff's Second Request for Information, Item 15.
  - a. Depreciation studies submitted with electric distribution cooperative rate applications in recent years have recommended that a depreciation review should be conducted every five years due to the changes in the factors affecting depreciation rates and accrued depreciation. Fully describe both Nolin's review process of its depreciation rates and the basis for Nolin's determination that a depreciation study was not necessary.

#### **Response:**

As part of the annual audit, the plant and reserve are reviewed for any major changes, unusual occurrences, or other factors that would necessitate updating the depreciation study. Other than the meters, there have not been any such occurrences. Nolin also monitors where it falls on the Depreciation Guideline Curve ("DGC"). Attached hereto as "Attachment 11" is the DGC and the point where Nolin is located as of December 31, 2016. Nolin generally falls within the Maximum and Minimum Curves.

b. Identify the individuals involved in the annual review of Nolin's depreciation, and provide their qualifications with regard to their expertise in establishing appropriate depreciation rates.

#### **Response:**

Nolin's Vice President Administration and Finance and its external auditor are involved in the annual review of Nolin's depreciation. Nolin's external auditor has been auditing electric cooperatives since 1978. He has assisted in the preparation of depreciation studies for twelve electric cooperatives on several occasions. The current Vice President Administration and Finance has a BS in Accounting and has worked in the cooperative field for twenty three years. During many of these years she was involved with the work order system and the plant accounting system. The previous Vice President Administration and Finance for Nolin, serving from 1984 to 2016, had a BS in Business Administration and had served as Office Manager or Vice President of a cooperative for over 40 years.

NOLIN RELL DECEMBER 2016

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Bulletin 183-1 Page 7

### DEPRECIATION GUIDELINE CURVES



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#### Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

12. Refer to Nolin's response to Staff's Third Request, Item 3.d., and the application Exhibit 10. Several items for Elizabethtown Laundry Co identified as related to retirement dinners/receptions have been excluded for ratemaking purposes. Confirm that the remaining expense items not included in "Items Disallowed for Rate Purposes" are not related to retirement dinners/receptions. If this cannot be confirmed, provide the amount related to retirement dinners/receptions.

#### **Response:**

The items for Elizabethtown Laundry Co totaling \$656.47, as referenced in Staff's Third Request, Item 3.d., does include two entries related to retirement dinners. Those items total \$114.48 and should be removed for ratemaking purposes.

#### Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

13. Refer to Nolin's response to Staff's Third Request, Item 3, Attachment 3B, (Revised) Exhibit 10, pages 2 through 5 of 7. For the following VISA expenditures, provide a complete and detailed description of each item listed on the referenced payments that Nolin has not removed from the test-year expense, and explain why Nolin believes these amounts should be included for ratemaking purposes: Check numbers 90109429, 90109680, 90110317, 90110596, 90111549, 15000190, 15000693, 15001127, 15001489, 15001822, and 15002251. It appears there are numerous charges for meetings, conferences, training and seminars. The description for these charges should include attendees, dates of attendance, locations, nature of the conference or training, and full description of the training that occurred.

#### Response:

The agenda for each of the referenced trainings/seminars/conferences are included in this filing as Attachments 13A through 13K. The attached agendas attest to the informative nature of each of these conferences in the areas of leadership, managerial skill enhancement, overall cooperative business model knowledge, communication skill building, time management and various other areas that are all beneficial to the cooperative as a whole. These meetings/trainings are essential to providing the tools needed by Nolin employees. We believe the more knowledge an employee has of the electric cooperative model the better that employee can work within the cooperative to advance their own productivity as well as those they supervise. The trainings and conferences also allow for networking opportunities with other cooperatives throughout the region, state and nation. Attendance at these training sessions/seminars/meetings/conferences allow our employees an opportunity to learn of tools available to them to aid in the completion of their duties in a more efficient manner.

#### Response No. 13 Page 2 of 2 Witness: Michael L. Miller

				Check Number	
Meeting/Conference	Date	<u>Attendees</u>	Location	Reference	Attachment
NRECA Legislative Conference	ADI-15	Michael Miller	Washington D.C.	90109429	13A
e e	•		0		
NRECA Connect Conference	May-15	Richard Ryan	Minneapolis, MN	15001822	13F
		Patsy Whitebead		15002251	13F
CFC Forum	hin-15	Michael Miller	Chiraen II	90109680	PSC - 2 - 19 Attachment 194
			annen Dat in	30103000	The Party of the P
NRECA Interact Conference	Jul-15	Felicia Gossett	Washington D.C.	90110317	13D
NRECA Touchstone Energy					
Board Meeting	Jul-15	Richard Ryan	Portland, ME	90109680	131
				90110317	13J
NRECA Supervisor Training					
Workshop	Aug-15	Melinda Redmond	Louisville, KY	90110596	13E
NRECA Tax, Finance & Accounti	Aug-15	O V Sparks	Denver, CO	90110317	13M
	Aug-15	OV Sparks	Denver, CO	90110596	13M
	Aug-15	O V Sparks	Denver, CO	90109680	13M
NRECA Regional Meeting	0(1-15	Michael Miller	Biloxi, MS	90109680	13N
			-		
				00400430	430
NRECA PowerUp Conference	Oct-15	Allison Cottey	Denver, CO	90109429	138
	Oct-15	Michelle Rogers	Denver, CO	90109429	138
NRECA CEO Close Up/NISC Bd					
Meeting	Jan-16	Michael Miller	Turson, AZ	15001127	131
NRFCA NET Conference	Feb-16	Vince Heuser	Ft Myers, FL	15000190	131
		Richard Ryan	ft Myers, FL	15000693	131
		Billy Pait	Ft Myers, FL	15001489	131
NRFCA Annual Meeting	Mar-16	Vince Heuser	New Orleans, LA	15000190	PSC - 2 - 19 Atlachment 19B
		O V Sparks	New Orleans, LA	15001127	PSC - 2 - 19 Attachment 198
		Richard Ryan	New Orleans, LA	15001489	PSC - 2 - 19 Attachment 198
		Michael Miller	New Orleans, LA	15001822	PSC - 2 - 19 Atlachment 198
				45000500	1211
NRECA Tech Advantage	Apr-16	GregHarrington	New Orleans, LA	15000693	13/1
		Jason Mattingly	New Orleans, LA	15001489	1311
		Vince Heuser	New Orleans, LA	15001822	13H
		Richard Ryan	New Orleans, LA		
		Michael Miller	New Orleans, LA		
NRECA Legislative Conference	Apr-16	Michael Miller	Washington D.C.	15001822	13G
NRUCEC New CEOTraining	Apr-16	Sara Roberson	Washington D.C.	15002251	13K
MOULT NEW CLO Hanning	101-10	Jun 110001300			
Introduction to Distribution					
Engineering	Aug.16	Devon Woosley	Madison, WI	15002251	130
L 1161112 14112	Nov-16	Devon Woosley	Madison, WI	15002251	13C

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### NRECA LEGISLATIVE RALLY ITINERARY – KENTUCKY ACTIVITIES

May 4	5:10 p.m.	Room 167 Senate Russell Office Building	Visit Rand Paul CONFIRMED	All representatives of Kentucky's Electric cooperatives.
May 5	8:30 a.m. – 10:00 a.m.	Washington Court Hotel Montpelier Room	<b>Breakfast</b> Kentucky's Touchstone Energy Cooperatives	All representatives of Kentucky's electric cooperatives and all Legislators' Energy Advisors, Legislative Aides, and Chiefs of Staff are invited to attend, along with special guests

#### **BREAKFAST PROGRAM:**

#### BREAKFAST ATTENDANCE LIST FROM LEGISLATIVE OFFICES

M. McConnell	- Tate Bennett, Legislative Assistant (Energy) – CONFIRMED
J. Paul	- Paige Agostin, Legislative Assistant (Energy) – CONFIRMED
E. Whitfield	- Allison Busbee, Policy Director (Energy) – NOT CONFIRMED
B. Guthrie	- Joel Miller, Legislative Counsel (Energy) - CONFIRMED
J. Yarmuth	- Marissa Wittebort, Legislative Assistant (Energy) - CONFIRMED
T. Massie	- David Silvers, Legislative Assistant (Energy) – NOT CONFIRMED
H. Rogers	- Megan (O'Donnell) Bell and Ashley Nichols, Legislative Assistants – CONFIRMED
A. Barr	- No representation from Barr's office as all staff will be in training

#### **RESPONSES OF SPECIAL GUESTS INVITED**

NRECA	- Paul Breakman, John Cassady and Laura Vogel CONFIRMED			
CFC	Sheldon Petersen – Regrets, but will be represented by another staff member			
NRTC	- Tim Bryan/Mark Davis – No reply			
RUS	- Jasper Schneider – No reply			
TOUCHSTONE	- Mary McLaury – Yes			
TVPPA	- Jack Simmons – Yes - Phillip Burgess - Yes			
TVA	- Ernie Peterson – Regrets			
COBANK	- Bill LaDuca – Yes			

Attachment 13A Page 1

#### **CAPITOL HILL VISITS**

DATE	TIME	LOCATION	ACTIVITY	PARTICIPANTS
MAY 5	11:00 am	Room 188 Senate Russell Office Building	Visit with Mitch McConnell CONFIRMED	All representatives of Kentucky's electric cooperatives.

The House of Representatives is in recess, so there will be no other visits.

#### **Co-op Attendance List for Senate Visits**

Inter-County Energy Joseph Spalding

Jackson Energy Carol Wright

Kenergy Corp. Gregory Starheim

<u>KAEC</u> Chris Perry Chase Crigler Barbara Rodgers

Meade County RECC Burns Mercer

Nolin RECC Mickey Miller

Owen Electric John Grant Mark Stallons

Pennyrile Electric Greg Grissom James Lear Shelby Energy Debra Martin

South Kentucky RECC Allen Anderson Benny Garland Rick Halloran

Warren RECC Scott Ramsey Mike McGuirk Marc Lovell Dennis Ingram Rebecca Goad Pete Dotson Rick Carroll Penney Baseheart Nancy Huffman

West Kentucky RECC David Smart Benny Adair Kevin Crider Troy English Eddy Wright

Big Rivers Electric Sharla Austin-Darnell Bob Berry Marty Littrel

Blue Grass Energy Jody Hughes Dennis Moneyhon Jane Smith Mike Williams

<u>Clark Energy</u> Chris Brewer Gale Means Robert Russell

Cumberland Valley Electric Chester Davis

East Kentucky Power Barry Mayfield

<u>Fleming-Mason Energy</u> Joni Hazelrigg Mary Beth Nance



Learning Labs 5

Learning Labs 6

Break

Continental Breakfast

Learning Labs 1

Learning Labs 2

Lunch On Own

Learning Labs 3

Learning Labs 4

Wellness Walk

**Registration Open** 

Continental Breakfast

Second General Session

Night Out at Lucky Strike (ticket required)

Break

Break

**Opening General Session** 

7:30 am - 8:30 am

8:30 am - 10:00 am

10:00 am - 10:15 am

10:15 am - 11:15 am

11:30 am - 12:30 pm

12:30 pm - 2:00 pm

2:00 pm - 3:00 pm

3:00 pm - 3:15 pm

3:15 pm - 4:15 pm

6:00 pm - 9:00 pm

6:00 am - 6:30 am

7:30 am - 4:00 pm

7:30 am - 8:30 am

8:30 am - 10:00 am

10:00 am - 10:15 am

10:15 am - 11:15 am

11:30 am - 12:30 pm

Tuesday, September 22

9/14/2015

Conference Program

Attachment 13B

Page 2

	12:30 pm – 2:00 pm	CFC Sponsored Luncheon
	2:00 pm – 3:30 pm	Regional Roundtable Discussion Sessions
	3:45 pm – 6:45 pm	Tri-State G&T Tour
,	Vednesday, September 2	3
	7:30 am – 10:15 am	Registration Open
	7:30 am – 8:30 am	Continental Breakfast
	8:30 am – 10:00 am	Closing General Session
	10:00 am – 10:15 am	Break
	10:15 am - 11:15 am	Learning Labs 7
	11:15 am	PowerUp 2015 Adjourns

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	Pont	ulyp'2015-Stenicschool	OTTREKING (SUNPAR	energe)	
Monday, September 21					
8:30-10:00 a.m.	<b>Opening General Sess</b>	sion: DeDe Murcer Moffet	t: Power Up Your Success i	n a S.N.A.P!	
Learning Labs #1 10:15-11:15 a.m.	How DO They DO That? Secret Tech Weapons for EAs - Beth Ziesenis	It's a Jungle Out There: Protecting You and Your Family in the Digital Age Sean Wiese	Connecting the Dots – Getting the Most From Your Power Up (or any) Learning Experience Lynn Moore	<b>Co-op 101</b> Amy Rosier	What's New, Better and Changed in Microsoft Windows 8 and Office 2013 Lisa Hanson
Learning Labs #2 11:30 a.m12:30 p.m.	Repeat: How DO They DO That? Secret Tech Weapons for EAs - Beth Ziesenis	See New Achievable Possiblities in Business & Life Dee Dee Murcer Moffett	Drawing the Line – Set Boundaries and Focus on the WIGS (Wildly Important Goals & Strategies)	Parliamentary Procedure: The Basics Nick Pascale	Microsoft Excel – Take your Skills to the Next Level Lisa Hanson
12:30-2:00 p.m.	Lunch On Own		<u> </u>		<b>I</b>
Learning Labs #3 2:00-3:00 p.m.	Electricity in English Robert Adams	Repeat: See New Achievable Possiblities in Business & Life Dee Dee Murcer Moffett	All Aboard! Onboarding the New Director Pat Mangan	Presentation Skills Bootcamp Beatrice Bruno	Create Easy to Use Fillable Forms with Adobe Acrobat Standard XI Lisa Hanson
Learning Labs #4 3:15-4:15 p.m.	Repeat: Parliamentary Procedure: The Basics Nick Pascale	<b>Telling Your Story</b> Lois Melkonion	Repeat: All Aboard! Onboarding the New Director Pat Mangan	Writing Bootcamp Beatrice Bruno	Time Management and Organization Tips using Microsoft Outlook 2013 Lisa Hanson
6:00-9:00 p.m.	Welcome Reception at	Lucky Strike			
niesday, September 22					
8:30-10:00 a.m.	General Session: Cole	tte Carlson: The Langua	ge of Leadership: It All Begi	ns with You	
Learning Labs #5 10:15-11:15 a.m.	Facilitating Meetings to Get Results! Pat Mangan	Communicating in the Multi-Generational Workforce Brooke Chesnut	Manage Your Time so it Doesn't Manage You! Kimberly Alexander	The Power of Shared Experiences in the Work Environment Kenvon Salo	Help your Executives Master their iPads Lisa Hanson
Learning Labs #6 11:30 a.m12:30 p.m.		Repeat: Communicating in the Multi-Generational Workforce Brooke Chesnut	Repeat: Manage Your Time so it Doesn't Manage You! Kimberly Alexander	Repeat: The Power of Shared Experiences in the Work Environment Kenyon Salo	Repeat: What's New, Better and Changed in Microsoft Windows 8 and Office 2013 Lisa Hanson
12:30-2:00 p.m.	Luncheon				
2:00-3:30 p.m.	Regional Roundtable I	Discussion Sessions			
3:45-6:00 p.m.	Tri-State G&T Tour		· · · · · · · · · · · · · · · · ·		
Vednesday, September 23		u A B	the state of the second st		
8:30-10:00 a.m.	<b>Closing General Sessi</b>	on: Dan Thurman: Living	Off Balance On Purpose	······································	
Learning Labs #7 10:15-11:15 a.m.	Being the CEO of Your Life Rachel Kodanaz	From Inspiration to Implementation: Taking This Back to Your Co-op Diane Rhodes-Michaely	How to Become a Master at Meeting Minutes Lucy Garst	Repeat: Time Management and Organization Tips using Microsoft Outlook 2013 Lisa Hanson	

