

MATHIS, RIGGS, PRATHER & RATLIFF, P.S.C.
ATTORNEYS AT LAW
500 MAIN STREET, SUITE 5
SHELBYVILLE, KENTUCKY 40065

C. LEWIS MATHIS, JR.
T. SHERMAN RIGGS
DONALD T. PRATHER
NATHAN T. RIGGS
ERIN R. RATLIFF

TELEPHONE: (502) 633-5220
FAX: (502) 633-0667

E-MAIL donalddtprather@gmail.com

March 24, 2017

Executive Director
Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602

RECEIVED

MAR 24 2017

PUBLIC SERVICE
COMMISSION

Re: Shelby Energy Cooperative PSC Case No. 2016-00434

Gentlepersons:

Please find enclosed the original responses to the Commission's Order "Commission Staff's Second Request for Information to Shelby Energy Cooperative, Inc."

Thank you for your attention to this matter.

Very truly yours,

MATHIS, RIGGS, PRATHER & RATLIFF, P.S.C.

By:



Donald T. Prather



DTP/pm
Enclosures

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

RECEIVED

MAR 24 2017

PUBLIC SERVICE
COMMISSION

In the Matter of Adjustment of Rates)
of Shelby Energy Cooperative, Inc.)

Case No. 2016-00434

APPLICANT'S RESPONSES TO
COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION

The Applicant, Shelby Energy Cooperative, Inc., makes the following responses to the "Commission Staff's Second Request for Information" as follows:

1. The witnesses who are prepared to answer questions concerning each request are Debra J. Martin and James R. Adkins.
2. Debra J. Martin, President & CEO of Shelby Energy Cooperative, Inc., is the person supervising the preparation of the responses on behalf of the Applicant.
3. The responses and exhibits are attached hereto and incorporated by reference herein.

Respectfully submitted,

MATHIS, RIGGS, PRATHER & RATLIFF, P.S.C.

By: Donald T. Prather
Donald T. Prather
500 Main Street, Suite 5
Shelbyville, Kentucky 40065
Phone: (502) 633-5220
Fax: (502) 633-0667
Attorney for Shelby Energy Cooperative, Inc.

By Paula McEllain

The undersigned, Debra J. Martin, as President & CEO of Shelby Energy Cooperative, Inc., being duly sworn, states that the responses herein are true and accurate to the best of my knowledge and belief formed after reasonable inquiry.

Dated: March 24, 2017

SHELBY ENERGY COOPERATIVE, INC.

Debra J. Martin
DEBRA J. MARTIN, PRESIDENT & CEO

Subscribed, sworn to, and acknowledged before me by Debra J. Martin, as President & CEO for Shelby Energy Cooperative, Inc. on behalf of said Corporation this 24th day of March, 2017.

Mary E Federle 520745
Notary Public, Kentucky State at Large

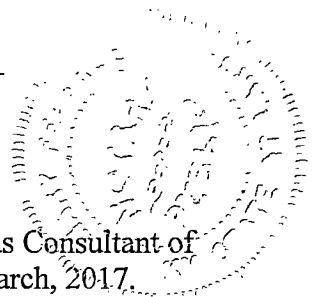
My Commission Expires: 10-7-18

The undersigned, James R. Adkins, as Consultant of Shelby Energy Cooperative, Inc., being duly sworn, states that the responses herein are true and accurate to the best of my knowledge and belief formed after reasonable inquiry.

Dated: March 24, 2017

SHELBY ENERGY COOPERATIVE, INC.

James R Adkins
JAMES R. ADKINS, CONSULTANT
By: Jan Hunt



Subscribed, sworn to, and acknowledged before me by James R. Adkins, as Consultant of Shelby Energy Cooperative, Inc. on behalf of said Corporation this 24th day of March, 2017.

Mary E Federle 520745
Notary Public, Kentucky State at Large

My Commission Expires: 10-7-18

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

1. Refer to the Application, paragraph 18, wherein it states that Shelby Energy's determination of its revenue requirement based on net investment rate base, return on capitalization, interest coverage, debt service coverage or operating ratio, with supporting schedules, is shown in Exhibit K. Also, refer to the response to Commission Staff's First Request for Information ("Staffs First Request"), Items 2 and 3. Provide the other information referenced in paragraph 18 of the Application for the calendar year 2016 when it becomes available.

Response 1.

The Exhibit K has been updated with calendar year 2016 information and is included as part of this response as **Exhibit 2-1**.

Shelby Energy Cooperative

Case No. 2016-00434

Computation of Rate of Return

July 31, 2016

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32

	<u>Actual Test Year</u>	<u>Adjusted Test Year</u>	<u>Calendar Yr 2016</u>
Net margins	\$ 1,387,711	\$ 1,358,314	\$ (582,076)
G&T capital credits	(1,810,069)	-	2,132,164
Interest on long-term debt	<u>1,471,969</u>	<u>1,542,945</u>	<u>1,508,329</u>
Total	<u>\$ 1,049,611</u>	<u>\$ 2,901,259</u>	<u>\$ 3,058,417</u>
Net rate base	<u>\$ 72,272,097</u>	<u>\$ 71,855,405</u>	<u>\$ 74,983,534</u>
Rate of return	<u>1.45%</u>	<u>4.04%</u>	<u>4.08%</u>
Equity Capitalization	<u>\$ 71,505,626</u>	<u>\$ 71,660,858</u>	<u>\$ 74,454,251</u>
Rate of return	<u>1.47%</u>	<u>4.05%</u>	<u>4.11%</u>

Shelby Energy Cooperative
Case No. 2016-00434
Determination of Rate Base
July 31, 2016

	<u>Actual</u> <u>Test Year</u>	<u>Adjusted</u> <u>Test Year</u>	<u>Calendar Yr</u> <u>2016</u>
Gross rate base:			
Total electric plant	\$ 88,843,078	\$ 88,843,078	\$ 90,875,520
Material and supplies (13 months average for test year)	567,913	567,913	567,913
Prepayments (13 months average for test year)	164,245	164,245	164,245
Working capital: 12.5% of operating expense less cost of power	<u>873,319</u>	<u>882,448</u>	<u>910,049</u>
	90,448,555	90,457,684	92,517,727
Deductions from rate base:			
Accumulated depreciation	17,810,020	18,235,841	17,163,110
Consumer advances	<u>366,438</u>	<u>366,438</u>	<u>371,083</u>
Net rate base	<u>\$ 72,272,097</u>	<u>\$ 71,855,405</u>	<u>\$ 74,983,534</u>
	<u>Material</u>	<u>Prepayments</u>	
July	589,490	115,555	
August	580,268	102,996	
September	579,194	164,008	
October	531,996	163,773	
November	463,172	216,988	
December	503,125	198,744	
January	532,345	227,979	
February	525,312	207,403	
March	564,579	188,301	
April	561,871	167,880	
May	598,976	142,872	
June	586,282	125,812	
July	766,261	112,875	
Average	567,913	164,245	

Shelby Energy Cooperative

Case No. 2016-00434

Computation of Rate of Return

July 31, 2016

Calendar Yr	Test Year	Calendar Year					
		1st	2nd	3rd	4th	5th	
2016	2016	2015	2014	2013	2012	2011	
Net margins	1,550,088	\$1,387,711	\$2,340,367	\$3,360,513	\$3,472,375	\$2,443,818	\$2,820,148
Interest on long-term debt	1,508,329	1,471,969	1,570,256	1,659,591	1,719,403	1,762,335	1,838,774
Total	3,058,417	2,859,680	3,910,623	5,020,104	5,191,778	4,206,153	4,658,922
Net rate base	75,104,465	72,272,097	69,969,224	68,522,300	65,560,735	63,914,565	61,215,120

Rate of return4.07%3.96%5.59%7.33%7.92%6.58%7.61%Return excluding G & T
patronage dividends:

Calendar Yr	Test Year	Calendar Year					
		1st	2nd	1st	2nd	3rd	
2016	2016	2015	2014	2013	2012	2011	
Net margins	1,550,088	\$1,387,711	\$2,340,367	\$3,360,513	\$3,472,375	\$2,443,818	\$2,820,148
G & T patronage dividends	2,132,164	1,810,069	1,972,964	2,305,926	2,640,762	2,015,873	2,161,305
Interest on long-term debt	1,508,329	1,471,969	1,570,256	1,659,591	1,719,403	1,762,335	1,838,774
Total	926,253	1,049,611	1,937,659	2,714,178	2,551,016	2,190,280	2,497,617
Net rate base	75,104,465	72,272,097	69,969,224	68,522,300	65,560,735	63,914,565	61,215,120

Rate of return, excluding G & T1.23%1.45%2.77%3.96%3.89%3.43%4.08%

Shelby Energy Cooperative

Case No. 2016-00434

Determination of Rate Base

July 31, 2016

Calendar Yr 2016	Test Year 2016	Calendar Year					
		1st 2015	2nd 2014	3rd 2013	4th 2012	5th 2011	
Gross rate base:							
Total electric plant	90,875,520	\$88,843,078	\$87,093,838	\$84,455,568	\$80,277,981	\$77,709,311	\$74,702,741
Material and supplies (13 mo. ave test)	669,486	567,913	503,125	550,768	429,320	415,446	409,924
Prepayments (13 mo. ave test year)	183,603	164,245	198,744	193,873	191,892	198,886	116,917
Working capital:							
12.5% of operating expense							
less cost of power	910,049	873,319	750,503	709,807	687,192	671,708	667,761
	92,638,658	90,448,555	88,546,210	85,910,016	81,586,385	78,995,351	75,897,343
Deductions from rate base:							
Accumulated depreciation	17,163,110	17,810,020	18,092,639	16,910,364	15,488,662	14,146,239	13,744,717
Consumer advances	371,083	366,438	484,347	477,352	536,988	934,547	937,506
Net rate base	\$75,104,465	\$72,272,097	\$69,969,224	\$68,522,300	\$65,560,735	\$63,914,565	\$61,215,120

Shelby Energy Cooperative
Case No. 2016-00434
TIER and DSC Calculations
July 31, 2016