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Attachment 13B Page 3

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#### NRECA Madison, Wisconsin Introduction to Distribution Engineering Program Agenda for Unit A

<u>Day</u>	<u>Time</u>	Topic	Instructor
<u>Monda</u>	<u>y, August 1, 2016</u>		
	8:00 - 9:30	Welcome Introduction to IDE Program Introduction to the Cooperative Model	Gary Pfann
	9:30 - 10:15	Overview of RUS Bulletins and Specifications	Kevin Mara
	10:15 - 10:30	Break	
	10:30 - 11:50	Introduction to NESC and Grounding	Jason Settle
	11:50 - 1:00	Lunch	
	1:00 - 1:50	Overhead Staking (NESC Clearances)	Kevin Mara
	1:50 - 2:00	Break	
	2:00 - 5:00	Overhead Staking (Conductors and Wood Poles)	Jason Settle

#### Tuesday, August 2, 2016

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8:00 - 9:30	Overhead Staking (Pole Tops)	Kevin Mara
9:30 - 9:45	Break	
9:45 - 11:50	Overhead Staking (Guying)	Kevin Mara
11:50 - 1:00	Lunch	
1:00 - 1:50	Class Exercise – Staking Problem	Jason Settle
1:50 - 2:00	Break	
2:00 - 3:30	Transformers (Single-phase sizing and voltage drop)	Jason Settle
3:30 - 5:00	Service Issues (Overhead and underground designs)	Kevin Mara

#### Wednesday, August 3, 2016

8:00 - 9:30	Three-Phase Transformers (Banking, and Testing)	Jason Settle
9:30 - 9:45	Break	
9:45 - 11:50	Metering (Revenue, AMR & AMI)	Kevin Mara

#### NRECA Madison, Wisconsin Introduction to Distribution Engineering Program Agenda for Unit A

<u>Day</u>	Time	Topic	Instructor
Wedne	sday, August 3, 2	<u>016</u>	
	11:50 - 1:00	Lunch	
	1:00 - 1:30	Class Exercise – Three-Phase Transformer Sizing	Jason Settle
	1:30 - 1:45	Break	
	1:45 - 4:00	Line Capacitors & Arc-Flash Assessment	Kevin Mara
	4:00 - 5:00	Underground Distribution Design (URD Cable) Installation Methods, Terminations, Etc.	Jason Settle

#### Thursday, August 4, 2016

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8:00 - 10:00	Underground Distribution Design Large Subdivision, Design Considerations	Kevin Mara
10:00 - 10:15	Class Problem	
10:15 - 11:50	Underground Distribution Design (Best Practices)	Kevin Mara
11:50 - 1:00	Lunch	
1:00 - 2:15	Engineering Role in Safety	Gary Pfann
2:15 - 2:30	Final Discussion and Dismiss	

#### **NRECA**

# Introduction to Distribution Engineering Program Agenda for Unit B

DAY	TIME		INSTRUCTOR
Tuesday	7:00 - 8:00	November 1, 2016 BREAKFAST Fluno Dining Center	
	8:00 - NOON	<u>SYSTEM PLANNING PART 1</u> - System Planning Overview, Energy & Power Concepts, Engineering Economics and Load Forecasting	Erik Sonju Power system engineering
	NOON - 1:00	LUNCH On your own	
	1:00 - 5:00	<u>SYSTEM PLANNING PART 2</u> - Establishing Planning Criteria, Construction Work Plans, Long Range Plans, System Modeling and Industry Trends	Erik Sonju Power system engineering
Wednesday		November 2, 2016	
,	8:00 - NOON	<u>SYSTEM PROTECTION PART 1</u> - Distribution System Reliability, Fault Current Analysis and Overcurrent Devices	Jeff Triplett POWER SYSTEM ENGINEERING
	NOON - 1:00	LUNCH on your own	
	1:00 - 5:00	<u>SYSTEM PROTECTION PART 2</u> - Coordination Between Overcurrent Devices, Device Selection/Placement, Protection of Distribution Equipment, Performing Sectionalizing / System Protection Studies and Advance Sectionalizing Schemes	Jeff Triplett POWER SYSTEM ENGINEERING
Thursday		November 3, 2016	
	8:00 - 10:00 10:00 - 11:00 11:00 - Noon	DISTRIBUTED ENERGY RESOURCES WORK ORDER INSPECTIONS COMMON POWER QUALITY ISSUES AND SOLUTIONS	Jeff Triplett - PSE Erik Sonju - PSE Erik Sonju - PSE
	NOON - 1:00	LUNCH on your own	
	1:00 - 2:00 2:00 - 4:30	WORK ORDER PROCESSES PLANT ACCOUNTING	Gary Pfann NRECA
	4:30 - 5:00	JOINT USE/POLE ATTACHMENTS	Gary Pfann
Friday	8:00 - Noon	November 4, 2016 GRID MODERNIZATION and COMMUNICATION SYSTEMS	Rick Schmidt Power system engineering
	NOON - 1:00	LUNCH on your own	
	1:00 - 2:00 2:00 - 2:30	REGULATORY ISSUES, ENVIRONMENTAL COMPLIANCE IMPORTANCE OF COMMUNICATION	Gary Pfann

2:30 Adjourn

SCHEDULE NOTES: 1) Breaks will be given in both morning and afternoon sessions and are included in tuition

Wrap up

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#### 2) Adjournment at 2:30 on Friday to facilitate travel home, please schedule accordingly

\* These discussions will be part of your networking opportunity. We will have some prepared materials to direct the discussions but do not intend to have formal presentations on these topics. Please come prepared to ask questions of your peers and provide your experiences for group benefit.



~

Gary Pfann

### Meet Your INTERACT Speakers

**Opening General Session** .....



### Leading at Every Level

#### Alice Dendinger, SPHR, Alice Dendinger Alliance Group

How do you lead, influence or coach from your position when you, or others, may see you as "just an administrator" or "just the HR person"? Leadership can come from every level regardless of your title. As a cooperative employee, no matter your role, you can influence those around you including your peers and your boss. During this General Session, you will learn new approaches to leadership and influence that you can demonstrate without residing at the top of the org chart.

Overall Group Benefits and Retirement Benefits Update

Marty Ahrens, Senior Director Health Management Services, NRECA Jodi Fuller, Vice President Benefits Products and Management, NRECA Laura Schumann, Director, Retirement Product Management, NRECA Roger Wilson, Director, Life Disability and Individual Products, NRECA Get information on group benefit plan enhancements and plan design changes for prescription drug plans, preventive drug coverage, dental and vision plans being implemented for 2016. Hear an update on development of the new RS Plan Administrative Platform, as well as the 401(k) Pension Plan research and redevelopment initiative and potential timetable for rollout.

### Second General Session .....



Legislative Perspective - Recent Successes and Immediate Challenges Chris Stephen, Sr. Associate Director Legislative Affairs, NRECA Seth Perretta, Principal and Co-chair, Health Practice Group, Groom Law Group (Boston) Malcolm Slee, Counsel, Groom Law Group (Denver) Chris Stephen is joined by Seth Perretta and Malcolm Slee, who will share information about

ongoing employee benefit cost challenges including the 2018 Affordable Care Act "Cadillac Tax."



#### Hot Topics in Labor & Employment Law

#### Bert Brannen, Regional Managing Partner, Fisher & Phillips LLP

Cooperatives are under siege with ever-changing rules, regulations and Executive Orders that affect the workplace. This session will cover recent developments coming out of the NLRB, EEOC and the courtroom. Bert will examine evolving case law on employer obligations to grant leaves and accommodations and other issues such as Bring Your Own Devices ("BYOD") to work policies, drug testing and marijuana, LGBT trends, and more.

### Third General Session .....



#### Co-op Workforce

#### Shaara Roman, Senior Vice President, Human Resources, NRECA

As younger people enter the workforce, co-op leaders must understand the changing expectations of talent. Shaara shares how co-ops can get smart talent and drive greater levels of collaboration and engagement inside teams and throughout the organization.



#### Talent {R}evolution: Future-Focused Strategies for Leveraging Human Capital

#### Peter Sheahan, Founder & CEO, ChangeLabs

Hear from Peter Sheahan, internationally known for inspiring innovative business thinking and creating lasting behavior change within organizations. Peter will discuss how co-ops can transform a multi-generational workforce into a magnet of smart and engaged people, develop a culture of recognition and drive engagement.

## Learning Labs Schedule Subject to change

Page 2

O Benefits Track O Human Resources Track

ONE Boston   Tuesday	r, July 14 🌰 Denver   Monday, August 24
	Looking Over the Horizon - NRECA Group Benefit and Retirement Plans
	Making Tax-Advantaged Side Accounts Work for You
10.00 - 11.00 a m	Benefits Compliance
10.00 - 11.00 a.m.	Cultural Transformation - Changing Your Culture from Me to We
	Leading Effective Change: Six Must-Know Strategies for HR Leaders
	HR and Social Media Strategies
	REPEAT: Looking Over the Horizon - NRECA Group Benefit and Retirement Plans
	REPEAT: Making Tax-Advantaged Side Accounts Work for You
11:15 a m - 12:15 n m	NRECA Employee Benefits Website
	Into a New Light: One Co-op's Journey to Excellence
	Auditing HR Policies and Minimizing Risk within Your Organization
	HR, Workforce Development and the Board
	Affordable Care Act (ACA) - Understanding Your Tax Filing Responsibilities
	REPEAT: Benefits Compliance
1:45 – 2:45 p.m.	Why Wellness Matters: Engagement Through Purpose
	Why is This Person Still Working Here?
	The Third Alternative - Dealing with Conflict, Differences and Crisis in Your Organization
DAY TWO Boston   Wednes	day, July 15 💿 Denver   Tuesday, August 25
·	REPEAT: Affordable Care Act (ACA) - Understanding Your Tax Filing Responsibilities
~_^^	REPEAT: Looking Over the Horizon - NRECA Group Benefit and Retirement Plans
10:00 - 11:00 a m	REPEAT: NRECA Employee Benefits Website
	Talent/Workforce Discussion Forum
	Hiring the Right Co-op People and Creating Effective Onboarding Programs
	Avoiding Employment Law Nightmares
	REPEAT: Benefits Compliance
	REPEAT: Making Tax-Advantaged Side Accounts Work for You
11:15 a.m. – 12:15 p.m.	REPEAT: Why Wellness Matters: Engagement Through Purpose
	REPEAT: Talent/Workforce Discussion Forum
	Taking the Drama Out of Bargaining - Dealing with Labor Unions
	REPEAT: Affordable Care Act (ACA) - Understanding Your Tax Filing Responsibilities
	REPEAT: Why Wellness Matters: Engagement Through Purpose
1:45 – 2:45 p m	REPEAT: NRECA Employee Benefits Website
	Talent Management: Creating a Recruiting Plan and Pipeline Development Strategies
	Succession Planning
	HR's Role in Leading Safety Improvements

his Conference is a must for all HR professionals and anyone with HR/benefits responsibilities to stay abreast of the changes in law and best practices in the field. It is too costly NOT to attend and be uninformed of the changing trends and regulations of the profession."