	<u>Actual</u> <u>Test Year</u>	<u>Adjusted</u> <u>Test Year</u>	<u>Calendar Yr</u> <u>2016</u>
TIER:			
Margins, excluding G&T capital cred	(\$422,358)	\$1,358,314	(\$582,076)
Interest on long term debt	1,471,969	1,542,945	1,508,329
TIER (Margins +Interest) / Interest	0.71	1.88	0.61
DSC:			
Margins, excluding G&T capital cred	(\$422,358)	\$1,358,314	(\$582,076)
Depreciation expense	2,617,512	3,040,004	2,729,386
Interest on long term debt	1,471,969	1,542,945	1,508,329
Principal payment on long term debt	1,599,527	1,599,527	1,794,429
DSC	1.19	1.89	1.11

$$\text{DSC} = \frac{(\text{Margins} + \text{depreciation} + \text{interest})}{(\text{interest} + \text{principal payments})}$$

Shelby Energy Cooperative
Case No. 2016-00434
TIER and DSC Calculations
July 31, 2016

Exhibit 2-1
Format K
page 6 of 7
Witness: James Adkins

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38

Calendar Yr	Calendar Year						
	Test Year	1st	2nd	3rd	4th	5th	
2016	2016	2015	2014	2013	2012	2011	
<u>TIER calculations:</u>							
Margins, excluding G&T capital credits	(582,076)	(422,358)	367,403	1,054,587	831,613	427,945	658,843
Interest on long term debt	1,508,329	1,471,969	1,570,256	1,659,591	1,719,403	1,762,335	1,838,774
TIER, excluding G&T capital cred	0.61	0.71	1.23	1.64	1.48	1.24	1.36
Margins, including G&T capital credits	1,550,088	1,387,711	2,340,367	3,360,513	3,472,375	2,443,818	2,820,148
Interest on long term debt	1,508,329	1,471,969	1,570,256	1,659,591	1,719,403	1,762,335	1,838,774
TIER	2.03	1.94	2.49	3.02	3.02	2.39	2.53
<u>DSC calculations:</u>							
DSC = ((Margins + depreciation + interest) / (interest + principal payments))							
Margins, excluding G&T capital credits	(582,076)	(422,358)	367,403	1,054,587	831,613	427,945	658,843
Depreciation expense	2,729,386	2,617,512	2,474,514	2,332,128	2,516,331	2,270,691	2,159,641
Interest on long term debt	1,508,329	1,471,969	1,570,256	1,659,591	1,719,403	1,762,335	1,838,774
Principal payment on long term debt	1,794,429	1,599,527	1,668,993	1,570,616	1,524,668	1,043,981	1,266,981
DSC, excluding G&T capital credit:	<u>1.11</u>	<u>1.19</u>	<u>1.36</u>	<u>1.56</u>	<u>1.56</u>	<u>1.59</u>	<u>1.50</u>
Margins, including G&T capital credits	1,550,088	1,387,711	2,340,367	3,360,513	3,472,375	2,443,818	2,820,148
Depreciation expense	2,729,386	2,617,512	2,474,514	2,332,128	2,516,331	2,270,691	2,159,641
Interest on long term debt	1,508,329	1,471,969	1,570,256	1,659,591	1,719,403	1,762,335	1,838,774
Principal payment on long term debt	1,794,429	1,599,527	1,668,993	1,570,616	1,524,668	1,043,981	1,266,981
DSC	<u>1.75</u>	<u>1.78</u>	<u>1.97</u>	<u>2.28</u>	<u>2.38</u>	<u>2.31</u>	<u>2.20</u>

Shelby Energy Cooperative
Case No. 2016-00434
Equity Capitalization
July 31, 2016

Exhibit 2-1
Format K
page 7 of 7
Witness: James Adkins

Calendar Yr 2016	Proposed	Test Year 2016	Calendar Year					
			2015	2014	2013	2012	2011	
<u>Equity Capitalization:</u>								
<u>without G&T patronage capital</u>								
Total margins and equities	41,660,396	40,466,245	40,311,013	40,482,423	38,525,785	35,475,435	32,287,180	30,080,783
Less G&T Patronage capital	21,994,666	19,862,502	19,862,502	17,889,538	15,583,612	12,942,850	10,926,977	8,765,672
	19,665,730	20,603,743	20,448,511	22,592,885	22,942,173	22,532,585	21,360,203	21,315,111
Long-term debt	54,066,938	51,057,115	51,057,115	51,861,366	46,930,359	46,500,974	43,025,580	41,280,865
Total	73,732,668	71,660,858	71,505,626	74,454,251	69,872,532	69,033,559	64,385,783	62,595,976
Equity capitalization ratio	<u>27%</u>	<u>29%</u>	<u>29%</u>	<u>30%</u>	<u>33%</u>	<u>33%</u>	<u>33%</u>	<u>34%</u>
<u>Equity Capitalization:</u>								
<u>with G&T patronage capital</u>								
Total margins and equities	41,660,396	40,466,245	40,311,013	40,482,423	38,525,785	35,475,435	32,287,180	30,080,783
Long-term debt	54,066,938	51,057,115	51,057,115	51,861,366	46,930,359	46,500,974	43,025,580	41,280,865
Total	95,727,334	91,523,360	91,368,128	92,343,789	85,456,144	81,976,409	75,312,760	71,361,648
Equity capitalization ratio	<u>44%</u>	<u>44%</u>	<u>44%</u>	<u>44%</u>	<u>45%</u>	<u>43%</u>	<u>43%</u>	<u>42%</u>
<u>Equity to Total Assets:</u>								
<u>with G&T patronage capital</u>								
Total margins and equities	41,660,396	40,466,245	40,311,013	40,482,423	38,525,785	35,475,435	32,287,180	30,080,783
Total assets	105,762,179	100,207,353	100,052,121	99,917,093	96,225,564	90,646,967	86,474,540	80,743,966
Equity to total asset ratio	<u>39%</u>	<u>40%</u>	<u>40%</u>	<u>41%</u>	<u>40%</u>	<u>39%</u>	<u>37%</u>	<u>37%</u>

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

2. Refer to the Application, Exhibit B, pages 1-9. Assuming the Commission approves a three-phase increase, state whether Shelby Energy intends to include the dates the second and third phases become effective in the tariff instead of, or in addition to, using the terms "Year 2" and "Year 3."

Response 2.

It is Shelby Energy's intent to include effective dates in the tariff for the second and third phase instead of using the terms "Year 2" and "Year 3."

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

3. Refer to the Application, Exhibit B, page 7 of 9, and Exhibit C, page 7 of 9, the Prepay Service tariff. The current and proposed tariffs include both a monthly and daily consumer facility charge. State whether Shelby Energy bills the consumer facility charge at the daily rate or at the monthly rate. If Shelby Energy bills at the daily rate, provide the reason for including a monthly rate in the tariff.

Response 3.

Shelby Energy bills the consumer facility charge on the Prepay Service as a daily rate. Shelby Energy includes a monthly rate in the Prepay Service tariff as an easy reference for members and others when reviewing or comparing tariffs.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

4. Refer to the Application, Exhibit D. The demand rates for the Large Industrial Rate Schedules B1 and B2 are currently equivalent. Shelby Energy is proposing that the demand rates be equivalent in proposed Phase 3, but not proposed Phases 1 and 2. State the reason for, or significance of, keeping the rates equivalent and explain why Shelby Energy is not proposing to do so in proposed Phases 1 and 2.

Response 4.

It is Shelby Energy's intent to have the demand rates for Schedules B1 and B2 equivalent at the end of phase 3 and equal to the demand wholesale rate that these two schedules are billed for wholesale power. The phase in amounts are not equal because the amount of increase and the percentage increase proposed for both rate classes are not equal. The phase-in amounts and rate design is based on the approach desired and approved by Shelby Energy's Board of Directors.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

5. Refer to the Application, Exhibit H-1, the Direct Testimony of Debra J. Martin ("Martin Testimony"), page 2 of 5, which states, "The cooperative must also maintain financial stability and integrity in order to meet its loan covenants and requirements with the Rural Utilities Service and the National Rural Utilities Cooperative Finance Corporation."

a. State whether Shelby Energy is compliant with its Times Interest Earned Ratio ("TIER") and Operating Times Interest Earned Ratio ("OTIER") requirements with respect to its mortgage covenants.

b. Provide any correspondence that Shelby Energy has had with respect to its TIER and OTIER mortgage covenants from January 1, 2013, through the present. Consider this an ongoing request throughout this proceeding.

c. Provide the formula that Rural Utilities Service "(RUS)" utilizes for computing OTIER.

d. Provide the proposed increase amounts for each rate class and each class's contribution to TIER and OTIER before and after the proposed rate increases.

Response 5a.

As of the end of 2016, Shelby Energy is compliant with its TIER and OTIER with respect to its mortgage covenants.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 5b.

With respect to its TIER and OTIER Shelby Energy has had no correspondence from January 1, 2013, through the present. Shelby Energy will make available to the PSC any future correspondence that takes place during this proceeding.

Response 5c.

RUS calculates OTIER as:

$$\text{OTIER} = \frac{\text{A} + \text{B}}{\text{A}}$$

A=Interest Expense on Long-Term Debt

B=Operating Margins plus cash received from the retirement of patronage capital by suppliers of electric power and by lenders for credit extended for the electric system.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 5d.

Refer to **Exhibit 2-5d** which is included as part of this response.

Shelby Energy Cooperative
Case No. 2016-00434

Second Data Request of Commission Staff

Rate Class	Increase Amounts				Before Increase		After Increase	
	Phase 1	Phase 2	Phase 3	Total	TIER	OTIER	TIER	OTIER
	Residential - Rate 12	\$ 674,960	\$ 238,810	\$ 236,859	\$ 1,150,629	.07	(0.61)	1.29
Off-Peak Marketing Rate (ETS)	\$ 248	\$ 81	\$ 84	\$ 413	0.76	0.76	0.78	0.78
Prepay Service - 15	\$ 59,887	\$ 11,830	\$ 11,520	\$ 83,237	0.73	0.24	0.97	0.77
General Service - 11	\$ 172,189	\$ 57,443	\$ 57,373	\$ 287,005	(2.32)	(3.49)	0.59	(0.58)
Large Power Service - 2	\$ 40,301	\$ 41,592	\$ 39,924	\$ 121,817	(0.71)	(0.73)	0.75	0.75
Large Industrial - B1	\$ 81,175	\$ 85,349	\$ 85,100	\$ 251,624	7.21	7.21	9.03	9.03
Large Industrial - B2	\$ 36,041	\$ 11,915	\$ 12,551	\$ 60,507	1.74	1.74	2.96	2.96
Outdoor/Street Lights - 3/3L	\$ 24,833	\$ 9,356	\$ 8,125	\$ 42,314	(1.01)	(1.01)	(0.18)	(0.18)
	\$ 1,089,634	\$ 456,376	\$ 451,536	\$ 1,997,546	0.58	0.07	1.88	1.37

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

6. Refer to the Martin Testimony at page 2 of 5. Also, refer to Schedule K, page 5. Explain the discrepancy in the OTIERs that are listed in each exhibit and provide corrections as necessary.

Response 6.

The OTIER referred to on Page 2 of 5 of Martin’s Testimony was obtained from Exhibit S of the application. The calculation to determine OTIER is included on line 49. The TIER included in Exhibit K excludes the G&T capital credit allocations. OTIER includes cash received from patronage capital from lenders.

Provided below is a table which provides the TIER and OTIER calculations for this application. A revised Page 5 of 7 for Exhibit K is included with this response as **Exhibit 2-6.**

Calculation of TIER and OTIER		
	TIER	OTIER
Actual test year with GTCCs	1.94	0.66
Actual test year without GTCCs	0.71	0.66
Adjusted test year	1.88	1.82

Shelby Energy Cooperative
Case No. 2016-00434
TIER & DSC Calculations
July 31, 2016

	Actual Test Year	Adjusted Test Year
TIER		
Margins , excluding G&T capital credits	\$ (422,357)	\$ 1,350,238
Interest on long term debt	1,471,969	1,542,945
TIER <i>(Margins + Interest)/ Interest</i>	0.71	1.88
DSC		
Margins, excluding G&T capital credits	\$ (422,357)	\$ 1,350,238
Depreciation expense	2,612,512	3,040,004
Interest on long term debt	1,471,969	1,542,945
Principal payment on long term debt	1,343,678	1,343,678
DSC <i>(Margins + depreciation + inteest)/ (interest + principal payments)</i>	1.30	2.06

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

7. Refer to the Martin Testimony, page 3 of 5, and the Application, Exhibit 6, regarding vegetation management.

a. Provide a copy of Shelby Energy's vegetation management plan.

b. In the format as listed in the adjustment to normalize the right-of-way expense in Exhibit 6, page 1, provide the vegetation-maintenance expense for each of the five calendar years 2012-2016.

c. For each of the five calendar years 2012-2016, provide Shelby Energy's system average interruption duration index ("SAIDI"), system average interruption frequency index ("SAIFI") and the customer average interruption duration index ("CAIDI").

Response 7a.

A copy of Shelby Energy's *Vegetation Management Plan* is included as part of this response as **Exhibit 2-7a**.

Response 7b.

Refer to **Exhibit 2-7b**, which is included as a part of this response.

Response 7c.

Refer to **Exhibit 2-7c**, which is included as part of this response.

Shelby Energy Cooperative, Inc.
Operations & Engineering Department
620 Old Finchville Rd
Shelbyville KY, 40065
502-633-4420

VEGETATION MANAGEMENT PLAN
GUIDELINES, METHODS
AND PROCEDURES

January 19th, 2017

TABLE OF CONTENTS

<u>Item</u>	<u>Description</u>	<u>Page</u>
1.0	<u>Definitions</u>	3
2.0	<u>Bidder's Qualifications</u>	4
3.0	<u>Instructions to Bidders</u>	4
4.0	<u>Introduction: Guidelines and Evaluation Methods</u>	6
5.0	<u>General Requirements</u>	7
6.0	<u>Work</u>	9
7.0	<u>Notification/Authorization to Trim or Remove Trees</u>	10
8.0	<u>Right of Way Clearing/Re-clearing Requirements</u>	11
9.0	<u>Options for Refusals/Reluctance to Yield Right-of-Way</u>	13
10.0	<u>Use of Chemicals and Sprays</u>	14
11.0	<u>Safety to Employees and the Public</u>	16
12.0	<u>Work Assignments</u>	17
13.0	<u>Supervision of Work and Workmanship</u>	18
14.0	<u>Contractor Caused Outages</u>	19
15.0	<u>Payment for Work</u>	20
16.0	<u>Indemnification</u>	20
17.0	<u>Hold Harmless</u>	21
18.0	<u>Independent Contractor</u>	21

Section 1.0 Definitions

- A. "SEC" shall mean Shelby Energy Cooperative.
- B. "Contractor" shall mean the successful Bidder to whom a Contract is awarded.
- C. "Work" shall refer to everything agreed to be done and furnished by the Contractor including all supervision, supplies, labor, transportation and equipment together with all responsibilities and obligations imposed by the Contract Documents.
- D. "Equipment" shall mean the trucks, trailers, tools, saws, and other apparatus which are owned and operated by the Contractor and which are required to be maintained by the Contractor for the performance of the Contract in accordance with the Specifications.
- E. "Specifications" shall mean all specifications pertaining to the Work to be performed.
- F. "Contract" shall mean the fully executed document which binds the interested parties in an agreement to fulfill all terms, conditions, and specifications.
- G. "Invitation for Bids" shall be the means by which SEC solicits bids from Pre-Qualified Contractors for Work which SEC may from time to time deem necessary to have performed.
- H. "Install", "Furnish", "Provide", or words of like import shall mean the Contractor shall install, furnish, or provide, and similarly the words "Approved", "Authorized", "Required", "Satisfactory", "Acceptable", or words of like import shall mean, as applicable, approved by, authorized by, required by, satisfactory to, or acceptable to SEC, unless otherwise expressly stated.
- I. "Prequalified Contractor" shall mean a contractor who is determined by SEC to be eligible to bid on the Work, subject to any of SEC's conditions, but such status shall not imply or infer compliance with any of the requirements of the Contract, Specifications or other Contract Documents.
- J. "Tree" shall mean any woody vegetation with a DBH (Diameter at Breast Height) of 4 inches or greater.
- K. "Brush" shall mean any vegetation with a DBH of less than 4 inches.

Section 2.0 Bidder's Qualifications

- 2.1 Bids will be accepted only from well established and qualified licensed contractors, trained and experienced in the clearing of power line rights of way and tree trimming that have been approved by SEC as a Pre-Qualified Contractor. No bid will be considered from any Contractor unless they are known to be skilled and were previously engaged in work of a character and scope consistent with these bid specifications.
- 2.2 Bidders must show that their equipment and facilities are sufficient and their workload so arranged as to meet the schedules called for by the Contract without the use of subcontractors. In order to aid SEC in determining the responsibility of any Bidder, the Bidder shall furnish evidence, satisfactory to SEC, of the Bidder's qualifications, experience and familiarity with work of the character specified and his or her financial ability to properly prosecute the proposed work to completion.
- 2.3 Unless previously approved, each Bidder shall submit to SEC a Contractor's Prequalification Application Form, available at SEC's office, and must be subsequently approved by SEC as a Pre-Qualified Contractor in order to receive a formal Invitation to Bid. SEC will only accept bids from Bidders who have been approved by SEC as a Pre-Qualified Contractor.

Section 3.0 Instructions to Bidders

- 3.1 Bids that are sent by U.S. Postal Service or private carrier shall be clearly marked "**BID ENVELOPE ENCLOSED**". The bid shall be sealed in a separate envelope and shall have the following information shown on the outside of the envelope:

BID FOR: Power Line Right of Way Clearance and Tree Trimming

BID DUE: TBD

OWNER: Shelby Energy Cooperative, Inc.

BIDDER: _____

Envelope must be addressed and submitted to:

Shelby Energy Cooperative
Attn: Supervisor, Field Support Services
620 Old Finchville Rd
Shelbyville, KY 40065

Any bid not conforming to these requirements will not be considered.

- 3.2 Before submitting a bid, each Bidder must (a) examine the Contract Documents

- thoroughly, (b) visit the system to become familiar with local conditions, that may in any manner, affect cost, progress, or performance of the work, (c) have knowledge of all federal, state and local laws, ordinances, rules and regulations affecting performance of the work, and (d) carefully correlate the Bidder's observations with the requirements of the Contract Documents.
- 3.3 Each bid shall be carefully prepared in accordance with the SEC Specifications referenced in the Contract Documents.
 - 3.4 Each bid shall be signed by a representative of the Bidder who is authorized to make contractual obligations for the Bidder and shall give the Bidder's full business address. Bids by partnerships shall be signed with the partnership name followed by the signature and designation of one of the partners or other authorized representative.
 - 3.5 Bids by a corporation shall be signed in the name of the corporation, followed by the signature and designation of the president, secretary, or other person authorized to bind the corporation. The name of all persons signing shall also be typed or printed.
 - 3.6 Sealed bids will be opened in private the day the bids are due. Contractors will be notified of any awarded work after Board approval.
 - 3.7 SEC reserves the right to reject any and all bids, waive any and all technicalities therein, disregard all nonconforming or conditional bids, and evaluate and award bids on other than a low bid basis. By submission of a bid, Bidder thereby agrees to these stipulations and will not challenge SEC's decisions.
 - 3.8 SEC may conduct such investigations as it deems prudent to establish the responsibility, qualifications, and financial ability of the Bidders. SEC's final selection of the best overall bid submitted, as determined solely by SEC, shall be based upon factors such as: financial stability of bidder; personnel experience and training; surveys of current and previous employers and previous work history with SEC; overall quality of equipment and organization; ability to adequately serve SEC with full coverage, customer responsiveness and complaint processing; employee safety training, safety compliance and procedures, including drug-free workforce initiatives, etc.
 - 3.9 When the Contract is awarded, SEC will provide the successful Bidder written notice of award after its Board of Directors meeting and final approval is obtained.
 - 3.10 SEC may elect during the term of this Contract to award one (1) or more additional contracts for rights of way clearance and tree trimming via alternative contractual arrangements such as hourly rates, unit cutting, zone clearing, or lump sum cost for circuit trimming. Nothing contained herein shall be construed as

prohibiting SEC from awarding such additional contracts as it deems necessary for the continued safe operation and maintenance of its electric distribution system.

3.11 The term of the agreement will be decided upon and documented in the contract.

Section 4.0 Introduction: Guidelines and Evaluation Methods

In order to maintain line clearance for public safety and electrical reliability, SEC regularly undertakes tree trimming and herbicide activities. These activities are required in order to be compliant with NESC, as well as Kentucky Revised Statute, and guidelines promulgated by OSHA. This guide details the methods and guidelines which SEC uses to accomplish that goal.

Goal:

The goal of our right-of-way clearance program is to maintain line clearance for public safety and electric system reliability.