- Louise Meade, VP of Human Resources, Berkeley Electric Cooperative, Inc., Moncks Corner, SC

### Schedule at a Glance Subject to change

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Saturday, July 11 • Friday, Au	igust 21	
, 7:30 – 8:30 a.m.	Pre-conference Registration and Continental Breakfast	
8:30 a.m. – 5:00 p.m.	Pre-conference workshop: SHRM Essentials of HR Management (Day 1 of 2)	
Sunday, July 12 • Saturday,	August 22	
7:30 – 8:30 a.m.	Pre-Conference Registration and Continental Breakfast	
8:30 a.m. – 5:00 p.m.	<ul> <li>Pre-Conference Workshops</li> <li>SHRM Essentials of HR Management (Day 2 of 2)</li> <li>Your Competitive Advantage-The Five Behaviors of a Cohesive Team</li> </ul>	
8:00 a.m. – 12:00 p.m.	<ul> <li>Business and Strategic Planning for HR Professionals Part 1 – Introduction</li> </ul>	
1:00 – 5:00 p.m.	Strategic Planning for HR Professionals Part 2 – Building and Refining the Plan	
6:00 p.m.	Colorado Rockies Baseball Game (Denver only)	
Monday, July 13 • Sunday, A	ugust 23	
7:30 a.m. – 6:00 p.m.	Registration Open	
7:30 – 8:30 a.m.	Community Service Continental Breakfast	
8:30 a.m. – 3:30 p.m.	Community Service Project (Denver ends at 1:30 p.m.)	
5:00 – 6:30 p.m.	Welcome Happy Hour and a ½ and INTERACT Showcase Networking	
Tuesday, July 14 • Monday A	August 24	
7:00 a.m. – 5:00 p.m.	Registration Open	
6:00 – 6:30 a.m.	Wellness Walk	
7:00 – 8:00 a.m.	Eat Smart! Breakfast	
8:00 – 9:30 a.m.	Opening General Session	
9:30 – 10:00 a.m.	Networking Break	
10:00 – 11:00 a.m.	Learning Labs 1	
11:00 – 11:15 a.m.	Networking Break	
11:15 a.m. – 12:15 p.m.	Learning Labs 2	
12:15 – 1:45 p.m.	Lunch on Your Own	
1:45 – 2:45 p.m.	Learning Labs 3	
2:45 – 3:00 p.m.	Networking Break	
3:00 – 4:30 p.m.	General Session 2	
6:00 p.m.	Dine Around Town (optional)	
Wednesday, July 15 • Tuesc	lay, August 25	
7:00 a.m. – 5:00 p.m.	Registration Open	
6:00 – 6:30 a.m.	Wellness Walk	
7:00 – 8:00 a.m.	Eat Smart! Breakfast	
8:00 – 10:00 a.m.	General Session 3	
10:00 – 10:15 a.m.	Networking Break	
10:15 – 11:15 a.m.	Learning Labs 4	
11:15 – 11:30 a.m.	Networking Break	
11:30 a.m. – 12:30 p.m.	Learning Labs 5	
12:30 – 2:00 p.m.	Lunch on Your Own	
2:00 – 3:00 p.m.	Learning Labs 6	·
3:00 – 3:15 p.m.	Networking Break	
3:15 – 4:50 p.m.	Closing General Session	
5:30 - 7:30 p.m.	INTERACT Reception	

#### CONTINUING EDUCATION

Farn continuing education'credits toward certification and/or recertification of your PHR, SPHR and GPHR and CEBS.

Allison Coffey	Page 1
From:	Barbara Rodgers <brodgers@kaec.org></brodgers@kaec.org>
Sent:	Friday, August 07, 2015 9:40 AM
- <b>To:</b>	mraley@mcrecc.coop; 'johnna@shelbyenergy.com'; 'nick@shelbyenergy.com'; mmoore@owenelectric.com; lisabaker@jacksonenergy.com; Allison Coffey; 'bhunt@fme.coop'; 'allisonm@bgenergy.com'; pmitchell@bigrivers.com; tlytle@fme.coop
Cc: Subject:	Mary Beth Dennis; Nancy Ledene; Barbara Rodgers SUPERVISORY CERTIFICATE TRAINING

Attachment 13E

Please pass along the following information to your co-op's attendees at the Supervisory Certificate Training to be held here in Louisville next week. I do not have everyone's email addresses, so it's imperative you pass this along.

#### **TRAINING LOCATION:**

The training will be held at the **Marriott East Hotel**, **1903 Embassy Square Boulevard**, **40299**, in the **Cardinal Room**. (This is the same hotel where the room block is)

#### TIME:

The training will begin at 8:00 a.m. and conclude about 4:00 or 4:30 in each day. Lunch is from 12:00 to 1:00, everyone on their own.

#### **MONDAY – AUGUST 10**

380.05 – Getting Started as a Supervisor 381.05 – Personal Time Management

#### **TUESDAY – AUGUST 11**

382.05 – A Supervisor's Role in Managing Change 383.05 – Improving Your Effectiveness Through Communications

#### WEDNESDAY – AUGUST 12

384.05 – Resolving Conflict Through Negotiation 385.05 – Motivating Employees

#### **THURSDAY – AUGUST 13**

386.05 – The Supervisor and Human Resources 387.05 – Tools for Effective Performance Management

#### **FRIDAY – AUGUST 14**

388.05 – Occupational Health and Safety for Supervisors

FOLLOWING IS THE LIST OF REGISTRANTS: If there are corrections to this list, please let me know right away. There is still room for a few more participants.

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#### BIG RIVERS – Brad Schartung

BLUE GRASS – Craig Morton, Tony Smith, Bobby McCoun; Jamie Conn FLEMING-MASON – Jennifer McRoberts, Tim Pease, Brandon Hunt

CONNECT '16 S	chedule-at-a-Glance - Subject to Change
Tuesday, May 10	
<u>م اینځ کار مار د د ایک میکونک میکونک کار د د میکونک کار د د د د د د د د د د د د د د د د د د د</u>	Registration Open
8:00 am - 12:00 pm	CCC Exam
9:00 am - 1:00 pm	Pre-Conference Workshops
2:00 - 2:45 pm	Newcomer Orientation
2:30 - 3:00 pm	Welcome to Portland Refreshment Break
3:00 - 4:30 pm	Opening General Session
5:00 - 7:00 pm	Spotlight Celebration & Welcome Reception
Vednesday, May 11	
	Registration Open
7:30 - 8:30 am	Breakfast
8:30 - 10:00 am	General Session presented by Touchstone
10:00 - 10:30 am	International Programs
10:30 - 10:50 am	Break
10:50 - 11:50 am	Breakout Sessions
12:00 - 12:15 pm	Espresso Learning Shots
12:15 - 1:45 pm	Lunch on Own
1:45 - 2:45 pm	Breakout Sessions
3:00 - 3:15 pm	Espresso Learning Shots
3:15 - 3:45 pm	Networking Break
3:45 - 4:45 pm	Breakout Sessions
Evening	On Your Own
hursday, May 12	
7:00 am - 5:00 pm	Registration Open
7:00 - 7:45 am	CCC Breakfast Session
7:00 - 8:00 am	Breakfast
8:00 - 8:30 am	Co-op Case Studies (vendor-sponosored sessions)
8:45 - 9:15 am	Co-op Case Studiès (vendor-sponosored sessions)
9:30 - 10:30 am	Breakout Sessions
10:30 - 10:50 am	Break

10:50 am - 12:00 pm	Breakout Sessions	Attachment Pa
12:00 - 1:30 pm	Lunch on Own	
1:30 - 2:30 pm	Peer-to-Peer Potluck Discussion Sessions	
2:30 - 2:50 pm	Break water a strategie te	
2:50 - 4:30 pm	Closing General Session	
6:00 - 9:00 pm	Touchstone Energy <sup>®</sup> Reception	
		updated 3/21/16

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### KENTUCKY CONGRESSIONAL VI: - TUESDAY, FEBRUARY 23 2016

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8:30 AM	Breakfast	HOUSE ROOM: Holiday Inn Capitol-550 C Street, SW	Kirk Johnson Senior Vice President of Government Relations, National Rural Electric Cooperative Association
TIME	LEGISLATOR	LOCATION	INDIVIDUAL DOING INTRODUCTIONS
12:30 p.m.	Congressman (District 6) Andy Barr	Visitors' Center: SVC201	Chris Perry President/CEO, Kentucky Association of Electric Cooperatives
Participating Co-ops: E	Blue Grass, Clark, East Kentucky Powe	er, Inter-County, Jackson, Fleming-Mason	Energy
1:00 p.m.	Senator Rand Paul	Visitors' Center:SVC201	Joe Arnold Vice-President of Strategic Communications Kentucky Association of Electric Cooperatives
All Co-Op Attendees			
1:30 p.m.	Congressman (District 5) Hal Rogers	Rayburn 2406	Joe Arnold Vice-President of Strategic Communications Kentucky Association of Electric Cooperatives
Participating Co-ops: C	Clark, Cumberland Valley, East KY Pow	ver, Fleming-Mason, Jackson. KAEC, Sou	th Kentucky
2:00 p.m.	Congressman (District 3) John Yarmuth	Visitors' Center: SVC201	Chris Perry President/CEO, Kentucky Association of Electric Cooperatives
Participating Co-ops:	EKP, KAEC, Shelby, Salt River		
2:30 p.m.	Congressman (District 4) Thomas Massie	Visitors' Center: SVC201	Mark Stallons President/CEO, Owen Electric
Participating Co-ops: E	Blue Grass, Clark, East Kentucky Powe	er, Fleming-Mason, Grayson, Owen, Shelb	y
3:00 p.m.	Congressman (District 2) Brett Guthrie	Visitors' Center: SVC201	Chase Crigler Director, Community and Government Affairs Kentucky Association of Electric Cooperatives
Participating Co-ops:	Big Rivers, East KY Power, Farmers, I	nter-County, KAEC, Kenergy, Meade, Nol	in, Shelby, Tri-County, TVA, Warren, Salt River
3:15 p.m.	Senator Mitch McConnell	Visitor's Center: SVC201	Chase Crigler Director, Community and Government Affairs Kentucky Association of Electric Cooperatives
All Co-Op Attendees	· · · · · · · · · · · · · · · · · · ·		
3:30 p.m.	Congressman (District 1) Ed Whitfield	Visitors' Center: SVC201	Greg Grissom President/CEO, Pennyrile Electric
Participating Co-ops:	Big Rivers, EKP, Farmers, Inter-Count	y, KAEC, Kenergy, Pennyrile, South KY, 1	ri-County, TVA, Warren, West KY, Gibson EMC

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### TechAdvantag\_ Expo

Your registration for the Annual Meeting includes access to the popular TechAdvantage Expo. Showcasing the latest tools, technologies and services to help increase your co-op's efficiency, the Expo offers a vital source of knowledge and information on current and emerging technology and energy products. Demonstrations and representatives are on hand to address your most critical challenges.

	Monday, February 15	Tuesday, February 16	Wednesday, February 17
EXPO SCHEDULE	Expo Opening Reception 4:30 – 7:00 p.m.	Expo Open 11:30 a.m. – 4:30 p.m. (Lunch available for purchase.)	Expo Open 11:00 a.m. – 2:00 p.m. (Lunch provided at 11:30 a.m.)

#### TechAdvantage® Conference

Attend the Annual Meeting and stay for the TechAdvantage<sup>®</sup> Conference. Special "Annual Meeting and TechPlus" pricing adds Wednesday afternoon and Thursday morning TechAdvantage Conference sessions to your Annual Meeting registration. Don't miss the opportunity to participate in educational sessions covering leading-edge strategies and best practices in science, technology and other industry areas that will benefit Co-op Nation well into the 21<sup>st</sup> century.

	Monday, February 15	Tuesday, February 16	Wednesday, February 17	Thursday, February 18
CONFERENCE SCHEDULE	Pre-Conference Workshops 8:00 a.m. – 5:00 p.m.	Opening General Session 8:00 – 9:20 a.m.	Learning Labs (Session 3) 8:30 – 9:30 a.m.	Learning Labs (Session 6) 9:00 – 10:15 a.m.
		Learning Labs (Session 1) 9:45 – 10:45 a.m.	Learning Labs (Session 4) 9:45 – 10:45 a.m.	Learning Labs (Session 7) 10:30 – 11:30 a.m.
		Learning Labs (Session 2) 11:00 a.m. – Noon	Technovation Sessions 11:30 a.m. – Noon	Closing General Session 11:45 a.m 1:00 p.m.
		Technovation Sessions in Expo 1:45 – 4:15 p.m.	General Session 2:00 – 3:15 p.m.	NOTE: All sessions on Thursday will be located at the
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For complete TechAdvantage Conference & Expo information, visit techadvantage.org.

# **CEO CLOSE-UP SCHEDULE**

(subject to change)

### শাদ্ধrday, January 9 এটি 8:30 a.m. Breakfast

급)(편 8:30 a.m. 표	Breakfast and Registration for Pre-Conference Workshop Participants
දිනු - 10:30 a.m.	360 Assessment for CEOs Overview
₩.30 a.m. – 5:30 p.m.	90-Minute, One-on-One Coaching Sessions for 360 Workshop Participants
Sunday, January 10	
7:00 – 8:00 a.m.	Breakfast and Registration for Pre- Conference Workshop Participants
8:00 a.m. – 3:00 p.m.	Pre-Conference Workshops
9:00 a.m. – 4:00 p.m.	90-Minute, One-on-One Coaching Sessions for 360 Workshop Participants
9:30 a.m.	Good Government Golf Tournament Registration Opens
12:00 p.m.	Good Government Golf Tournament Shotgun Start
1:00 – 6:00 p.m.	CEO Close-Up Registration Open
Monday, January 11	
7:00 a.m. – 5:00 p.m.	<b>Registration Open</b>
7:00 – 8:00 a.m.	Breakfast and Networking with Associate Members and Sponsors
8:00 – 10:00 a.m.	Opening General Session
9:00 a.m. – 3:00 p.m.	Spouses Tour: San Xavier Del Bac & Tubac
10:00 – 10:30 a.m.	Break
10:30 – 11:30 a.m.	Breakout Sessions 1
11:30 a.m. – 1:00 p.m.	CEO Networking Lunch
1:00 – 2:30 p.m.	General Session 2
2:30 – 2:45 p.m.	Break
2:45 – 3:45 p.m.	Breakout Sessions 2
3:45 p.m.	Break
4:00 – 5:00 p.m.	Roundtable Discussion Forums
5:30 – 7:30 p.m.	Reception for CEO Close-Up Attendees, Sneakers and Guests

luesday, January 12	Attachment 13I
7:00 a.m. – 5:00 p.m.	Registration Open Page 1
7:00 - 8:30 a.m.	Breakfast and Networking with Associate Members and Sponsors
8:30 a.m. – 9:45 a.m.	General Session 3
9:45 – 10:00 a.m.	Break
10:00 – 11:00 a.m.	Breakout Sessions 3
11:00 – 11:15 a.m.	Break
11:15 a.m. – 12:15 p.m.	Breakout Sessions 4
12:15 p.m. – 1:45 p.m.	CEO Luncheon
1:45 – 3:15 p.m.	General Session 4
3:15 – 3:30 p.m.	Break
3:30 – 4:30 p.m.	Roundtable Discussion Forums
4:30 p.m.	2015 CEO Close-Up Adjourns
5:30 – 7:00 p.m.	Closing Reception (CEOs, Spouses, Guests, Speakers)
Wednesday, January 13	
7:30 – 8:30 a.m.	Breakfast and Registration for Post- Conference Workshop Participants
8:30 – 10:30 a.m.	360 Assessment for CEOs Overview
10:30 a.m. – 5:30 p.m.	90-Minute, One-on-One Coaching Sessions for 360 Workshop Participants

## Thank You to Our Sponsors

As of October 14, 2015










# **CEO CLOSE-UP SPEAKERS**

More to come! Check Associates.Cooperative.com/CEOCloseUp for updates. Page 2



George Aldridge Leadership Consultant and

*Coach, ICON* Now That You Are the Boss, Are You Still Growing as a Leader?