Strategy:

The strategy for clearing and maintaining line clearance is to arrange the entire system in operable units, defined by individual circuits or substations, and to operate line clearance activities on those units in a regular and scheduled manner.

Tactics:

The tactics involved are detailed in the following Guidelines. At the development stage of SEC's vegetation management plan, circuits were prioritized on the basis of last available date of trimming, and vegetation conditions found by onsite circuit inspections which occur periodically throughout the year as a part of normal activities to determine circuit condition. Reliability, measured by the number of tree related outages expressed on a per circuit mile basis was further used to identify circuits which should be cleared the soonest, with the highest going first and so on. Circuit outages due to trees are regularly reviewed to determine if any adjustment of the trimming cycle to address changing conditions on the circuit is warranted. Onsite inspection further allows adjustment of these time frames should extraordinary circumstances warrant such an adjustment. Examples of such circumstances are: insect infestation damage (Southern Pine Beetle, Emerald Ash Bore, etc), heavy forest fire damage which will result in tree losses throughout the circuit, or weather related instances.

The effectiveness of the plan is evaluated by the reduction of the frequency of tree related outages, and the duration of tree related outages on the treated circuit. This is monitored by the contribution of tree related outages to both customer and system average interruption indices (SAIDI, SAIFI, and CAIDI). Reports

generated by the dispatch Outage Management System (OMS) identify these circuits and the nature and frequency of outages.

SEC conducts clearing activity in each circuit feeder to one full circuit clearing, encompassing floor, side and shade tree trimming (ground to sky 30' wide) each five-year circuit cycle. Circuits and new construction units are then scheduled for chemical treatment to reduce floor vegetation. Below is an example of a typical 5-year circuit cycle:

- Year 1; the circuit will receive the first cutting and clearing of vegetation
- Year 2; the circuit will receive the first spraying of herbicide, after allowing approximately 1 year of growth to better control future development of vegetation
- Year 3; no cutting, clearing or spraying will be performed on the circuit
- Year 4; the circuit will receive the second spraying of herbicide, as needed.
- Year 5; no cutting, clearing or spraying will be performed on the circuit except for yard-tree trimming, as necessary
- Year 6; the circuit receives the next cutting and clearing of vegetation to maintain the 5-year circuit cycle.

Section 5.0 General Requirements

- 5.1 Bidders bidding on herbicide treatment work shall be trained and licensed in the handling and use of chemicals and sprays, and shall furnish evidence of the same, for foliage, basal, and tree stump applications. Evidence shall include, without being limited to, the Bidder's Commercial Applicator's License Number certified in Category 6 - Right of Way from the Kentucky Department of Agriculture.
- 5.2 If a Contractor utilizes a non-English speaking work force they shall have a general foreman capable of communicating with their employees and SEC members. At least one member of every crew, ideally the working foreman shall be capable of speaking fluent English in order to answer any questions a landowner or a representative of SEC may have.
- 5.3 A contract crew shall consist of all necessary personnel and all necessary tools and equipment as outlined in the Contractor's Pre-Qualification Application Form, to safely and efficiently complete the work. SEC reserves the right to do any Work covered within this Contract by its own forces, to have such Work performed by other contractors, to cause such Work to be completed by other means, or to defer any Work to a future date.
- 5.4 Since Contractor(s) employees come in contact with SEC customers, they shall be completely dressed in suitable clothing which shall be clean at the beginning of each day. All clothing worn by contracting employees must conform to arc flash regulations as required by law if working within the minimum approach distance.

Each crew shall have a cell phone or some other method of communication that SEC can use to contact them at all times. In the case of cell phones, the phone numbers shall be given to SEC's Supervisor, Field Support Services and said phone numbers kept current.

The number and type of personnel and equipment making up each crew shall be agreed upon by the owner. The contractor understands and accepts the fact that the owner reserves the right to terminate the contract for any reason at any time and that there is no guarantee of any specific types or amounts of work.

Identification badges or other forms of identification which display the Company's name, contact information, position, etc. are required and must be shown to the customer upon request.

- 5.5 All trucks and other vehicles provided by the Contractor to perform the Work shall bear the Contractor's number and shall be well marked and identified with company insignia or name designating the vehicles as property of the Contractor and have "Contractor for Shelby Energy" magnets in place.
- 5.6 Contractor shall observe all generally recognized safety rules (including without limitation the provisions of the National Electrical Safety Code and ANSI Z133.1 - 2000 or latest edition thereof), regulations, and methods to prevent injury to all employees and other persons or damage to property of SEC or the public arising from its operations. Contractor shall observe all laws and regulations applicable to its operations including without limitation OSHA requirements, Kentucky Department of Transportation requirements, and Kentucky Department of Agriculture requirements.
- 5.7 Contractor shall secure from SEC information as to the nature of the electric circuits involved in all cases prior to commencement of Work in each area. Contractor acknowledges that SEC's electric circuits are to continue in normal operation during this Work, and Contractor shall provide and use all protective equipment necessary for the protection of its employees and to guard against interfering with the normal operation of these electric circuits. If a line is interrupted or damaged caused by work from this operation the Contractor will be responsible for cost of repairing and restoring that line.
- 5.8 Contractor shall immediately notify SEC of any irregular situations observed on SEC's system, including, without limitation, equipment or facility malfunctions, actual or potential safety problems, loose or sagging guy wires, damaged conductors, leaking transformers, damaged or defective poles, and any other seemingly unusual circumstance encountered by the Contractor.
- 5.9 If, during the term of the Contract, additional hourly crews or workers are needed to perform right of way clearing, tree trimming, chemical applications, SEC will first request such crews or workers from the Contractor then working for SEC. Should the Contractor fail to furnish additional crews or workers upon thirty (30)

days written notice, SEC shall have the right to obtain additional crews or workers from other resources.

- 5.10 Contractor shall promote a drug and alcohol free working environment.
- 5.11 Contractor(s) shall not perform or solicit any type of private tree trimming work on customer's property while actively engaged in performing work for SEC under this contract until all work on the circuit is completed.

Section 6.0 Work

- 6.1 Contractor shall perform all Work to the complete satisfaction of SEC and in accordance with all municipal, county, state and other local laws, ordinances, and regulations applicable to Work of this character and nature. All Work performed by the Contractor is subject to inspection and approval by SEC. Any Work not meeting the minimums as set forth in these Specifications, or generally accepted line clearance standards, or Work which has been falsely represented in any fashion by Contractor shall be redone by the Contractor at no (zero) cost to SEC. Failure by SEC to inspect Contractor's Work shall in no way relieve the Contractor from any obligations, liabilities, or responsibilities in connection with the Contract.
- 6.2 Contractor agrees to provide adequate notice and if possible, obtain consent, for the necessary work from the property owner or public authorities having ownership or control over each tree to be trimmed or removed and/or all property to be cleared or sprayed. Contractor shall discuss with the property owner the type of work to be performed, identifying any and all trees that need to be trimmed or removed, the disposal of brush, any areas that need to be sprayed, and the proposed route of all vehicles and equipment traveling over the owner's property. When property owners cannot be contacted, door hangers shall be left to inform them that Contractor was present to trim trees. Hangers (provided by SEC) shall contain information as Company Name, Phone Number, etc. Whenever permission to do any work cannot be obtained, SEC shall be informed of the situation.
- 6.3 Contractor shall certify that complaints of any nature received from property owners or public authorities resulting from this Work will receive immediate attention and that all efforts will be made to effect a prompt adjustment. If any damage is done to the property of others by Contractor's workforce, Contractor shall repair and restore at its sole expense any such property and correct any damage inflicted thereto, all to the complete satisfaction of the owner(s) of the injured property. All complaints, and any action taken by Contractor in connection with such complaints, shall be reported to SEC. If the repairs are not made in a timely manner SEC will make the repairs and invoice the said contractor.

- 6.4 Contractor shall secure all permits and licenses necessary for the Work to be performed and pay all charges and fees required for such permits and licenses.
- 6.5 Contractor(s) shall provide sufficient crews to complete the work in the specified time period. However, SEC expects that after work has begun on specified circuits, the Contractor's operation will progress on a continued basis with necessary staffing levels to complete the required circuit miles by the end of the term of the contract. Crew size, crew structure, crew equipment, and the need for any additional crews under this contract will be at the Contractor's sole discretion. Any work not completed by the specified date must still be completed by the Contractor. The inability to finish the work on time will also be considered and noted before any future bid work is granted to that Contractor.

Section 7.0 Notification/Authorization to Trim or Remove Trees

Shelby Energy's right-of-way easements allow for the maintenance of right-of-ways areas included within the easements; however, the contractor shall be required to use good judgment and take reasonable care when entering upon such areas. In all cases, respect for the property owner and other stakeholders shall be considered paramount by the contractor. In sensitive areas such as yards, subdivisions, highly maintained areas, posted lands, and similar circumstances, the contractor shall make a good faith effort (when reasonably possible) to inform property owners and/or other stakeholders of the contractor's presence and the general scope of the contractor's work before proceeding. Any situations in which a property owner or other stakeholder takes issue with the contractor's right to enter the property or complete the work shall be reported to SEC's designated representative immediately in order to help facilitate a resolution. All gates, fences and consumer property are to be left in the same condition as found.

SEC provided locks are installed on many locked-gates. The contractor should not cut locks or chains unless permission is granted by the SEC Field Supervisor. Crews will be provided a SEC key to gain access to areas where a SEC lock is present.

- 7.1 The Contractor shall provide the property owner(s) with notification of intent to conduct the required right-of-way clearance and cut stump herbicide application work. This contact shall precede any work done on any property. The work will then be scheduled for each crew. Any line clearance work done without proper notification must have specific approval by the authorized Shelby Energy representative.
- 7.2 Verbal notification of the property owner for routine line clearance work is sufficient. If the property owner is not home, a notification card may be left on the door. Notification cards shall not be placed in any U.S. mailboxes. Notification cards shall only be used where the owner is likely to be present on site on a regular basis. Absentee owners may be notified by mail or by phone.

- 7.3 In the case of the industrial, municipal, county, state, or large private estate type of properties, the caretakers or other designated individual in the employ of the owners who is responsible for the trees or brush to be cut or trimmed is considered to represent the interest of the owner. Notification of such caretakers or grounds maintenance supervisors is sufficient.
- 7.4 For both bid and hourly crews, the foreman shall email the designated SEC employees, daily concerning their working locations for their respective crews. Foreman's are also to email the information for any members that refuses to allow the crews to properly maintain their ROW. Contractor shall also keep appropriate maps marked to reflect current daily progress for all projects.
- 7.5 If landowner refuses access, Contractor shall notify authorized SEC representative immediately.

Section 8.0 Right of Way Clearing/Re-clearing Requirements

- 8.1 Work within the boundaries of this project shall include clearing/re-clearing. The work may be performed on both urban/residential and rural sites where a specified or desired right-of-way shall be established, reestablished and maintained. Trimming shall adhere to ANSI A300 guidelines and OSHA Safety regulations. If the crown of a tree or any branches are within the right-of-way boundaries, even though the base of the tree is outside of the right-of-way boundary, this tree will be considered as part of the Bid Project and shall be removed or trimmed to meet the guidelines (i.e. overhang from a tree outside of right of way).
- 8.2 Techniques consistent with the practices of directional, natural, lateral, and drop crotch trimming should be utilized. Drop crotch pruning consists of reducing tops, sides, or individual limbs and avoids cutting back to small suckers. Directional pruning or trimming shall be used to direct or train future tree growth or sprouting away from the wires. Tree trimming required on coniferous trees (pine, spruce, hemlock, etc.), along the established tree edge shall involve the removal and/or trimming of limbs that are encroaching the right-of-way. Removal of the limbs will be back to the main stem, trunk, and/or to suitable live lateral branch.
- 8.3 The practices of "shearing", "flat-topping", "pollarding", "stubbing", and "rounding over" shall not be permitted anywhere along SEC's lines.
- 8.4 Right of way clearing and tree trimming shall be performed on all primary lines. All tree trimming on right-of-way boundaries shall be ground to sky. Tree removals will be concentrated to trees that may pose a threat to primary lines (i.e. danger trees), trees of a fast growing species (i.e. maples, and poplars) and trees requested by landowners to be removed within the Row. Trees that are outside of the Row will be trimmed to obtain proper clearance. Contractors are not responsible for tree removals requested by landowners that are outside of the Row unless such trees are hazard trees. Emphasis shall be placed on removing trees in

the 4-12-inch range, where approval is granted by the property owner. Trees larger than 4-12 inch shall be trimmed if reasonable clearance can be obtained to avoid contact with primary lines until the next trim cycle, unless otherwise requested by the landowner.

- 8.5 Where trimming only is permitted, the lateral or Directional pruning method shall be employed. Clearances following our right of way widths for single and three phase lines shall be obtained wherever possible.
- 8.6 As designated by the authorized SEC representative, fruit bearing trees that remain within the right-of-way shall be trimmed not removed in accordance to the Shelby Energy right-of-way clearing guidelines unless otherwise notified by the property owner.
- 8.7 Existing right of way consisting of primary lines shall be cleared to meet the clearance standards below. If the existing Right-of-Way is in such condition that the clearances below are already achieved, then no work is needed. In the event that the right-of-way clearance is not sufficient then work will progress in accordance with these specifications. Normal right of way widths are 30 ft wide for single and three phase lines.
- 8.8 Individual services will not be the responsibility of the Contractor on Circuit bids. SEC circuits include all right-of-way between the SEC owned pole with transformer and the final SEC owned pole. Clearing of secondary services will be the responsibility of the landowner unless a hazardous situation exists that would not allow them to maintain those lines. If such a hazard exists a service man will be dispatched to trim enough to allow swing clearance of the secondary wire. If a landowner requests to remove a tree near a service wire, SEC will temporarily take down the wire while the landowner resolves the removal of the tree in question.
- 8.9 All overhead guy stubs, anchors, and riser poles, shall be cleared of all vines and vegetation to allow reasonable access to that facility for maintenance and serviceability. Generally, this would include the area within 10 feet of the pole or equipment.
- 8.10 Mechanical Clearing and Re-Clearing work will be permitted where applicable. After any mechanical operation, if any damages to property exist, the Contractor shall restore the land to the natural contour existing prior to the start of the work (i.e. ruts caused by machinery). This must be accomplished to the satisfaction of SEC and the landowner.
- 8.11 All work is to be performed under the supervision of the contractor. Work shall be conducted in a manner such that all phases of the clearing and/or reclearing work shall progress concurrently, (i.e., cutting, disposal and final cleanup). SEC has the sole authority to designate the class of right-of-way. If any recent right-of-way

clearing/reclearing is encountered, and it does not conform to these specifications, it must be included in the bid.

- 8.12 Disposal of operation wood residue such as brush, wood, large sections of tree trunks, large limbs, wood chips, and other such products produced or generated by this operation on the SEC system shall not obstruct roads, paths, or waterways. Disposal of said residue shall be the sole responsibility of the Contractor and at approved locations. All disposal costs shall be included in the cost submitted on the SEC bid. Logs and brush may be left "wind-rowed" along the outer edges of the right of way.
- 8.13 Disposal of wood from Yards will consist of the clean up of all brush and large wood will be cut and stacked. The Contractor will not be responsible for the removal of large wood. Cleanup of wood resulting from the removal of a tree will be the responsibility of the landowner. Disposal of wood and brush in Unmaintained Right of Ways will consist of wind rowing the brush and wood to the outer edge of the right of way.
- 8.14 Members requesting Timber of a merchantable size to be left will be cut in lengths of 100 inches unless otherwise specified by the landowner. The timber will be piled on the edge of the right of way and will become the responsibility of the landowner to remove.
- 8.15 Any dead trees or trees deemed to be a hazard even if beyond the right of way, which would strike the line in falling, shall be removed. Contractors are also responsible for any hazardous trees missed upon inspection and will be sent back to remove these hazards. (*Hazard trees may include but not limited to dead or dying trees, trees with visible cankers or rots, severe leaning trees, and trees with severe animal or mechanical damage showing signs of rot*).
- 8.16 Vines on poles, guy wires, and equipment shall be removed and cut off at ground level and the area surrounding the pole and/or equipment.

Section 9.0 Options for Refusals/Reluctance to Yield Right-of-Way

- 9.1 Options to modify right-of-way clearing may be offered to individual landowners or groups of adjacent landowners that object to clearing according to the standards indicated by the SEC right-of-way program. In providing these options, SEC seeks to enable individual members to choose methods for right-of-way clearance that best address their concerns while preventing the burden of costs for use of non-standard procedures from being placed upon SEC members as a whole.

Because of varying site conditions, not all options will be offered in all locations. Options that may be available for a particular site include:

Stumps:

Stump Grinding will not be used on the SEC system unless authorized by a representative of SEC. If any stump grinding is utilized by SEC, the Contractor will be compensated at an hourly rate.

All woody stem vegetation will be cut as close to the ground line as practicable and the cuts shall be made parallel with the ground, not at an angle.

Relocation of lines:

Where consistent with SEC standards for line maintenance/improvement, rerouting of lines or moving lines underground at the member's expense will be considered. Rerouting must follow SEC guidelines, and accessibility to the lines must be as good as or better than at the original location. In locations where groups of landowners must agree to rerouting, it is the responsibility of the interested landowners to negotiate agreement with adjacent landowners and obtain necessary easements before rerouting can proceed. If such agreement cannot be obtained within a time frame specified by SEC, right-of-way clearing will proceed unless other options are negotiated individually with SEC.

Section 10.0 Use of Chemicals and Sprays

- 10.1 The Contractor shall ensure that the on-site applicator be certified by the Kentucky Department of Agriculture, Division of Pesticides. Only certified applicator(s) may apply herbicide on Shelby Energy right-of-way. Copies of applicators licenses shall be given to Shelby Energy prior to starting any projects.
- 10.2 All herbicides used by the contractor shall be approved by Shelby Energy and used in accordance with the manufacturer's specifications on the label. Herbicides with a National Fire Protection Association (NFPA) health rating of 3 or greater shall not be used on Shelby Energy's system unless specifically approved by Shelby Energy. Contractor shall be responsible for purchasing, storing, and furnishing chemicals to its crews.
- 10.3 There will be no herbicide application on National Forest or other State or Federally owned lands unless authorized with proper permits and authorization from the proper manager of those lands.
- 10.4 All herbicide treatment crews will have the ability to perform foliar and basal chemical treatment where applicable.
- 10.5 Treatment Around Poles and Guy Wire Attachments - Cut off all vines ascending all poles and guy wires at the height of reach. Treat with herbicides all vines below cutting and other vegetation, which may interfere with SEC's facilities from all poles and guy wires. Should vines be in contact with SEC conductors or

equipment the contractor shall notify the Supervisor, Field Support Services to have them safely removed.

- 10.6 Herbicide treatment of right of way may be done at various locations using suitable herbicides to control vegetation particular to that location. Prior to commencement of any Work involving the application of chemicals, the Contractor shall thoroughly familiarize and inform himself of all local conditions and other factors which could or might affect herbicide treatment.
- 10.7 Unless otherwise specified by SEC, the Contractor shall mix and apply the herbicides in accordance with the recommendations of the manufacturer's label and the following general specifications:
 - (a) For Foliage Application: This method shall be used only on brush during the active plant growth period, generally between May 1 and September 1. Herbicide mixture shall be applied to completely wet the entire leaf, stem and trunk surface of each plant.
 - (b) For Basal Application: This method shall be used on brush of any size at any season of the year. Herbicide mixture shall be applied to completely wet the entire surface of the stem or trunk from the root-crown up the stem eighteen (18) inches, with emphasis on completely wetting the root-crown.
 - (c) For Stump Application: This method shall be used on all new stumps at any season of the year. Stumps shall be treated as soon as practical, but always on the same day that the cutting is performed. Herbicide mixture shall be applied in sufficient volume to completely wet the sapwood, the area around the outer edge of stump.
- 10.8 Contractor shall not be obligated to treat any portion of a line where damages to crops, orchards, or ornamental plants may result from chemical drift.
- 10.9 SEC will have the right to specify when and where herbicide application and/or herbicide treatment will be used in rural areas or otherwise.
- 10.10 Contractor's use of herbicides in connection with the Work shall be in strict compliance with all federal and state laws, rules and regulations which from time to time govern the use of herbicides. By undertaking to perform any part of the Work in which chemicals are used, the Contractor certifies that Contractor is familiar with, has complied with, and at all times will comply with all requirements (including but not limited to those relating to training and the giving and posting of all required notices) under all of the foregoing laws, rules and regulations and further, the Contractor shall indemnify and hold harmless Shelby Energy and its directors, officers, employees and agents from and against any liability, claim, demand, cause of action of every kind and description, damage, losses and expenses, including attorney's fees through appeals, arising or resulting from the Contractor's non-compliance with or violation of any of the foregoing laws, rules or regulations.