George Aldridge will offer practical skills and techniques that CEOs can leverage to enhance team productivity and job satisfaction. He will

also lead a 360 Assessment workshop, providing an introspective look at your leadership, focused on strengths to be leveraged and weaknesses to be addressed.



Alice Dendinger SPHR, President, Alice Dendinger Alliance Group Alice Dendinger focuses on strategic management, assisting the leaders, managers, supervisors, and direct reports at

every level to "work better together." Dendinger will lead the "Your Competitive Advantage: The Five Behaviors of a Cohesive Team" pre-conference workshop and a breakout session on working with unions and union negotiations.



Ron Fournier Senior Political Columnist and Editorial Director of National Journal Millennials: Generation Disruption's Influence on Politics, Business, and Culture

In this insightful and entertaining presentation, Ron Fournier will discuss the

political challenges and opportunities of leading in this period of enormous change, explore how new media and Millennials are changing politics and voting trends, and deftly analyze the current political environment.



a "nuts and bolts" session around recruiting and selections to ake the right hiring decisions.

## Leigh Taylor Director of Talent Assessment, FCC Services

Leigh Taylor is responsible for helping cooperatives and the Farm Credit System make good decisions when hiring and growing their talent. She will share her experience recruiting and selections to



Kevin Eikenberry Chief Potential Officer, The Kevin Eikenberry Group With his philosophy "every person and every organization have extraordinary potential," Kevin Eikenberry has been helping organizations

and staff reach their potential since 1993. He will lead the "Making the Transition to Your Role as CEO: a Roadmap for Success" pre-conference workshop and a breakout session on succession planning and building your co-op's leadership pipeline.



"Technology Planning, Decision Making and Leadership: Enhancing Organizational Effectiveness" pre-conference workshop and a breakout session on telecommunications planning and strategy.

Eric Cody President, Cody Energy Group With 35 years of experience with electric utilities, Eric Cody helps utilities manage complex

technology and business changes. Cody will lead the

# Touchstone Energy Cooperative, Inc. Board of Directors Meeting Longfellow Room, Westin Portland Harborview, Portland, Maine July 9-10, 2015

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	AGEN Thursday, Ju	NDA 11y 9, 2015	
			Board Book Corresponding Tab
7:00 AM	Breakfast for Board and Regional Mer	nbers in the Longfellow Ro	om
8:00 AM	<ul> <li>Call to Order</li> <li>Approval of Minutes (Feb. 25-26, 2015; April 20, 2015 &amp; May 26, 2015 Meetings)</li> <li>Approval of Deb Mirasola to fill the vacancy created by Bill Schmidt</li> </ul>	Chair: Steve Rhodes	TAB 1
	ADVISORY C Note: Regional Members are invited for Advisor	OMMITTEE REPORTS and encouraged to attend the or Committee Reports	he morning session
	Standards & Best Practices Staff Liaison: Tim Sullivan	Chair: Greg Keiss	TAB 2
	Cooperative Relations Staff Liaison: Mary McLaury	Chair: Jon Beyer	TAB 3
	Business Development Staff Liaison: Tim Sullivan	Chair: Debbie Rementer	TAB 4
	Energy Solutions Staff Liaison: Alan Shedd	Chair: Jimmy Autry	TAB 5
	Brand Strategies Staff Liaison: Mary Ann Cristiano	Chair: Deb Mirasola	TAB 6
	Regional Member Report	Chair: Lynn Simmons	(No tab; verbal report)
	LUNCH AND AFTER	RNOON SESSION	
12:00 PM 1:00 PM	Joint Luncheon for Board and Regional Members in the Longfellow Room		
12:00 PM 1:00 PM	Budget and Finance Committee Luncheon Meeting Staff liaison: Mary McLaury, Steve Sandberg	Chair: Darryl Shriver	TAB 7
	<ul> <li>Review dues distribution</li> <li>Reforecasting update for 2015: <ul> <li>Mid-year financial report</li> <li>3-year budget forecast</li> <li>Investment fee structure for 2016 and 2017</li> </ul> </li> </ul>		

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1.00.000			
1:00 PM	Report of Chief Operating Officer	Mary McLaury	TAB 8
	Membership Report		
}	<ul> <li>Financial Report</li> </ul>		
	(Reforecasting)		
	• Staffing update		
	• General review of activities		
	since the last board meeting	-	
	Legal Report	Nick Pascale, Counsel	
	Budget and Finance Committee Report	Chair: Darryl Shriver	TAB 9
	Strategic Planning Discussion	· · · · · · · · · · · · · · · · · · ·	TAB 10
	• Strategic plan tune-up		
	• • Mission		
	o. Vision		
	• Strategic initiatives		
	• 2016 strategy and timelines		
	Executive Session on Demand	Chair: Steve Rhodes	
	EVENING - GRG (Business	L DUP DINNER Casual)	
6:00 PM	Meet in Lobby of Westin Hotel	The restaurant is located 2	
6:15 PM	Cocktail Hour	blocks from the hotel	
7:00 PM	Board Dinner at Restaurant 555		

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	/ Frid	AGENDA ay, July 10, 2015	
7:30 AM 8:30 AM	Breakfast in the Longfellow Re	Dom	
8:30 AM	Call to Order	Chair: Steve Rhodes	
	<ul> <li>Finance and Accounting Report</li> <li>Review of NRECA budget timeline</li> </ul>	Steve Sandberg	TAB 11
9:00 AM	Executive Session with BDO to review and accept 2014 Audit report; Approve selection of auditor for 2016.	Chair: Steve Rhodes	
	Continuation of Strategy Discussion		
	<ul> <li>Old Business</li> <li>Board member documents</li> <li>Election of alternates</li> </ul>	Steve Rhodes	TAB 12
	New Business		
	Board Meeting Calendar:		
	Fall Meeting: November 5-6, 2015 Gulf Shores, AL		
	Winter Meeting: • Feb 17-18, 2016 New Orleans, LA		
	Summer Meeting: • 2016 Date & location TBD		
	Adjourn meeting	· · · · · · · · · · · · · · · · · · ·	

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# Monday, April 11 | Courtyard Marriott Dulles Town Center

# 5 - 6:30 p.m. Hospitality

Meet fellow new CFOs attending the orientation in the Bistro area, located on the lobby level of the hotel.

# Tuesday, April 12 | CFC Headquarters

7:20 a.m.	Board Bus at Courtyard Marriott Dulles Town Center for Ride to CFC Headquarters
7:30 a.m.	Continental Breakfast
7:55 a.m.	Welcome and Introductions
	<ul> <li>John Grant, VP, Events and Training, Corporate Relations, CFC</li> </ul>
	<ul> <li>Tracey Steiner, SVP, Education and Training, NRECA</li> </ul>
8 a.m.	Introduction to Your National Organizations
	This is a facilitated discussion with attendees about their challenges as new CFOs. What issues are at the top of your radar screen? What unique challenges are facing your cooperative? The chief executive officers of the national cooperative organizations are eager to listen and respond to your concerns.
	Sheldon C. Petersen, CEO, CFC
	Tim Bryan, CEO, NRTC
	Jeffrey Connor, Interim CEO, NRECA
	Phil Irwin, CEO, Federated Rural Electric Insurance Exchange
	<ul> <li>Moderator: Tracey Steiner, SVP, Education and Training, NRECA</li> </ul>
9:15 a.m.	Break
9:30 a.m.	An Introduction to CFC—Your Finance Cooperative
	[1 CPE Credit, Personal Development]
	Get to know your cooperative finance organization. Meet the CFC executive staff and learn more about how CFC supports the electric cooperative network.
	Sheldon C. Petersen, CEO, CFC
	<ul> <li>John Evans, EVP and COO, CFC</li> </ul>
	Joel Allen, SVP, Members Services, CFC
	<ul> <li>Roberta Aronson, General Counsel &amp; SVP, Legal Services, CFC</li> </ul>
	<ul> <li>John Borak, SVP, Credit Risk Management, CFC</li> </ul>

Brad Captain, SVP, Corporate Relations, CFC

#### Tuesday, April 12, continued | CFC Headquarters

- Graceann Clendenen, SVP, Corporate Services, CFC
- Andrew Don, CFO & SVP, Treasury & Financial Services, CFC
- Steve Kettler, SVP, Strategic Services, CFC
- Steven Lilly, SVP, Special Asset Management, CFC
- Robin Reed, SVP, Loan Operations, CFC
- Greg Starheim, SVP, Business and Industry Development, CFC

#### 10:30 a.m. Your Cooperative's Investment in Safety

#### [1 CPE Credit, Management Advisory Services]

Focusing on safety can help drive overall success at your cooperative. Learn what you as the CFO can do help leadership understand the costs and benefits of its safety programs.

- Bud Branham, Director, Safety and Loss Prevention, Safety Plans & Products, NRECA
- Phil Irwin, CEO, Federated Rural Electric Insurance Exchange

## 11:30 a.m. Networking Lunch and Group Photo in CFC Atrium

## 12:45 p.m. CFC's Loan Products & Services

#### [1 CPE Credit, Finance]

Understand the services that the Member Services Group (MSG) supports, including various forms of loan products, interest rate options, discounts available and patronage capital refunds. Meet your AVP and the rest of the MSG team and learn about the expertise they provide.

- · Joel Allen, SVP, Member Services, CFC
- Dan Cawood, VP, Portfolio Management, Member Services, CFC
- Amy Luongo, VP, Portfolio Management, Member Services, CFC
- David Olah, VP, Portfolio Management, Member Services, CFC
- The MSG Team
- 1:45 p.m. Break

# 2 p.m. CFC's Treasury Services

## [1 CPE Credit, Finance]

Meet the Treasury and Financial Services Group and learn more about CFC Select Notes, CFC Commercial Paper, CFC's Daily Liquidity Fund and other financial and credit products they support. Hear how CFC interacts with the capital markets and short and long-term investors who purchase CFC's debt securities.

- Andrew Don, CFO & SVP, Treasury & Financial Services, CFC
- Bruce MacNeil, VP, Capital Market Funding, Treasury & Financial Services, CFC
- John Suter, VP, Capital Markets Research & Analysis, Treasury & Financial Services, CFC
- . Ling Wang, VP, Capital Market Relations, Treasury & Financial Services, CFC

#### 3 p.m. Break

## 3:15 p.m. CFC's Strategic Services and Corporate Relations Services

#### [1 CPE Credit, Specialized Knowledge and Applications]

Meet the Corporate Relations and Strategic Business Development groups. Learn more about CFC's financial tools, KRTA ratios, education training, regulatory support and where these and other products/services can be located on the CFC website.

- Brad Captain, SVP, Corporate Relations, CFC
- · John Grant, VP, Events & Training, Corporate Relations, CFC
- Kris Jackson, VP, Marketing & Strategic Communications, Corporate Relations, CFC
- Steve Kettler, SVP, Strategic Services, CFC
- Bettina Kimmel, Manager, Financial Analysis Products & Services, Strategic Services, CFC

### 4:45 p.m. Wrap Up and Recap for the Day

Participants will be asked to share key things learned from Day 1.

- 5 p.m. Networking Reception with Heavy Hors d'Oeuvres -CFC Headquarters Tour (Optional)
- 6:30 p.m. Return to Courtyard Marriott Dulles Town Center

# Wednesday, April 13 | NRECA Headquarters

7 a.m.	Board Bus at Courtyard Marriott Dulles Town Center for Ride to NRECA Headquarters
7:40 a.m.	Arrive at NRECA Headquarters/Continental Breakfast
	Welcome and Housekeeping
	<ul> <li>John Grant, VP, Events and Training, Corporate Relations, CFC</li> </ul>
	<ul> <li>Tracey Steiner, SVP, Education and Training, NRECA</li> </ul>
8 a.m.	NRECA: Your Trade Association
	[1 CPE Credit, Personal Development] Learn about NRECA, its operating structure, current issues and initiatives, and the services provided to members.
	<ul> <li>Jeffrey Connor, Interim CEO, NRECA</li> </ul>
	<ul> <li>Jim Bausell, SVP, Communications, NRECA</li> </ul>
	<ul> <li>Veneicia Lockhart, SVP, Finance, NRECA</li> </ul>
	<ul> <li>Martin Lowery, EVP, Member and Association Relations, NRECA</li> </ul>
	<ul> <li>Jim Spiers, VP, Business &amp; Technology Strategies, NRECA</li> </ul>
	<ul> <li>Moderator: Tracey Steiner, SVP, Education and Training, NRECA</li> </ul>
9 a.m.	Break
9:15 a.m.	Workforce Management: Preparing Your Co-op for Talent Transition
	[1 CPE Credit, Personnel/HR] Because your co-op's workforce is arguably its most important tangible asset, effective workforce planning and development should be a critical

asset, effective workforce planning and development should be a critical part of your organizational strategy. As a CFO, your value is linked to your ability to provide strategic insights and manage performance through periods of growth, stagnation and rapid change. This session will cover the NRECA initiatives, tools, resources and employee benefits that will help you and your finance team contribute to your co-op's long-term success.