- 10.11 Chemical spills shall be immediately cleaned-up in a manner consistent with label restrictions, Federal and State regulations, and acceptable environmental procedures mandated by law. Any and all notifications to proper authorities in connection with such spills shall be made by the Contractor. Each crew responsible for herbicide applications shall be supplied with a suitable spill response kit for cleaning-up and neutralizing spills of chemicals, all at the sole expense of the Contractor. Contractor shall insure that its employees are trained in the proper techniques for spill response, and are supplied with the necessary personal protective equipment required to perform spill mitigation duties.
- 10.12 Contractor shall at all times be solely responsible for the continuous safeguarding of its workforce, including compliance with all applicable Federal, State, and local laws, together with its responsibilities for training its employees in the proper methods and use of personal protective equipment required for handling herbicides used in connection with this Work.

Section 11.0 Safety to Employees and the Public

Contractor shall at all times take all reasonable precautions for the safety of its employees and the public, and shall comply with all applicable provisions of federal, state and local laws, rules and regulations, including but not limited to the most current version of the National Electric Safety Code, all OSHA rules, and the Shelby Energy Safety Manual. Contractor shall have a Safety program in place and will produce documentation of Safety training, audits, or other necessary documents upon request.

SEC reserves the right to stop the contractor's work immediately if SEC becomes aware that the contractor is in violation of any of the above mentioned safety requirements, and SEC reserves the right to terminate the contract due to safety concerns at its sole discretion. SEC further reserves the right to inspect contractor work sites at its discretion.

The Contractor shall provide a safety person to check on the crews at no charge to the owner. The schedule for checking crews will be determined by the contractor.

The contractor is required to furnish SEC with all documentation in a timely manner (when and if requested by SEC) concerning safety requirements, investigations or any other information about the crews working on SEC's system. The contractor must provide a written report to SEC for any OSHA reportable injury or violation, and any "near-miss" incident or accident must be promptly reported to the SEC Field Supervisor.

- 11.1 The contractor shall obtain full information from Shelby Energy as to the voltage of its circuits before starting the various parts of the work.

- 11.2 The Contractor shall at all times conduct the work in a manner as to safeguard the public from injury to persons or property, and shall comply with the regulations set forth in OSHA 1910.269, OSHA 1910.331, OSHA 1910.266 Logging Standard and ANSI Z133.1 – 1994. All provisions of Shelby Energy safety policy, as detailed in the Shelby Energy Safety Manual, further apply to all contractors on Shelby Energy.
- 11.3 The contractor shall use all necessary protection for its employees and to guard against interference with the normal operation of the circuits. If, in the judgment of the Contractor's General Foreman/Supervisor, it is hazardous to trim or remove trees with the circuits energized, the authorized Shelby Energy representative(s) shall be contacted. If deemed appropriate, the necessary protection or de-energizing the circuits will be provided by Shelby Energy to ensure the safe removal of the affected tree parts.
- 11.4 When applying herbicides, the contractor shall at all times take all reasonable precautions for the safety of employees on the work and of the public by utilizing safety equipment and methods in accordance with the manufacturer's specifications on the herbicide label. Contractor shall comply with all applicable provisions of Federal, State, and local laws specifically including 302 KAR Chapters 27, 28 and 29 relating to the use and application of herbicides. Contractor will furnish copies of any required licenses, certifications or permits to Shelby Energy upon request.

Section 12.0 Work Assignments and Equipment

- 12.1 The Contractor shall advise SEC on a daily basis as to the location of all crews, any and all crew movements throughout the day, the progress of the Work assigned, and any problems or unusual occurrences. SEC will furnish systems maps or digital aerial / GPS files to the contract ROW foreman or supervisor for the purpose of locating and recording all work done on SEC's system. After work has been completed in a particular area the paper maps or digital files should be returned to SEC's Field Supervisor.
- 12.2 Contractor shall make available its crews for emergency work as determined by SEC, day or night, weekends, holidays, or during any natural disasters such as ice or snow storms, tornadoes and other strong storms, etc. Contractor shall furnish an emergency work price list to SEC along with their bid. Contractor shall furnish SEC the name and telephone number of the person to contact for emergency crews. Contractor may be asked to assign additional crews to SEC's system if the emergency is severe or of long duration.
- 12.3 Contractor shall submit to SEC a progress report at the end of each week.
- 12.4 Reasonable working hours shall be utilized for lump sum cost for circuit work. Contractor shall be free to determine working days and hours to suit his needs with

the following exceptions. There shall be no work on Saturday or Sunday and on SEC designated holidays without approval by a designated SEC representative. In general, the normal workweek for lump sum work should consist of forty (40) productive hours between 7:00 a.m. and 6:00 p.m., Monday through Friday, unless otherwise approved by SEC. The workday shall begin at the designated assembly location and end at the work site.

- 12.5 SEC properties will not be made available for the Contractor for crew starting points or for storing/garaging tools or equipment, unless authorized by SEC. When convenient, the contractor may be given permission to park vehicles and equipment on SEC property. Contractors may not park at substation property owned by East Kentucky Power (EKP) without written permission from EKP. When parking equipment in the field the contractor is responsible for obtaining permission from the land owners.
- 12.6 SEC shall not be charged for time spent on maintenance of equipment, including without limitation fueling of vehicles, oil or antifreeze changes, changing and/or sharpening of chipper blades, and other similar maintenance and repair work. SEC will not render payment for equipment that is incapable of fully performing its intended function. Minor mechanical repairs such as sharpening and adjusting chain saws shall be permitted on SEC time.
- 12.7 Equipment must be maintained in above average condition and with little or no oil leaks. SEC shall have the right to request that equipment which does not meet the approval of SEC be replaced. The decision of SEC shall be final.

Section 13.0 Supervision of Work and Workmanship

- 13.1 Contractor shall supervise and direct the Work, using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, and procedures.
- 13.2 Contractor is an independent contractor and neither Contractor nor any of its employees shall be deemed to be agents or employees of SEC.
- 13.3 The Contractor shall give prior notification of work start-up and when adding or changing crew. Complete the necessary reporting forms as needed. All reports, logs, timesheets, and paperwork shall be accurate, neat, and complete. Exaggerated, padded, or incorrect work report entries may result in the dismissal of the crew foreman and/or general foreman/supervisor. The crew foreman and/or supervisor shall maintain an up-to-date log of all property owner notification and/or refusals.
- 13.4 Contractor shall provide and maintain continually on the site of the Work during its progress and until its completion, adequate and competent supervision of all operations for and in connection with the Work being performed under this

Contract, either personally or by a duly authorized representative. The General Foreman or other representative of the Contractor, who has charge of the Work thereof, shall be fully authorized to act for the Contractor and to receive whatever orders as may be given for the proper execution of the Work or notices in connection therewith.

- 13.5 Contractor shall employ only workers who are competent to perform the Work assigned to them and who are adequately trained and experienced in performing first-class Work of the character and magnitude required by this Contract and expected of reputable Contractor's performing work similar to the Work necessary under this Contract.
- 13.6 SEC will periodically review and evaluate crew performance based upon factors such as, but not limited to, quality of work, quantity of work, clearances obtained, safety awareness and public relations efforts.
- 13.7 Contractor shall be required to attend regular progress meetings with SEC to discuss the Work of this Contract, review crew evaluations, receive information as to future work locations for planning purposes and discuss any problems in prosecuting the Work under this Contract.
- 13.8 SEC will furnish a designated employee to oversee all aspects of line clearing while contract crews are working on Shelby Energy's system. Any and all questions that may arise should be brought before this designated person for resolution. SEC's representative will strive to provide answers to contractor questions and/or requests in a timely manner (usually within two or three business days).

Section 14.0 Contractor Caused Outages

- 14.1 Anytime the Contractor feels that work can not be completed safely or an outage due to work associated with the clearing of the right of way is unavoidable he should ask for an outage to be scheduled by our line crews. We will have no problem with scheduling an outage to make the job safe.
- 14.2 Should the Contractor knock down or come in contact with SEC's conductors or equipment they must immediately contact the Supervisor, Field Support Services.
- 14.3 There will be a minimum charge of \$200 dollars for each Contractor caused outage for restoration costs. If the amount of restoration or damages costs exceeds \$200 then the total amount for restoration will be charged to the Contractor.
 - 14.3.1 If a Contract Crew causes an outage, that entire crew shall "Stand Down" and will not be permitted to work on the SEC system until the completion of an incident investigation. Upon completion of the investigation, the crew may return

to work as determined by SEC and depending on the findings of the investigation. This will allow the contractor and SEC sufficient time to investigate and take any necessary actions to insure future outages will be avoided.

Section 15.0 Payment for Work

- 15.1 The Contractor will be required to utilize daily time sheets provided by or approved by Shelby Energy. Timesheets shall be accurate, neat and complete, and shall detail time charged to individual work and service orders.
- 15.2 In order to receive payment for any **Combination Lump Sum/Unit Price** bid work the Contractor must supply with invoices a weekly detailed list of units cleared or trimmed and the location of these units. Inspection for accuracy shall be done by a representative of SEC before payment.
- 15.3 When overtime is applicable, the rate will be 1.5 times the regular hourly rate for labor; however; overtime rates will not be charged for equipment prices. Overtime billed for emergency/storm work will be applicable for hours that exceed 40 hours in a week.

If the owner requests the contractor to bring in extra temporary workers or equipment for emergency situations such as additional work or storm restorations the owner and contractor shall negotiate rates and any special terms/conditions for those extra workers and equipment at the time the request is made. All other terms/conditions applying to temporary workers or equipment not changed by mutual agreement of the parties in writing shall be as stated in the contract.

It is understood that by both parties that the hourly rates included in this contract are complete charges and there is no extra charge per man (per Diem) charge.

Section 16.0 Indemnification

To the maximum extent permitted by law, Contractor shall defend, indemnify, and hold harmless Owner and Owner's directors, officers, and employees from all claims, causes of action, losses, liabilities, and expenses (including reasonable attorney's fees) for personal loss, injury, or death to persons (including but not limited to Contractor's employees) and loss, damage to or destruction of Owner's property or the property of any other person or entity (including but not limited to Contractor's property) in any manner arising out of or connected with the Contract, or the materials or equipment supplied or services performed by Contractor, its subcontractors and suppliers of any tier. But nothing herein shall be construed as making Contractor liable for any injury, death, loss, damage, or destruction caused by the sole negligence of Owner.

Section 17.0 Hold Harmless

Contractor agrees to defend, pay on behalf of, and hold harmless Shelby Energy

and its directors, officer, agents, members and employees, from all claims, demands, causes of action, damages, costs, or liabilities, in law or in equity, of every kind and nature whatsoever, including but not limited to those brought by employees of Contractor or its subcontractors, and those brought as a result of any interruption, discontinuance, or interference with Shelby Energy's service to any of its customers, arising out of or as a result of any act or failure to act, whether or not negligent, in connection with the performance of the work to be performed pursuant to this proposal by Contractor its directors, officers, agents, employees, and subcontractors. Contractor agrees to defend and pay all costs in defending these claims, demands, causes of action, damages, costs, or liabilities, including attorney's fees, and Contractor shall also reimburse Shelby Energy for any and all legal and other expenses incurred by Shelby Energy in connection therewith.

Furthermore, Contractor agrees to maintain public liability and property damage insurance (including automobile public liability and property damage insurance) to cover the obligations set forth above. The minimum insurance limits of liability shall be \$500,000.00 automobile public liability and property damage and \$1,000,000.00 for all other public liability and property damage.

The policy must state that Contractor has contractual liability coverage and that Shelby Energy has been added as an additional insured. Contractor and any subcontractor shall carry workers' compensation insurance as required by law. Shelby Energy shall receive a minimum thirty (30) day notice in the event of cancellation of insurance required by the agreement. Contractor shall furnish a certificate of insurance to Shelby Energy showing that the above obligations and requirements are provided for by a qualified insurance carrier, and showing Shelby Energy as an additional insured on such insurance annually prior January 1 of the insured calendar year. It shall be the contractor's responsibility to provide SEC with a new proof prior to the expiration of the current proof.

Section 18.0 Independent Contractor

Contractor hereby acknowledges that it is an independent contractor for Shelby Energy. Contractor shall be free to determine and control its time, energy and skill to perform the work in accordance with this Agreement.

Contractor acknowledges that Shelby Energy, in reliance upon this Agreement, is not withholding any taxes from sums paid to Contractor as compensation for services rendered under this Agreement. Additionally, Contractor acknowledges that Shelby Energy is not carrying worker's compensation coverage or unemployment insurance coverage on Contractor or Contractor's employees due to the independent Contractor nature of the relationship. In the event Contractor should be adjudged not to be an independent Contractor, Contractor will indemnify Shelby Energy for any additional expenses resulting from such ruling.

Shelby Energy Cooperative, Inc.
Vegetation-Maintenance Expense
Case No. 2016-00434

<u>Account</u>	<u>Description</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
593.20	O.C.R. Maintenance - Planned	25,262	39,607	133,764	47,086	193,146
593.30	Right of Way - Planned	762,152	866,465	836,039	1,466,061	2,225,186
593.35	Right of Way - Spraying	1,939	11,625	56,677	84,316	106,750
593.40	Air Patrol	0	0	0	17,670	25,840
		\$789,352	\$917,697	\$1,026,480	\$1,615,132	\$2,550,921

Shelby Energy Cooperative, Inc.
Interruptions Indices
Case No. 2016-00434

		<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
System Average Interruption Duration Index	SAIDI	92	114.5	138.68	106.56	157.72
System Average Interruption Frequency	SAIFI	0.94	1.13	1.11	0.99	1.51
Customer Average Interruption Duration Index	CAIDI	97.87	101.33	124.94	107.64	104.45

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

8. Refer to the Martin Testimony, page 4 of 5, and Shelby Energy's May 16, 2013 letter to the Commission regarding the prepayment of Retirement Security Pension Plan contributions with the National Rural Electric Cooperative Association ("NRECA R&S Plan").

a. Explain whether Shelby Energy has had the opportunity since 2013 to make subsequent prepayment contributions to the NRECA R&S Plan, if so, provide the date(s) and amount(s) for any prepayments made.

b. If the answer to part a. is yes, provide the accounting treatment by date and amount for each prepayment contribution,

Response 8a.

No, Shelby Energy has not been provided an opportunity, since 2013, to make subsequent prepayment contributions to the NRECA R&S Plan.

Response 8b.

N/A

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

9. Refer to the Application, Exhibit H-2, Direct Testimony of James R. Adkins ("Adkins Testimony"), pages 2 and 3 of 7, regarding the general guidance of proposed rates and increase amounts.

a. Explain what is meant by a "reasonable amount" for the residential rate increase.

b. Explain how the proposed 60 percent increase for phase 1 and 20 percent increase in each remaining phase were determined.

Response 9a.

A reasonable amount for the residential rate class was in the five percent to six percent range. It was expected that the residential class would be the rate class with the largest increase in amount, but it was desired to have all classes receive some level of increase.

Response 9b.

The Board of Directors of Shelby Energy wanted to phase in the rate increase to its members, especially its residential members. The original idea of the 60 percent increase for phase 1 and 20 percent for the other two phases was to ensure that Shelby Energy would meet its mortgage agreements after phase 1 and then use phase 2 and phase 3 to meet its intended goal of 1.88 TIER based on the test year after the last phase. Some modification was made to this plan because of the Board's desire to phase in the increase for several larger commercial and industrial classes on a more even basis for all three phases.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

10. Refer to the Adkins Testimony, pages 4 of 7. The testimony states "[a]dditionally, Shelby Energy is attempting to bring the demand rates for Rates B1 and B2 in line with the wholesale demand rates since these two rate classes are on special wholesale rates." State whether this statement indicates that Shelby Energy is billed by East Kentucky Power Cooperative, Inc. ("EKPC") at EKPC's Schedule B rates for all power used by customers taking service on Shelby Energy's Rates B1 and B2. If not, explain what is meant by this statement.

Response 10.

Shelby Energy is billed under EKPC's Schedule B rates for all members that it bills based on Shelby Energy's Schedule B1 and B2.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

11. Refer to the Application, Exhibit J, page 1 of 10, and Exhibit D.

a. Exhibit D shows that the current and proposed Residential Rate 12 rates are the same as the current and proposed rates for Prepay Service Rate 15. Exhibit J shows that proposed Phase 1 results in a 3.6 percent increase for Residential Rate 12, but a 6.6 percent increase for Prepay Service Rate 15. Given their equivalent current and proposed rates, explain the difference in the amount of increase between the two rate schedules.

b. Confirm that the following rate classes are not included in the billing analysis because there are no customers taking service under the tariffs: Optional Time-of-Day Rate 22; Special Outdoor Lighting Service Rate 33; Large Industrial Rate 83; Large Industrial Rate C1; Large Industrial Rate C2; and Large Industrial Rate C3. If this cannot be confirmed, explain why they are not included.

Response 11a.

Two primary reasons exist for this difference in percentage increase amounts. One reason is that Rate 12 – Residential has two components to its rate schedule: a customer charge and an energy charge while Rate 15 – Prepay Service has three components in its rate schedule: a customer charge, an energy charge and a prepay service charge. The second reason is based on the normalization process where the prepay service is based on the number of members for the complete test year valued at the regular rate. However, Shelby Energy seems to have a large number of members

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

during this period who were on this service for a partial month. Please see the table below for the development of these increase percentages.

Increase Percents		
	Rate 12	Rate 15
	Residential	Prepay
Increase for Phase 1	\$ 674,960	\$ 59,887
Normalized Revenue	\$ 18,776,920	\$ 906,485
Percent Increase	3.6%	6.6%

Response 11b.

Shelby Energy confirms there are no customers taking service under the following tariffs: Optional Time-of-Day Rate 22; Special Outdoor Lighting Service Rate 33; Large Industrial Rate B3; Large Industrial Rate C1; Large Industrial Rate C2; and Large Industrial Rate C3.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

12. Refer to the Application, Exhibit J, page 2 of 10. Explain in detail what is represented in the row titled "Difference to partials" and how the amounts were calculated for the test year and each of the proposed phases.

Response 12.

As consumers are connected and disconnected throughout the month, the consumer is counted in the number of consumers for the month even though they were not connected for the entire month. This is the difference between the number of consumers at the customer charge and the actual revenue billed to those consumers. This amount was carried forward to the normalized and proposed revenues.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

13. Refer to the Application, Exhibit J, page 4 of 10.

a. Explain how the \$51,896 Consumer Facility Charge was calculated in the Normalized column, as it appears to be based on a total of 420 ($\$51,896/\$.338/365$) customers rather than the total of 597 customers ($7166/12$) that were used in calculating revenues under the proposed three phases.

b. Explain how the \$15,354 Prepay Service Fee was calculated in the Normalized column as it appears to be based on a total of 420 ($\$15,354/\$.1/365$) customers rather than the total of 597 customers ($7166/12$) that was used in calculating revenues under the proposed three phases.

c. If Shelby Energy bills Prepay Service Rate 15 customers at the daily rate, address the following:

(1) Explain why this schedule calculates the Consumer Facility Charge as if Shelby Energy bills a monthly Consumer Facility Charge rather than a daily Consumer Facility Charge.

(2) Confirm that the method used by Shelby Energy understates Consumer Facility Charge revenue by using the daily rate for 360 days rather than 365 days. If confirmed, provide a revised Exhibit J.

Response 13a.

Shelby Energy has a large number of members during this period who were on this service for a partial month. The normalized amount was made equal to the actual in this situation.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 13b.

Shelby Energy has a large number of members during this period who were on this service for a partial month. The normalized amount was made equal to the actual in this situation.

Response 13c.(1)

Shelby Energy's tariff provides this rate as a monthly amount and as a daily amount. This approach has been used to be consistent with the Prepay Service Fee.

Response 13c.(2).

Shelby Energy will agree that a multiplier of 365 provides a higher number versus a multiplier of 360. However, Shelby Energy believes that a multiplier of 360 is better based on the fact that the Consumer Facility Charge was originally a monthly charge and then was converted to a daily charge using a divisor of 30 days.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

14. Refer to the Application, Exhibit J, page 5 of 10. Explain how the amounts in the row titled "Primary metering discount 5%" were calculated for each of the three proposed phases.

Response 14.

These amounts were developed on this basis; the actual discount amount for the test year was divided by the actual total base revenue for the test year to develop a multiplier. This multiplier was then applied to the proposed total base rate revenue to find the amount of discount for each phase.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

15. Refer to the Application, Exhibit J, page 6 of 10. Explain how the amounts in the row titled "Primary metering discount 5%" were calculated for each of the three proposed phases.