- Maureen Hamilton, Principal Project Management, Membership & Association Support Services, NRECA
- Michelle Rostom, Director, Member Workforce & Effectiveness, NRECA
- Stephen Sanker, VP, Financial & Field Services, Insurance & Financial Services, NRECA Services, NRECA

## Wednesday, April 13, continued

10:15 a.m.	Break
10:30 a.m.	Tech Trends: Altering the Co-op Consumer Relationship and Expanding Financing Options
	<b>[1.5 CPE Credits, Social Environment of Business]</b> This session explores technology trends and opportunities in the following areas: the emergence of a consumer-centric business model; smart devices getting broader attention; consumer offerings blurring the line between solar, storage and energy services; and the shifting role of electricity. Hear about the trends and financing options that may affect your co-op's financial future.
	<ul> <li>Ed Drew, VP, Utility Solutions, NRTC</li> </ul>
	<ul> <li>Krishna Murthy, VP, Electric and Energy Industry Analysis, Business and Industry Development, CFC</li> </ul>
	<ul> <li>Jim Spiers, VP, Business &amp; Technology Strategies, NRECA</li> </ul>
	<ul> <li>Russ Wasson, Director of Tax, Finance and Accounting Policy, NRECA</li> </ul>
11:45 p.m.	Networking Lunch with NRECA Staff
12:45 p.m.	Accounting and Regulatory Issues
	This session will address the latest finance and accounting changes and regulatory developments affecting electric cooperatives.
	<ul> <li>Krishna Murthy, VP, Electric and Energy Industry Analysis, Business and Industry Development, CFC</li> </ul>
	<ul> <li>Russ Wasson, Director of Tax, Finance and Accounting Policy, NRECA</li> </ul>
1:15 p.m.	Break
1:30 p.m.	CFO Fiduciary Duty and Capital Credit Lawsuits
	<ul> <li>[1 CPE Credit, Business Law]</li> <li>Understanding your duties and responsibilities as a CFO is critical not only in your day-to-day work but also with regards to policies relating to the retirement of capital credits. This session addresses how the law defines a corporate officer's responsibilities as well as recent capital credit class-action lawsuits against electric cooperatives.</li> <li>Roberta Aronson, General Counsel &amp; SVP, Legal Services, CFC</li> <li>Ty Thompson, Chief Member Counsel, NRECA</li> </ul>
2:30 p.m.	Break/ NRECA Building Tour (Optional)

#### Wednesday, April 13, continued

3 p.m.	CFO Roundtables – Successes and Challenges
	[1.5 CPE Credits, Personal Development] This is an informal forum providing the opportunity to share, discuss and question experiences related to the trends and issues of interest to you. Roundtable topics will focus on Leadership and Management, Financial Management Best Practices and Strategies and the "Current Climate" – Operational Issues.
4:30 p.m.	Wrap Up and Recap for the Day
	Participants will be asked to share key things learned from Day 2.
4:45 p.m.	Networking Reception with Heavy Hors d 'Oeuvres
6 p.m.	Board Bus for Tour of Washington Monuments (Optional) or Evening on Your Own
7:30 p.m.	Bus Tour Returns to Courtyard Marriott Dulles Town Center

# Thursday, April 14 | CFC Headquarters

7:20 a.m.	Board Bus at Courtyard Marriott Dulles Town Center for Ride
	to CFC Headquarters

- 7:30 a.m. Continental Breakfast
- 7:55 a.m. Welcome/Housekeeping
  - John Grant, VP, Events and Training, Corporate Relations, CFC
  - Tracey Steiner, SVP, Education and Training, NRECA

### 8 a.m. Meet NRTC

#### [1 CPE Credit, Personal Development]

Get to know your cooperative telecommunications organization. Meet key NRTC representatives and learn more about how NRTC supports the electric cooperative network.

- Ed Drew, VP, Utility Solutions, NRTC
- Chris Martin, VP, Member and Industry Relations, NRTC
- 9 a.m. Break

9:15 a.m.	Executive Session for CFOs
`	This is an opportunity to engage in a frank (and private) dialogue with your peers.
10:15 a.m.	Break
10:30 a.m.	Seasoned CFO Panel Discussion
	[I CPE Credit, Personal Development] This is a forum for an open and frank discussion with four current CFOs from electric cooperatives. Hear from them about what it takes to achieve long-term success as a CFO for an electric cooperative. • Amy Borntrager, CFO, Coles-Moultrie Electric Cooperative, Mattoon, IL • Greg Cook, CFO, Community Electric Cooperative, Windsor, VA • Gary Cripps, COO, Delaware Electric Cooperative, Greenwood, DE • Robert Steele, CFO, Cobb EMC, Marietta, GA • Facilitator: John Grant, VP, Events and Training, Corporate Relations, CFC
11:45 a.m.	Recap and Wrap Up for the Day
	Participants will be asked to share key things learned from Day 3.
12 p.m.	Adjourn

2016 Presentations | NET Conference 2017

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# 2016 Presentations

# Presentations are now available for download.

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Jump to:

- Tuesday
- Wednesday
- Thursday

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# Tuesday, Feb. 2nd

Opening General Session. | 1:00 p.m. -3:00 p.m. # Welcome All

Welcome to NET2016, Your Source for Energy and Information.

Mary McLaury, COO, Touchstone Energy

#### **Resilience: Why Things Bounce Back**

Andrew Zolli | Keynote | Biography

Thought leader Andrew Zolli will relate breakthrough scientific discoveries, pioneering social and ecological innovations and important new approaches to constructing a more resilient world. Learn how this concept of resilience is a powerful lens through which we can assess major issues afresh: from business planning to social development, from urban planning to national energy security - circumstances that affect us aii.

Come prepared to tell us your story of how utilities and businesses can be resilient through practical examples.

# Resilience in the Electric Utility Industry and in our Communities

A panel of cooperative leaders will lead the discussion about industry disruption, technology solutions, economic challenges and how co-ops, companies and communities can become more resilient.

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## Back to Top

Conference Tracks 3:30 p.m. - 4:45 p.m.

The Tech Report. Robotics. 3D printing. Drones.
 Artificial Intelligence. "Future" technologies are here.
 Discover how businesses and people will be impacted.

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2) Grid Security & Cyber Security. Cyber security threats are increasing. Hear from an expert how to identify risks and assess vulnerabilities. Find out how to secure customer data and take steps to protect your personal information.

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3) **Innovative Economic Development.** Economic development is the cornerstone of any vibrant community. Hear innovative ways to attract new businesses and growing industries.

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# Wednesday, Feb. 3rd

General Session II. a.m. 🛗 8:30 a.m. - 10:00

All Electric Future: Keeping America Secure, Strong and Clean Christopher Guith | Keynote

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Hear from Senior V.P. of The U.S. Chamber's Institute and their mission to unify policymakers, regulators, business leaders, and the American public behind a common sense strategy to help keep America secure, prosperous, and clean.

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## Back to Top

Conference Tracks 10:15 a.m. - 11:30 a.m.

4) **The Cutting Edge of Solar**. See how the rise of solar is changing the electric utility business, and take an in-depth look at how two co-ops have evolved their solar programs to turn solar into a co-op advantage.

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5) Making Lemonade from III(d). Can

lemonade be made from new climate rules? Aggressive electrification could be the solution to meeting federal, state and local climate goals. Learn about trends in end-use technologies and promising opportunities to reduce greenhouse gas emissions to meet nationally mandated climate goals.

### **Download Presentation Files**

6) The Tech Report (Repeat). Robotics. 3D printing. Drones. Artificial Intelligence. "Future" technologies are here. Discover how businesses and people will be impacted.

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#### Back to Top

Conference Tracks 1:30 p.m. - 2:45 p.m.

7) **Solar 2.0 - What's Next for Co-ops.** This moderated discussion will probe tomorrow's solar issues from a variety of perspectives. Topics will include: doing business with solar providers, opportunities for C&I members, capturing higher value from solar, how affordable storage and advanced inverters will change the game.

## **Download Presentation Files**

8) **Big Data Management: You've Got the Data, Now Here's How To Use It.** Providing the right kind of data and analytics can build stronger relationships between co-ops and business customers. Learn how to identify trouble spots, and potential savings from co-op case studies and an industry expert.

### **Download Presentation Files**

9) The Wild, Wild West of Drones. Until recently, the idea of utility workers using drone aircraft to inspect and assess power lines wasn't much more than a pie-in-the-sky notion. But with new federal rules being crafted to allow for the business use of drones, electric co-ops are beginning to incorporate this technology into their operations with approval from the government. Learn about the pioneering experience of those engaged in navigating the "wild west" of drone integration into co-op operations.

Download Presentation Files Back to Top General Session III. | 3:30 p.m. - 4:45 p.m.

Crossing the Generational Divide: Unlocking the Power of Generations For Your Strategic Advantage

Curt Steinhorst | Keynote | Biography

There's a generational shift at co-ops and companies across America. This high energy presentation builds upon research and teaches how to successfully cross the generational divide in both the way we communicate and use technology.

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# Thursday, Feb. 4th

Conference Tracks 9:00 a.m. - 10:15 a.m.

10) Energy Procurement in a DG World. C&I customers must weigh the feasibility of entering longterm energy contracts or hedging energy bets. Are co-ops headed to real-time pricing? Will conventional rates prevail? Learn what to expect from the energy marketplace.

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11) The Better from the Best: Shedding the Light on LEDs. Not all LEDs are the same. We've come a long way since the early days of light emitting diodes. In fact, the marketplace is flooded and it's difficult to know which LED advancements live up to their claims. Hear how cooperatives sifted through the options to choose the best solutions for their community.

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12) Have Energy Storage Technologies Reached a Tipping Point? Do falling costs of both solar modules, battery storage, and/or thermal energy storage present a potential tipping point that could encourage huge numbers of homeowners and businesses in the U.S. to go off-grid? What are potential implications for utilities, the national grid and consumers?

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General Session IV. | 10:15 a.m. -

## Powerhouse: Inside the Invention of the Battery to Save the World

Steve Levine | Keynote | Biography

Hear from former New York Times and Wall Street Journal correspondent about his latest book, The Powerhouse, a thrilling account about an innovator's quest to transform our planet and our lives.

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2015 Tax, Finance & Accounting Conference for Cooperatives

NSAC + NRECA = Collaboration Among Cooperatives August 2-5 • Sheraton Denver • Denver, CO Attachment 13M

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# SCHEDULE AT A GLANCE

SUNDAY, AUGUST 2

10:00 a.m. – 5:30 p.m. 1:00 p.m. – 5:00 p.m.

Registration Pre-conference Workshops and User Group Meetings NRECA & NSAC First Timer's Reception

5:30 p.m. – 6:30 p.m.

# MONDAY, AUGUST 3

6:30 a.m. - 5:00 p.m. 7:45 a.m. - 9:00 a.m. 9:10 a.m. - 10:10 a.m. 10:25 a.m. - 11:25 a.m. 11:25 a.m. - 12:45 p.m. 12:45 p.m. - 12:45 p.m. 12:55 p.m. - 2:55 p.m. 3:10 p.m. - 4:10 p.m. 4:20 p.m. - 5:10 p.m. Registration Opening General Session Learning Labs 1 Learning Labs 2 General Session 2 (*Awards Luncheon*) Learning Labs 3 Learning Labs 4 Learning Labs 5 General Session 3 Welcome to Denver Reception *Sponsored by* 

# TUESDAY, AUGUST 4

6:30 a.m. – 5:00 p.m. 8:00 a.m. – 9:15 a.m. 9:25 a.m. – 10:25 a.m. 10:40 a.m. – 11:40 a.m. 11:40 a.m. – 1:15 p.m.

1:15 p.m. – 2:15 p.m. 2:30 p.m. – 3:30 p.m. 3:45 p.m. – 5:00 p.m. 5:30 p.m. – 6:30 p.m. General Session 4 Learning Labs 6 Learning Labs 7 U.S. Economy and Capital Markets Luncheon Sponsored by Learning Labs 8 Learning Labs 9 Expert Panels & Round Table Discussions

NSAC Happy Hour

Registration

# WEDNESDAY, AUGUST 5

6:30 a.m. – Noon 8:00 a.m. – 9:15 a.m. 9:15 a.m. – 10:30 a.m. 10:45 a.m. – 11:45 a.m. 11:45 a.m. – Noon Registration General Session 5 General Session 6 Closing General Session Closing Comments & Late Bird Prizes

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# **Networking Events**

# SUNDAY, AUGUST 2

**NRECA & NSAC** FIRST-TIMER'S RECEPTION 5:30 p.m. - 6:30 p.m. **Governor's Square 9** 

# Y MONDAY, AUGUST 3

WELCOME TO DENVER RECEPTION 6:00 p.m. - 8:00 p.m. Plaza Ballroom D-F Sponsored by COBANK

# TUESDAY, AUG 4

NSAC HAPPY HOUR 5:30 p.m. - 6:30 p.m. **Rock Bottom Brewery** 



WI-FI NETWORK: SHERATON MEETING ROOMS

**PASSWORD:** TFACC

#### CONFERENCE REGISTRATION IS LOCATED IN THE PLAZA FOYER, CONCOURSE LEVEL 0

Sunday, Aug 2: 10:00 a.m. - 5:30 p.m. Monday, Aug 3: 6:30 a.m. - 5:00 p.m. Tuesday, Aug 4: 6:30 a.m. - 5:00 p.m. Wednesday, Aug 5: 6:30 a.m. - Noon

# SESSION KEY

(G) GENERAL SESSION • (E) ELECTRIC TRACK • (T) TAX TRACK (A) ACCOUNTING & AUDITING TRACK • (M) MANAGEMENT TRACK

# SUNDAY, AUGUST 2, 2015

PRE-CONFERENCE WORKSHOPS 1:00 p.m. - 5:00 p.m.

E01 • Internal Controls - Assessing Your Policies and Procedures Steve Dawson, CPA, CFE, President, Dawson Forensic Group Director's Row E

E02 • Basics of Electric Co-op Taxation & Reporting Russ Wasson, CPA, Senior Association Director – Tax, Finance & Accounting Policy, NRECA Directors Row H

E03 • User Group - ATS Darlene Gainus, Chief Administrative Officer, Applied Technology Solutions Plaza 4

E04 • User Group - NISC John Weber, ABS Product Line Manager, NISC; Greg Jahner, Enterprise Solutions Manager, NISC Director's Row J

#### E05 • User Group - SEDC

Thom Sutherland, Director of Learning and Development, SEDC **Plaza 2** 

#### T01 · Basic Subchapter T Cooperative Tax

Erik Krienert, Tax Manager, Illinois Agricultural Auditing Association; David Antoni, Tax Managing Director, KPMG LLP; Dan Nutley, Partner, Moss Adams LLP **Plaza 3** 

A01 • Advanced Agricultural Cooperative Accounting

Bill Erlenbush, Education Director, NSAC; Phil Miller, Assistant Education Director, NSAC Director's Row I M01 · Speed of Trust Randy Nelson, Senior Client Partner, FranklinCovey Plaza 1

# MONDAY, AUGUST 3, 2015

NETWORKING CONTINENTAL BREAKFAST 7:00 a.m. – 7:45 a.m. **Plaza Foyer** 

OPENING GENERAL SESSION 7:45 a.m. – 9:00 a.m

#### G01 · Collaboration: The Cooperative Way



Adam Schwartz, Founder & Principal, The Cooperative Way, DBA CDS Consulting Co-op **Plaza Ballroom A-C** 

LEARNING LABS 1 9:10 a.m. - 10:10 a.m.

E07 • Energy Sector Outlook

Paul McCurley, Acting Director, Energy & Power, NRECA Plaza Ballroom A-C

#### **T02** · Cooperative Joint Ventures

Kevan Acord, PA, Attorney, Bridge Builder Tax & Legal Services P.A.; J. Casner Wheelock, Attorney, Middleton/ Reutlinger

Governor's Square 10

# A02 • The Private Company Council: Why it is Important to Co-ops

Russ Wasson, CPA, Senior Association Director – Tax, Finance & Accounting Policy, NRECA Governor's Square 16

M02 · Megatrends: The Digital Transformation of Row Crop Agriculture and the Implications for Farmers and Retailers

John Power, President & Senior Advisor LSC International, Inc. Governor's Square 17

#### LEARNING LABS 2 10:25 a.m. - 11:25 a.m.

10:25 a.m. - 11:25 a.m.

#### E08 · Is Your Revenue Right?

Robert Cobb, CPA, General Partner, Bolinger, Segars, Gilbert & Moss LLP; Terry Mitchell, CPA, Principal, Jackson Thornton Utilities; Steve Gilliam, CPA, Partner, Adams, Jenkins & Cheatham, P.C. **Governor's Square 15** 

## E09 · A Guide to Strategic Planning

Rod Crile, Regional Vice President, CFC Governor's Square 14

E10 • Current Trends in Inventory Management Mike Prom, CEO, Western United Electric Supply Corporation Governor's Square 12

E11 • Form 7: Overview of the Uniform System of Accounts (USOA) Kim Mikkelsen, President, KW Consulting Governor's Square 11

### T03 · M&A Pre-Acquisition To-Do Items

Eric Krienert, CPA, Moss Adams LLP; Michael Fincher, CPA, Senior Manager, Deloitte Tax LLP; Ivan Saval, Managing Director, Investment Banking Division of INTL FC Stone Securities, Inc. **Governor's Square 10** 

### A03 • Internal Controls - Large Co-ops Tom Foreman, CPA, Crowe Horwath LLP;

Jeff Whiteside, CISSP, Crowe Horwath LLP Governor's Square 16

### M03 • How to Market the Cooperative Difference Adam Schwartz, Founder & Principal, The Cooperative

Way, DBA CDS Consulting Co-op Governor's Square 17

# GENERAL SESSION 2 (AWARDS LUNCHEON)

11:25 a.m. - 12:45 p.m.

G02 · Wired Differently: Putting Cooperative Culture into Practice



Vern Dosch, President and CEO, NISC **Plaza Ballroom D-F** 

LEARNING LABS 3 12:45 p.m. - 1:45 p.m. Attachment 13M

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Governor's Square 15

### E13 · Cash Flow Modeling

Johnny Vaughn, Senior Electric Program Analyst, CFC Governor's Square 14

# E14 • When is a Business Activity Related or Unrelated?

Bill Miller, CPA, Tax Partner, Bolinger, Segars, Gilbert & Moss LLP Governor's Square 12

### E15 · Form 7: Preparing

Kim Mikkelsen, President, KW Consulting Governor's Square 11

#### T04 · M&A Post-Acquisition To-Do Items

Eric Krienert, CPA, Moss Adams LLP; Michael Fincher, CPA, Deloitte Tax LLP; Ivan Saval, Managing Director, Investment Banking Division of INTL FC Stone Securities, Inc. **Governor's Square 10** 

### A04 • Fiduciary Responsibilities & Best Practices in Plan Governance Robert Lavenberg, CPA, JD, LL.M, Partner, BDO Governor's Square 16

M04 · Computing Trends + Technology =

Opportunities? Don Tomoff, MBA, CPA, Director, Invenio Advisors LLC Governor's Square 17

LEARNING LABS 4 1:55 p.m. - 2:55 p.m.

#### E16 - Equity Management - Patronage Capital Redemption Methods & Trends

James Howard Smith, CPA, CEO, The Blue Ridge Consultancy LLC Governor's Square 15

## E17 • Let's Make a Deal - Preparing Your System for New Debt

Peggy Boldissar, Manager, Financial Accounting, Lee County Electric Cooperative **Governor's Square 14** 

#### E18 • Consumer Protection - Payment Card Industry (PCI) Compliance

Greg Jahner, Enterprise Solutions Manager, NISC Governor's Square 12

E19 • Form 7: Analyzing Kim Mikkelsen, President, KW Consulting Governor's Square 11

# **T05** • The Foreign Account Tax Compliance Act (FATCA)

Carrie Parrish, Tax Manager, Sunkist Growers, Inc.; J. Michael Cornett, Principal, KPMG LLP, Washington National Tax; Donald Mittelstadt, Supervisor, Tax Information Reporting & Compliance / Corporate Vendor Compliance, CHS, Inc. **Governor's Square 10** 

# A05 · Patronage – Differences between U.S. and Canada

Jim Halvorsen, Principal, CliftonLarsonAllen LLP; Daphne Rixon, PhD, FCMA, Associate Professor Accounting, Sobey School of Business

Governor's Square 16

# M05 • Do You Know What is in Your Dusty and Out of Date Bylaws?

William Covey, Attorney, Heyl, Royster, Voelker & Allen; Dustin Klinger, Attorney, Thede, Culpepper Moore Munro & Silliman LLP; Todd Hoppe, Attorney, Foster, Swift, Collins & Smith PC Governor's Square 17

**LEARNING LABS 5** 

3:10 p.m. - 4:10 p.m.

E20 • Equity Management - Creating a Policy That's Right for Your System Rod Crile, Regional Vice President, CFC Governor's Square 15 E21 • Let's Make a Deal - A Case Studyage 5 Patrick L. Kanda, Staff Accountant, Grand Valley Rural Power Lines, Inc. Governor's Square 14

E22 • The Arizona Solar Story - A Case Study Barbara Lockwood, GM, Regulatory Affairs and Compliance, Arizona Public Service Governor's Square 12

E23 • Form 7 - Presenting Financials to the Board of Directors Kim Mikkelsen, President, KW Consulting Governor's Square 11

**T06 • Current Cooperative Tax Developments** George Benson, Attorney, McDermott Will & Emery LLP **Governor's Square 10** 

A06 - The New Lease Accounting Standard: The Journey Continues Jeff Dieleman, CPA, Partner, Moss Adams LLP Governor's Square 16

M06 • Dodd-Frank and Beyond: CFTC Regulations and Rules Kevin Natz, Vice President, NCFC Governor's Square 17

GENERAL SESSION 3 4:20 p.m. - 5:10 p.m.

## G03 · FASB Update



Daryl Buck, CPA, Board Member, Financial Accounting Standards Board (FASB) **Plaza Ballroom A-C** 

# Tuesday, August 4, 2015

NETWORKING CONTINENTAL BREAKFAST 6:45 a.m. – 7:45 a.m. **Plaza Foyer** 

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## GENERAL SESSION 4 8:00 a.m. - 9:15 a.m.

G04 • Painting with Numbers: A Different Perspective on the Craft and Art of Presenting Numbers



Randall Bolten, CEO and Author, Painting with Numbers **Plaza Ballroom A-C** 

# **LEARNING LABS 6**

9:25 a.m. - 10:25 a.m.

## E24 · Are You a Target for Litigation?

Ty Thompson, Vice President and Deputy General Counsel – Director & Member Legal Services, NRECA Plaza Ballroom A-C

# **T07** • Section 199 Revisited: Technical Updates and Developments

David Antoni, Tax Managing Director, KPMG LLP; Rebecca Smith, CPA, MST, Tax Director, CliftonLarsonAllen, LLP; Sharon Appelt, Tax Director, Darigold, Inc. **Governor's Square 10** 

A07 • Internal Controls - Small Co-ops Tom Foreman, CPA, Crowe Horwath LLP Governor's Square 16

M07 • Affordable Care Act: What's Next? Deadlines and Developments Tim Goodman, Partner, Dorsey & Whitney LLP Governor's Square 17

LEARNING LABS 7 10:40 a.m. - 11:40 a.m.

E25 · Governance Risk - Defining a Board's Fiduciary Duty to the Members

Don Richards, Partner, Richards, Elder & Green LLP and General Counsel, NTCA Governor's Square 15

### E26 · RUS Accounting Update

Diana Alger, CPA, Chief, Technical Accounting & Auditing Staff, Rural Utilities Service, U.S. Department of Agriculture **Governor's Square 14** 

Attachment 13M E27 • Pension Benefits Update Page 6 Mary Jo Arthur, Senior Principal, Retirement Consulting, NRECA; Steve Sanker, Vice President, I&FS Financial and Field Services, NRECA Governor's Square 12

## E28 · Electric Utility Plant Accounting - Part I

Robert M. Benson, Retired Field Accountant, Rural Utilities Service, U.S. Department of Agriculture **Governor's Square 11** 

## T08 · IC DISC: Update on Tax and

Implementation Issues Conrad Davis, CPA, Parter, Crowe Horwath LLP; John Kelleher, Crowe Horwath LLP Governor's Square 10

A08 The New Lease Accounting Standard: The Journey Continues Jeff Dieleman, CPA, Partner, Moss Adams Governor's Square 16

M08 • The Generational Challenge - How to Attract, Motivate and Lead a Multi-Generational Team Lynn Moore, President, Moore Innovative Solutions

Lynn Moore, President, Moore Innovative Solution: Governor's Square 17

# E29 Update on the U.S. Economy and Capital Markets (Luncheon)

11:40 a.m. - 1:15 p.m.



National Rural Utilities Cooperative Finance Corporation



Sheldon Petersen, Chief Executive Officer, CFC Plaza Ballroom D-F

LEARNING LABS 8 1:15 p.m. - 2:15 p.m.

### E30 · Merger & Acquisition Considerations

Bill Collet, President, Collet & Associates LLC; Craig Lewis, Vice President Corporate Services, Rappahannock Electric Cooperative, Inc.

Governor's Square 15

## E31 · RUS Accounting Update (REPEAT)

Diana Alger, CPA, Chief, Technical Accounting & Auditing Staff, Rural Utilities Service, U.S. Department of Agriculture **Governor's Square 14** 

#### E32 · Health Insurance Plan Updates

Jodi Fuller, Vice President, I&FS Benefit Product Development & Management, NRECA; Steve Sanker, Vice President, I&FS Financial and Field Services, NRECA **Governor's Square 12** 

#### E33 • Electric Utility Plant Accounting - Part II

Robert M. Benson, Retired Field Consultant, Rural Utilities Service, U.S. Department of Agriculture **Governor's Square 11** 

#### T09 • ACA Employer Shared Responsibility Tax Reporting

Tim Goodman, Partner, Dorsey & Whitney LLP; Rebecca Smith, CPA, MST, Tax Director, Clifton Larson Allen **Governor's Square 10** 

#### A09 • Non-Traditional Co-ops

Phil Miller, Assistant Director of Education, NSAC; Nancy McClelland, CPA, Nancy McClelland LLC; Patricia Sterner, COO-Domestic, NCBA CLUSA **Governor's Square 16** 

## M09 • Fiduciary Responsibilities & Best Practices in Plan Governance

Robert Lavenberg, CPA, JD, LL.M Partner, BDO Governor's Square 17

# LEARNING LABS 9

2:30 p.m. - 3:30 p.m.

#### E34 · Current Rate Structures and Trends

Martin J. Blake, Principal, The Prime Group LLC Governor's Square 15

#### E35 • Long Range Forecasting and the RUS Loan Application Process

Edward Moran, General Field Representative, Rural Utilities Service Electric Program, U.S. Department of Agriculture **Governor's Square 14** 

#### E36 • Deferred Compensation Plans

Jodi Fuller, Vice President, I&FS Benefit Product Development & Management, NRECA; Mary Jo Arthur, Senior Principal, Retirement Consulting, NRECA **Governor's Square 12**  Attachment 13M E37 • Electric Utility Plant Depreciation Page 7 Robert M. Benson, Retired Field Consultant, Rural Utilities Service, U.S. Department of Agriculture Governor's Square 11

### T10 • Planning the Use of Non Qualified Dividends and Special Situations

David Antoni, CPA,Tax Managing Director, KPMG LLP; Teresa Castanias, CPA; Sharon Appelt, Tax Director, Darigold, Inc.

Governor's Square 10

#### A10 • Hedge Accounting at Co-ops

Phil Miller, Assistant Director of Education, NSAC Governor's Square 16

#### M10 • The Importance of Cybersecurity

Jan Hertzberg, CISA, CIPP/IT, Director of Technology Risk Services, Baker Tilly Virchow Krause LLP **Governor's Square 17** 

# EXPERT PANELS & ROUNDTABLE DISCUSSIONS

3:45 p.m. - 5:00 p.m.

#### E38 • Stump the Expert Panel: Audit/Rate/Tax/ Consultants

Martin J. Blake, Principal, The Prime Group LLC; Ty Thompson, Vice President and Deputy General Counsel – Director & Member Legal Services, NRECA Governor's Square 15

#### E39 • Stump the Expert Panel: RUS Accounting Compliance

Edward Moran, General Field Representative, Rural Utilities Service Electric Program, U.S. Department of Agriculture; Diana Alger, CPA, Chief Technical Accounting & Auditing Staff, Rural Utilities Service, U.S. Department of Agriculture; Robert M. Benson, Retired Field Consultant, Rural Utilities Service, U.S. Department of Agriculture **Governor's Square 14** 

# E40 • Stump the Expert Panel: Human Resources

Mary Jo Arthur, Senior Principal, Retirement Consulting, NRECA; Steve Sanker, Vice President, I&FS Financial and Field Services, NRECA; Jodi Fuller, Vice President, I&FS Benefit Product Development & Management, NRECA **Governor's Square 12** 

-01

E41 • Stump the Expert Panel: Are You New to the Co-op World? John Parker, CFO, United Power, Inc.; Melissa Wood, Manager of Accounting, First Electric Cooperative Corporation Governor's Square 11

T11 · Large Co-op Roundtable Governor's Square 10

A11 - Small Co-op Roundtable Governor's Square 16

## M11 · Export Markets

Holly Womack, Vice President, Agricultural Export Finance Division, CoBank; Neil Mikulski, International Economist, USDA Foreign Agricultural Service **Governor's Square 17** 

# Wednesday, August 5, 2015

NETWORKING CONTINENTAL BREAKFAST 6:45 a.m. – 7:45 a.m. **Plaza Foyer** 

NSAC ELECTRIC COOPERTATIVE CHAPTER ANNUAL MEETING BREAKFAST Plaza Ballroom D-F GENERAL SESSION 5 8:00 a.m. - 9:15 a.m.

## G05 · Economic Update



Terry Barr, Senior Director of Industry Research, Knowledge Exchange Division, CoBank **Plaza Ballroom A-C** 

GENERAL SESSION 6 9:15 a.m. - 10:30 a.m.

## G06 · Washington Update



Kirk Johnson, Senior Vice President Government Relations, NRECA



Lisa Van Doren, Vice President & Chief of Staff Government Affairs, National Council of Farmer Cooperative **Plaza Ballroom A-C** 

CLOSING GENERAL SESSION 10:45 a.m. - 11:45 a.m.

G07 • Combating Cybercrime, Fraud and ID Theft



Theresa Payton, CEO and President, Fortalice Solutions LLC **Plaza Ballroom A-C** 

# SAVE THE DATE

July 31 – Aug 3, 2016 Grand Hyatt • Washington, DC Attachment 13M Page 8

Attachment 13N Page 1

# 2015 NRECA REGIONAL MEETINGS



THE NEXT GREATEST THING



# SCHEDULE

Attachment 13N Page 2

#### **TUESDAY, OCTOBER 27**

- 7:00 8:00 a.m. Registration — Director Education Promenade Foyer
- 8:00 a.m. 4:00 p.m. Director Courses Some courses are split into two rooms due to the number of attendees.
  - 963.1: Strategic Technologies and Their Impact on the Cooperative Magnolia E & F Rooms
  - 964.1: Communicating the New Energy Landscape Magnolia G & H Rooms
  - 9 2600: Director Duties and Liabilities Magnolia B
- 1:00 5:00 p.m. Registration — Regional Meeting and Voting Delegates Promenade Foyer

4:00 – 5:30 p.m. NISC Regional Meeting and Member Reception Azalea Ballroom A/B

- 4:00 5:30 p.m. SEDC Member Enrichment Meeting Camellia Ballroom B
- 4:00 5:30 p.m. ATS Regional Meeting Camellia Ballroom A

## WEDNESDAY, OCTOBER 28

- 7:30 a.m. 4:30 p.m. Registration — Regional Meeting and Voting Delegates Promenade Foyer
- 7:30 8:30 a.m. CEO Breakfast Camellia Ballroom A



Co-Sponored by NRECA and CFC By invitation only

# **REGIONS 2 AND 3 REGIONAL MEETING**

achment 13N Page 3

#### 8:00 a.m. - 4:30 p.m.

NRECA Insurance and Financial Services Azalea Ballroom B

#### 8:30 - 8:50 a.m.

Region 2 Nominating Committee Meeting Azalea Ballroom A

#### Region 3 Nominating Committee Meeting Camellia Ballroom B

#### 9:00 - 11:30 a.m.

#### FIRST GENERAL SESSION

Beau Rivage Theatre

Robert Occhi, NRECA Mississippi Director presiding

## II Welcome

The Honorable Tate Reeves Lieutenant Governor of Mississippi

#### **II NRECA** President's Address

Mel Coleman, NRECA President and Arkansas Director

### II Current Resolutions Update

Julie Barkemeyer, Senior Principal Legislative Affairs and Counsel, NRECA

Paul Breakman, Associate Director Regulatory Counsel, NRECA

#### **Refreshment Break**

Promenade Foyer



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Exploring the Issues: A Proposed Resolutions Briefing Jessica Healy, Assistant General Counsel NRECA

Montee Wynn, Senior Principal Legislative Affairs and Counsel, NRECA

Non CO<sub>2</sub> Environmental Regulations John Novak, Senior Director Environmental Issues, NRECA

## 3

# SCHEDULE

11:30 a.m. – Noon CFC District Meeting Beau Rivage Theatre



Jimmy LaFoy (Alabama), Overall Chair Mike Campbell (Florida), Overall Secretary-Treasurer

Join Districts 2 and 3 board members for an update on CFC's operations. Elections will be held in both Districts 2 and 3 for the at-large director position. An election will be held for the District 2 directordirector position. An election will be held for the District 3 manager-director position. District 3 voting delegates also will elect a 2016 Nominating Committee

#### Noon - 1:30 p.m.

CFC Luncheon and Address

Magnolia Ballroom

Sheldon Petersen, CEO, CFC

Sponsored by CFC



#### 1:45 – 4:30 p.m. SECOND GENERAL SESSION Beau Rivage Theatre

bedu Alvage medde

William Hart, NRECA South Carolina Director presiding

- The New III(d) Rules Are Here: Now What? Kirk Johnson, Senior Vice President Government Relations, NRECA
- Why Cyber Security Should Be on Your Board Agenda Barry Lawson, Associate Director Power Delivery and Reliability, NRECA

David Revill, Manager, Cyber Security Operations Georgia Transmission Corporation

- Fewer Injuries and a Safer
   Environment for Your Members
   Phil Irwin, President and CEO
   Federated Rural Electric Insurance Exchange
- **II** Director Certificate Presentations

# **REGIONS 2 AND 3 REGIONAL MEETING**

achment 13N Page 5

#### **Refreshment Break**

Promenade Foyer

Sponsored by Hurtado & Associates, Inc.



#### **II** Resolutions Committee Meeting

- Federated Rural Electric Insurance Exchange Director Elections — Region 2
- 5:30 7:00 p.m.

Welcome Reception Magnolia Ballroom Sponsored by CoBank

## COBANK

#### **THURSDAY, OCTOBER 29**

VOTING DELEGATES MUST PICK UP CREDENTIALS AT THE REGISTRATION DESK PRIOR TO THE BUSINESS MEETING.

7:30 a.m. - Noon

Registration — Regional Meeting and Voting Delegates Promenade Foyer

7:30 - 8:30 a.m.

ACRE Breakfast (Tickets \$20)



The Honorable John Tanner, Former Tennessee Congressman

#### 8:00 - 11:00 a.m.

NRECA Insurance and Financial Services Azalea Ballroom B

#### 9:00 – 11:00 a.m.

#### THIRD GENERAL SESSION

Beau Rivage Theatre

Charles "Ed" Short, NRECA Alabama Director presiding

#### Energy on Consumers' Terms: Finding the Fit For Your Co-op Andrew Cotter, Program Manager Business & Technology Strategies, NRECA

Jeff Pratt, President, Green Power Electric Membership Corporation

Mike Cobb, Senior Vice President-Member Services, Marketing & Communications Owen Electric Cooperative



# SCHEDULE

#### A Changing Landscape for Electric Power

Andrew Cotter, Program Manager Business & Technology Strategies, NRECA

Anthony Campbell, President and CEO East Kentucky Power Cooperative

Lisa Johnson, General Manager and CEO Seminole Electric Cooperative

#### **II NRECA Financial Report**

Curtis Wynn, NRECA Secretary-Treasurer and North Carolina Director

#### **Refreshment Break**

Promenade Foyer

11:15 a.m.

#### Region 2 Business Meeting Beau Rivage Theatre

Kelley Smith, Region 2 Executive Committeeperson, presiding

#### Region 3 Business Meeting Magnolia Ballroom

Magnolia Baliroom

Charles "Ed" Short, Region 3 Executive Committeeperson, presiding

#### **Business Meeting Agenda**

- Call to Order
- Adoption of Agenda
- Adoption of Standing Rules
- Approval of Minutes of 2014 Business Meeting
- Report of Nominating Committee
- Election of Regional Members to NRECA Standing Committees
- Consideration of Proposed Resolutions
- New Business

#### Adjourn



## Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

## 14. Refer to Nolin's response to Staff's Third Request, Item 20.b. and Attachment 20A.

a. Explain the benefit of Nolin's ratepayers of these special board meetings.

### **Response:**

On December 18, 2015, the Nolin Board held a special meeting with two (2) employees to hear grievances. This meeting was strictly a personnel matter.

On January 20, 2016, the Nolin Board met again in a special meeting to listen to grievances regarding a personnel issue.

Special board meetings such as those described above are sometimes necessary to conduct the business of the cooperative when the subject matter dictates and when the length of the meeting exceeds the time of the normal monthly board meeting. Nolin's ratepayers benefit from a responsive and available Board of Directors that addresses issues in a timely manner. While special board meetings are avoided when prudent to do so, they are appropriate from time to time; as these expenses are recurring and are reasonably incurred as part of the prudent operation of the cooperative, they should be included for ratemaking purposes.

b. Confirm that the dates of these two meetings were November 21, 2015, and December 14, 2015, and not 2016 as provided in the response. If this cannot be confirmed, provide the dates of these special board meetings.

### Response:

The correct dates for these special board meetings are December 18, 2015, and January 20, 2016. The special meetings held in November and December of 2016 (outside the test year) were mistakenly referenced by Nolin as part its response to Staff's Third Request, Item 2(b).

## Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

15. Refer to Nolin's response to the AG's Second Request, Item 1.b., and the application, Exhibit 12. Explain the increases in estimates for Legal, Advertising, and Other Expenses.

#### **Response:**

Nolin originally underestimated the expense it would incur in connection with this rate case. This was due, in part, to the fact that Nolin has successfully avoided proceedings of this nature in recent years and has rarely sought to increase its rates during the past few decades. Additionally, the complexity of this case and the extensive, detailed information sought by Commission Staff and the Attorney General has required Nolin to seek outside assistance from counsel and consultants. Nolin remains committed to minimizing its rate case expenses and will provide updated expense information in advance of the hearing scheduled in this matter.

## Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Response to Commission Staff's Fourth Data Request

16. Refer to nolin's response to the AG's Second Request, Item 1.c. Receipts indicate that Nolin met with members of Farmers RECC. Explain why this meeting was necessary, why it should be included in Nolin's rate case expense, and the benefit to Nolin's ratepayers.

#### **Response:**

The description of this meeting was incorrectly labeled as a meeting with Farmers RECC. These expenses, shown on page 11 of "Attachment 1C", actually reflect a meeting Nolin held with local farmers in its service territory. Nolin staff, along with its Rate Consultant, facilitated a discussion on how the proposed rate increase would impact these customers and their farms. This expense was necessarily incurred to ensure that Nolin's ratepayers were informed and that their concerns and comments were heard as part of this process.

## Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Commission Staff's Fourth Request for Information

- 17. Refer whether Nolin's response to the AG's Second Request, Item 1.e.
  - a. Explain whether Nolin's employees and consultants are paid wages for time spent on "working lunches".

## **Response**

Nolin RECC's Board Policy #707.0 "Work Hours and Pay for Hourly Employees" (attached hereto as Attachment 17A) states "the standard eight hour workday is from 8:00 a.m. through 5:00 p.m., Monday through Friday, with one unpaid hour allowed for lunch." Nolin pays its hourly employees for all time spent performing work, consistent with state and federal law; whether an hourly employee earns wages during a lunch depends on the situation and work performed, but generally Nolin hourly employees work and are paid based on an eight hour workday. Salaried/exempt employees, of course, are not paid on an hourly basis and thus there is no specific wage paid for "working lunches." With respect to consultants, Nolin generally is not charged and does not pay for time spent at lunches; again, though, the specific facts attendant to a lunch and the degree to which work is performed may justify payment in certain circumstances.

b. Explain whether Nolin has a formal written policy regarding paying for meals for employees and consultants when Nolin business is discussed related to the consultant's visit. If so, provide a copy of this policy.

## **Response**

Nolin RECC's Board Policy #710.0 "Expense Reimbursement" (attached hereto as Attachment 17B) states "the Cooperative will pay for employees' [including consultants'] actual meal expenses if he/she is engaged in the conduct of company business with another person, who is a non-employee of the Cooperative, while in the Cooperative's service area; or such other conditions as approved by management".
## SUBJECT: WORK HOURS & PAY FOR HOURLY EMPLOYEES

### I. <u>PURPOSE</u>:

The Fair Labor Standards Act of 1938, as amended, establishes certain rules and regulations by which businesses are guided in defining their own working rules. The purpose of this policy is to define these rules as they apply to the employees of Nolin Rural Electric Cooperative Corporation.

### II. <u>POLICY</u>:

It shall be the policy of Nolin RECC to establish working rules conforming to all state and federal laws and regulations.

### III. <u>PROVISIONS</u>:

The following working conditions and pay shall apply as stipulated in the provisions of this policy:

- A. <u>Workweek</u>. The official workweek for the computation of pay shall be from 6:00 a.m. on Monday to 7:59 a.m. the following Monday. The standard workweek for most employees is forty (40) hours worked between 8:00 a.m. Monday and 5:00 p.m. Friday. However, certain specialized work assignments may require work schedules which vary from this standard workweek.
- B. <u>Work Day</u>. Management reserves the right to vary the start of the work day because of work needs, storm or weather conditions, or for the work demands of a particular department or employee.
  - 1. For most employees the standard eight (8) hour workday is from 8:00 a.m. through 5:00 p.m., Monday through Friday, with one (1) unpaid hour allowed for lunch and two (2) paid 15 minute breaks.
  - 2. The standard workday for certain positions (i.e. Dispatch) may vary from the above definition because of the special work requirements of those positions.

## C. Overtime Pay for Employees Working Standard 40 Hour Work Week.

- 1. Employees will be paid at the rate of one and one-half times the regular rate for all time worked in excess of forty (40) hours in a workweek. Authorized sick, vacation, and holiday leave taken during a workweek shall be counted as hours worked.
- 2. If an employee is required to work on the day the Cooperative observes as a holiday, he/she will be paid eight (8) hours at regular straight time pay (coded as Holiday Pay), plus time and one-half for the hours actually worked (coded as Overtime).
- 3. If an employee is re-called to work after going home from working a regularly scheduled shift, he/she will be paid time and one-half for the additional hours worked.

## D. Overtime Pay for Employees Working Specialized Work Assignments

- 1. Specialized work assignments (i.e. Dispatch) may vary from a standard forty (40) consecutive hour work week. For hours actually worked on the day the Cooperative observes a holiday, employees on specialized work assignments will be paid as follows:
  - a. Actual hours worked as Overtime (paid at time and one-half).
  - b. Eight (8) hours Holiday Pay (paid at regular rate).

For example, to key in time for an employee working a regularly scheduled twelve (12) hour shift, who works on a holiday, key time in as 12 hours coded Overtime (paid at time and one-half), 8 hours coded Holiday Pay (paid at regular rate).

E. <u>Overtime Approval</u>. Overtime work must be approved in advance by the appropriate supervisor except for emergency line work to restore or maintain service. Overtime emergency work, etc., will be reported to the immediate supervisor for approval and shall also be approved by the appropriate departmental Vice President.

- F. <u>Working Conditions</u>. Every effort will be made to avoid working employees beyond the regular workday. However, maintaining service to members, unanticipated emergency circumstances, or the need to complete work assignments may make it necessary for employees to work beyond the standard eight (8) hour day.
- G. <u>On-Call</u>. Two (2) employees shall, by advance schedule, be designated to be "on-call" from 8:00 a.m. on Monday to 8:00 a.m. the following Monday. The employees will perform on-call duty on a rotating basis, as scheduled. These designated employees will be paid two (2) hours each day, at their respective overtime rate, for each day of the week that they are "on call," regardless of whether or not they were called out. If employees are called out to work they will also be compensated for time worked in excess of the 2 hours, not to exceed 24 hours per day. Policy 727 "Maintenance of Service Outside of Regularly Scheduled Working Hours" shows details of the on-call policy.
- H. <u>Pay Days</u>. Pay vouchers for the first pay period in the month (the 1<sup>st</sup> through the 15<sup>th</sup>) will be given to employees on the day payroll is run. Pay vouchers for the second pay period (the 16<sup>th</sup> through the last day of the month) will be given to employees on the day payroll is run.

## IV. <u>RESPONSIBILITY</u>:

The President/CEO and all Vice Presidents.

This policy supersedes any existing policy that may be in conflict with the provisions of this policy.

Adopted: 10-09-1986 Revised: 02-15-2001 Revised: 07-15-2002 Revised: 06-10-2008 Revised: 03-01-2011 Revised: 11-12-2015 Revised: 10-13-2016

## NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

## BOARD POLICY NO. 710.0

## SUBJECT: EXPENSE REIMBURSEMENT

### I. <u>PURPOSE</u>:

Occasionally Cooperative employees, because of the nature of their jobs or special work assignments, have extra-ordinary personal expenses which can be directly attributed to their job. A Cooperative credit card will be provided to all employees to cover travel related expenses while on Cooperative business. In such cases that a Cooperative credit card is unavailable, employees will be reimbursed for actual reasonable and necessary expenses incurred on behalf of the Cooperative.

### II. <u>POLICY</u>:

It shall be the policy of Nolin Rural Electric Cooperative Corporation to reimburse employees for actual necessary and reasonable expenses incurred on behalf of the Cooperative, according to the provisions of this policy. Employees who travel at Cooperative expense have the responsibility of adhering to corporate policies and assisting in reduction of costs associated with travel. False reimbursement claims are prohibited. Adherence to the best value travel alternative is encouraged, consistent with travel requirements.

#### III. <u>PROVISIONS</u>:

The following special provisions and procedures shall apply to this policy:

### A. Lodging

When an employee is away from home overnight, on approved business for the Cooperative, the Cooperative will pay for actual meeting-related lodging expenses.

## B. <u>Meals</u>

The Cooperative will pay for employees' actual meal expenses if:

- 1. He/she is in a duty status away from the Cooperative's service area.
- 2. He/she is engaged in the conduct of company business with another person, who is a non-employee of the cooperative, while in the Cooperative's service area; or such other conditions as approved by management.

C. <u>Travel</u>

Employees will use company-owned vehicles when conducting business or attending meetings on behalf of the Cooperative. In the event that travel cannot be by company car, employees will be reimbursed travel costs on the following basis:

- 1. When traveling by commercial carrier, the actual cost incurred.
- 2. When traveling by personal automobile, on which the employee pays all expenses, the prevailing mileage rate approved by the Internal Revenue Service for federal income tax purposes will be paid (on the basis of coach-class round trip air fare or actual mileage incurred, whichever is less).
- 3. Employees shall not use personal vehicles unless approved in advance.
- D. <u>Miscellaneous Expense</u>

Employees will be reimbursed actual cost for miscellaneous expenses, or items purchased by them in fulfillment of duty assignments, including local transportation, materials and supplies. If practical, receipts should be submitted for reimbursement, and shall be required for purchases of materials, supplies or equipment.

E. Payment

Payment for expenses incurred will be made only when an itemized voucher with supporting receipts, and approved by the Department Vice President and/or President/CEO, has been submitted to the Administrative and Finance Department.

- F. <u>Spouse Expense</u> Any expenses incurred by an accompanying spouse will be paid by the employee.
- G. The President/CEO is authorized to attend any state, regional, or national meeting or training program at Cooperative expense, if within his judgment, the interests of the Cooperative are furthered thereby and the costs have been budgeted. He (she) shall report monthly to the Board of Directors on the meetings he (she) attends.

Board Policy No. 710, page 3

## IV. <u>RESPONSIBILITY</u>:

The President/CEO and Department Vice Presidents.

This policy supersedes any existing policy which may be in conflict with the provisions of this policy.

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Adopted:10-09-1986Amended:02-15-2001Amended:03-16-2011Amended:04-09-2015Amended:03-2017

18. Refer to Nolin's response to the AG's Second Request, Items 5 and 11, and Staff's First Request, Item 53. Explain where Nolin reviews compensation practices related to health insurance and other benefits. Provide copies of any studies or surveys used.

#### **Response:**

As previously mentioned, Nolin has in place a Compensation Program (wage and salary plan) that has been developed and implemented in conjunction with a third party consultant and consistent with Board Policy. Please see Nolin's Response to Commission Staff's First Request for Information, Item No. 53, including attachments. In addition to the modeling and market information obtained from its consultant, Nolin also engages other cooperatives in discussions concerning compensation practices, including with respect to both wage rates and benefit packages. Nolin also regularly reviews the activities of other utilities before this Commission as it relates to compensation practices, and it maintains familiarity with the local economy and workforce to ensure it remains competitive in the hiring and retention of quality employees.

Question 19 Page 1 of 1 Witness: Michael L. Miller

## Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Commission Staff's Fourth Request for Information

19. Refer to Nolin's response to the AG's Second Request, Item 10. Confirm that Nolin does not conduct formal employee performance evaluations.

## **Response**

Nolin conducts daily evaluations of employees' work performance that are taken into consideration for increases in wages/salaries. Nolin does not presently conduct quarter/semi-annual/annual formal performance evaluations.

## Nolin Rural Electric Cooperative Corporation Case No. 2016-00367 Commission Staff's Fourth Request for Information

20. For each level of health insurance coverage available to Nolin's employees (i.e., single, family, etc.), provide the number of employees covered by Nolin's health insurance plan and the associated premiums for the test year.

## **Response**

The number of employees covered by Nolin's health insurance plan and the associated premiums for the test year are listed below.

COVERAGE TYPE	NUMBER OF	PREMIUM COST
Couple	67	\$383,533.91
EE/Child	16	\$61,697.38
Family	103	\$814,741.06
Single	23	\$55,017.20
TOTALS	209	\$1,314,989,55

21. Explain whether Nolin has any policies or procedures regarding employee repayment of employer-sponsored education or training expenses if an employee leaves the company within a specific period of time after completing the education. If so, provide a copy of this policy.

## **Response:**

Nolin Board Policy #712.0 "Employee Training & Development/Tuition Reimbursement" (Attachment 21A) states "an employee is requested to sign an agreement providing for repayment to the Cooperative educational reimbursement received as follows if he/she voluntarily leaves the employment of the Cooperative within three years after the program".

- a. Within one year 100%
- b. Within two years 75%
- c. Within three years 25%
- d. After three years 0%

# NOLIN RECC APPLICATION FOR TUITION REIMBURSEMENT

DATE:	·		
NAME:			_
DEPT:			
I am (circle one) enro	olled or going to enroll	in the following program of study:	
COURSE:			_
SCHOOL:			_
DATES:			
Estimated registration	and tuition costs per sen	nester:	

I understand that I will be reimbursed under Nolin RECC's Tuition Reimbursement Program as outlined in the Board Policy #712, provided that I am still employed and upon proof of satisfactory completion of each credit or semester.

I understand that if I voluntarily leave the employment of the Cooperative within three (3) years after the class/training program, I will be responsible for providing repayment to the Cooperative a portion of any educational reimbursement received as follows:

- Within one (1) year repay 100%
- Within two (2) years repay 75%
- Within three (3) years repay 25%
- After three (3) years 0% repayment

**Employee Signature** 

## FOR MANAGERIAL USE

Program (circle one) does or does not relate to the applicant's work and expected future with Nolin RECC.

APPROVED: YES NO

Department Manager

Date

Date

President/CEO

Human Resources

Date

#### NOLIN RURAL ELECTRIC COOPERATIVE CORPORATION

#### BOARD POLICY NO. 712.0

#### SUBJECT: EMPLOYEE TRAINING & DEVELOPMENT / TUITION REIMBURSEMENT

#### I. PURPOSE:

It is recognized that the Cooperative cannot continue to function efficiently and develop to meet its consumers' future needs unless it is staffed with well-qualified and highly motivated employees who are continuously developing their technical skills and knowledge. The Cooperative has a stake in the professional and technical development of its employees, and this policy serves to define the amount to which the Cooperative will participate with employees in their training and development.

#### II. POLICY:

It shall be the policy of Nolin Rural Electric Cooperative Corporation to encourage employees to develop their abilities and skills by sharing in the cost of approved training programs, which are related to the employee's present or possible future duties with the Cooperative, according to the provisions of this policy.

#### III. PROVISIONS:

The following provisions and conditions shall apply to this policy:

- A. On-the-job training shall be an integral part of the responsibilities of all management and supervisory personnel. In addition, they should encourage their subordinates to participate in appropriate training programs, which will increase their skills and chances for advancement.
- B. Maximum encouragement will be given to all employees to develop their capacities by off-the-job education and training through attendance at approved schools or study by correspondence courses from recognized and approved institutions.
- C. Employees may be reimbursed the cost of tuition and other fees provided the following conditions are followed:
  - 1. A tuition reimbursement form must be submitted to the Human Resources Manager before starting the course(s) of study.

### Board Policy No. 712.0, page 2

- 2. The course must have a clear and direct relationship to the needs of Nolin and the employee's present or future work assignment.
- Requires that all courses be completed successfully during the assigned semester with a "C" average or better.
- 4. Proper receipts and grades must be submitted to the Human Resources Manager within thirty days after course completion. Reimbursement for tuition and necessary fees consisting of those basic and normal costs charged by the education institution for actual course of instruction including laboratory fees. Non-reimbursable fees include:
  - a. Late registration fees
  - b. Graduation fees
  - c. Special costs
  - d. Books or other course supplies
  - e. All expenses related to uncompleted courses
  - f. All expenses related to courses with less than a "C" average
- 5. Class schedule shall not conflict with work hours.
- D. The Cooperative will pay the cost of attendance at training programs and workshops sponsored by the Kentucky Association of Electric Cooperatives, East Kentucky Power Cooperative and the National Rural Electric Cooperative Association, when attendance has been approved in advance.
- E. The full cost of USDA Correspondence courses or other approved correspondence courses will be paid by the Cooperative, at the time of registration for the course, and then charged against the employee. After the successful completion of the course, the employee will be credited for the full amount of the course. If the employee does not successfully complete the course within the prescribed time period, he/she must reimburse the full amount paid by the Cooperative.
- F. The President/CEO must approve in advance an employee's participation in any training activity if the Cooperative is being asked to pay any or all of the cost.

Board Policy No. 712.0, page 3

. . . . .

- G. An employee may be requested to sign an agreement providing for repayment to the Cooperative educational reimbursement received as follows if he/she voluntarily leaves the employment of the Cooperative within three years after the program.
  - a. Within one (1) year 100%
  - b. Within two (2) years 75%
  - c. Within three (3) years 25%
  - d. After three (3) years 0%

The President/CEO may waive this reimbursement requirement in the event of termination due to health or disability reasons, if warranted.

#### IV. RESPONSIBILITY:

The President/CEO and all Vice Presidents.

This policy supersedes any existing policy, which may in conflict with the provisions of this policy.

Adopted: 05-08-1986 Revised: 02-15-2001 Revised: 01-01-2010 Revised: 03-16-2011

22. Provide an explanation of Nolin's treatment of the undepreciated value of the meters replaced as a result of the AMI meter upgrade approved in Case No. 2014-00436.

### **Response:**

Nolin estimated that by the time the AMI upgrade was complete, that the AMI meters would be 87% depreciated. The net book value of the undepreciated meters would be approximately \$768,000. It was Nolin's opinion there was a sufficient balance in the reserve to absorb the retirement of the original cost of meters as they were retired. To be clear, Nolin did not request or implement a regulatory asset for the meter retirement; as meters were removed from service, the asset account and accumulated depreciation account related to meters was reduced by the same amount.

23. Provide the current status of the meter project to install AMI meters approved in Case 2014-00436. Include percentage of completion, completion date or estimated completion date if it is not complete, total expenditures to date, and the remaining estimated spending to be incurred, if any.

## **Response:**

Nolin's AMI meter project as approved by this Commission in Case 2014-00436 was fully deployed and completed as of July 18, 2016. The total expenditures to date relating to the installation of the AMI meters is \$6,007,447. Nolin does not expect any future expenditures for this project installation.