Response 15.

. These amounts were developed on this basis; the actual discount amount for the test year was divided by the actual total base revenue for the test year to develop a multiplier. This multiplier was then applied to the proposed total base rate revenue to find the amount of discount for each phase.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

16. Refer to the Application, Exhibit J, page 7 of 10. Explain how the amounts in the row titled "Primary metering discount 5%" were calculated for each of the three proposed phases.

Response 16.

These amounts were developed on this basis; the actual discount amount for the test year was divided by the actual total base revenue for the test year to develop a multiplier. This multiplier was then applied to the proposed total base rate revenue to find the amount of discount for each phase.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

17. Refer to the Application, Exhibit J, page 10 of 10. Explain why the rate shown for Envirowatts is \$.02825 when Exhibit D shows the current rate to be .02750 and no change is proposed to the rate.

Response 17.

The rate listed in the Application, Exhibit J, Page 10 of 10 should be \$0.0275. The difference amounts to a reduction in revenue of \$99.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

18. Refer to the Application, Exhibit N. Provide a copy of the audited financial statements for 2016.

Response 18.

Refer to **Exhibit 2-18** which is included as part of this response.

Kentucky 30
Shelby Energy Cooperative, Inc.
and Subsidiary
Shelbyville, Kentucky
Audited Financial Statements
December 31, 2016 and 2015

Alan M. Zumstein
Certified Public Accountant
1032 Chetford Drive
Lexington, Kentucky 40509

CONTENTS

Independent Auditor's Report	1 - 2
Consolidated Financial Statements:	
Balance Sheets	3
Statements of Revenue and Comprehensive Income	4
Statements of Members' Equity	5
Statements of Cash Flows	6
Notes to Financial Statements	7 - 14
Additional Consolidating Information:	
Balance Sheet	15
Statement of Revenue and Comprehensive Income	16
Supplementary Information	
Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with <i>Government Auditing Standards</i>	17 - 18
Independent Auditor's Report on Compliance with Aspects of Contractual Agreements and Regulatory Requirements for Electric Borrowers	19 - 20

ALAN M. ZUMSTEIN
CERTIFIED PUBLIC ACCOUNTANT

1032 CHETFORD DRIVE
LEXINGTON, KENTUCKY 40509
(859) 264-7147
zumstein@windstream.net

MEMBER
• AMERICAN INSTITUTE OF CPA'S
• KENTUCKY SOCIETY OF CPA'S
• INDIANA SOCIETY OF CPA'S
• AICPA DIVISION FOR FIRMS

Independent Auditor's Report

To the Board of Directors
Shelby Energy Cooperative, Inc.

Report on the Financial Statements

I have audited the accompanying consolidated financial statements of Shelby Energy Cooperative, Inc. and Subsidiary, which comprise the balance sheets as of December 31, 2016 and 2015, and the related consolidated statements of revenue and comprehensive income, changes in equities, and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

My responsibility is to express an opinion on these consolidated financial statements based on my audits. I conducted my audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that I plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, I express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

I believe the audit evidence I have obtained is sufficient and appropriate to provide a basis for my audit opinion.

To the Board of Directors
Shelby Energy Cooperative, Inc.

Opinion

In my opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Shelby Energy Cooperative, Inc. and Subsidiary as of December 31, 2016 and 2015, and the results of their operations and cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Report on Consolidating Information

My audits were conducted for the purpose of forming an opinion on the consolidated financial statements as a whole. The consolidating information on pages 15 - 16 are presented for purposes of additional analysis of the consolidated financial statements rather than to present the financial position, results of operations, and cash flows of the individual companies, and is not a required part of the consolidated financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the consolidated financial statements. The consolidating information has been subjected to the auditing procedures applied in the audit of the consolidated financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated financial statements or to the consolidated financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In my opinion, the consolidating information is fairly stated in all material respects in relation to the consolidated financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, I have also issued a report dated February 28, 2017, on my consideration of Shelby Energy Cooperative, Inc. and Subsidiary's internal control over financial reporting and my tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of my testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering internal control over financial reporting and compliance.

Alan Zumstein

Alan M. Zumstein, CPA
February 28, 2017

Shelby Energy Cooperative and Subsidiary
Consolidated Balance Sheets, December 31, 2016 and 2015

<u>Assets</u>	<u>2016</u>	<u>2015</u>
Utility Plant, at original cost:		
In service	\$ 92,166,121	\$ 88,647,786
Under construction	1,186,875	881,620
	<u>93,352,996</u>	<u>89,529,406</u>
Less accumulated depreciation	18,409,661	19,274,359
	<u>74,943,335</u>	<u>70,255,047</u>
Investments		
Associated organizations	23,720,386	21,800,426
Goodwill, net of amortization	368,414	368,414
	<u>24,088,800</u>	<u>22,168,840</u>
Current Assets:		
Cash and cash equivalents	2,130,118	3,900,145
Accounts receivable, less allowance for 2016 of \$457,034 and 2015 of \$375,409	4,311,829	3,390,326
Material and supplies, at average cost	730,037	552,845
Prepayments and other current assets	212,081	236,156
	<u>7,384,065</u>	<u>8,079,472</u>
Total	<u>\$ 106,416,200</u>	<u>\$ 100,503,359</u>
<u>Members' Equities and Liabilities</u>		
Members' Equities:		
Patronage capital and retained earnings	\$ 39,412,541	\$ 38,478,257
Other equities and minority interests	2,430,848	2,198,199
Accumulated other comprehensive income	(198,702)	(209,741)
	<u>41,644,687</u>	<u>40,466,715</u>
Long Term Debt	<u>52,588,364</u>	<u>50,602,021</u>
Accumulated Postretirement Benefits	<u>1,997,479</u>	<u>1,984,457</u>
Current Liabilities:		
Accounts payable	4,583,058	3,307,962
Short term borrowings	1,346,472	-
Current portion of long term debt	1,970,000	1,800,000
Consumer deposits	1,529,886	1,543,140
Accrued expenses	385,171	314,717
	<u>9,814,587</u>	<u>6,965,819</u>
Consumer Advances for Construction	<u>371,083</u>	<u>484,347</u>
Total	<u>\$ 106,416,200</u>	<u>\$ 100,503,359</u>

The accompanying notes are an integral part of the financial statements.

Witness: James Adkins

Shelby Energy Cooperative, Inc. and Subsidiary
Consolidated Statements of Revenue and Comprehensive Income
for the years ended December 31, 2016 and 2015

	<u>2016</u>	<u>2015</u>
Operating Revenues	\$ 46,148,538	\$ 45,375,822
Operating Expenses:		
Cost of power and propane	34,268,137	34,007,521
Distribution - operations	2,128,164	1,953,195
Distribution - maintenance	3,531,327	2,618,855
Consumer accounts	814,963	535,083
Customer service and information	444,955	450,669
Sales	4,105	(66,722)
Administrative and general	1,117,178	1,210,328
Depreciation, excluding \$137,357 in 2016 and \$165,713 in 2015 charged to clearing accounts	2,862,100	2,581,132
Taxes	72,391	221,304
Interest on long-term debt	1,523,210	1,580,936
Other interest	11,186	28,644
Other deductions	7,342	4,251
Total cost of electric service	<u>46,785,058</u>	<u>45,125,196</u>
Operating Margins	<u>(636,520)</u>	<u>250,626</u>
Nonoperating Margins:		
Interest income	39,721	36,819
Subsidiary and others	(47,937)	254,300
	<u>(8,216)</u>	<u>291,119</u>
Patronage Capital assigned from:		
East Kentucky Power Cooperative, Inc.	2,132,164	1,972,964
Other organizations	62,660	72,162
	<u>2,194,824</u>	<u>2,045,126</u>
Net Margins	1,550,088	2,586,871
Other Comprehensive Income:		
Postretirement benefits	11,039	11,039
Total Comprehensive Income	<u>\$ 1,561,127</u>	<u>\$ 2,597,910</u>

The accompanying notes are an integral part of the financial statements.

Shelby Energy Cooperative, Inc. and Subsidiary
Statements of Changes in Members' Equity
for the years ended December 31, 2015 and 2016

	<u>Patronage Capital</u>	<u>Other Equity</u>	<u>Accumulated Other Comprehensive Income</u>	<u>Total Members' Equity</u>
Balance - December 31, 2014	\$ 36,730,211	\$ 2,557,702	\$ (220,780)	\$ 39,067,133
Comprehensive income:				
Net margins	2,586,871			2,586,871
Postretirement benefit obligation				
Amortization			11,039	
Adjustments			-	11,039
Total comprehensive income			<u>11,039</u>	<u>2,597,910</u>
Refunds of capital credits	(592,321)			(592,321)
Transfers to other equity and minority interests	(246,504)	(557,057)		(803,561)
Other equities		197,554		197,554
				<u>197,554</u>
Balance - December 31, 2015	38,478,257	2,198,199	(209,741)	40,466,715
Comprehensive income:				
Net margins	1,550,088			1,550,088
Postretirement benefit obligation				
Amortization			11,039	
Adjustments			-	11,039
Total comprehensive income			<u>11,039</u>	<u>1,561,127</u>
Refunds of capital credits	(599,902)			(599,902)
Transfers to other equity and minority interests	-			-
Other equities	(15,902)	232,649		216,747
				<u>216,747</u>
Balance - December 31, 2016	<u>\$ 39,412,541</u>	<u>\$ 2,430,848</u>	<u>\$ (198,702)</u>	<u>\$ 41,644,687</u>

The accompanying notes are an integral part of the financial statements.

Shelby Energy Cooperative, Inc. and Subsidiary
Consolidated Statements of Cash Flows
for the years ended December 31, 2016 and 2015

	<u>2016</u>	<u>2015</u>
Cash Flows from Operating Activities:		
Net margins	\$ 1,550,088	\$ 2,340,367
Adjustments to reconcile to net cash provided by operating activities:		
Depreciation		
Charged to expense	2,862,100	2,581,132
Charged to clearing accounts	137,357	165,713
Patronage capital credits	(2,194,824)	(2,045,126)
Accumulated postretirement benefits	24,061	25,314
Change in assets and liabilities:		
Receivables	(921,503)	824,548
Material and supplies	(177,192)	71,805
Prepayments	24,075	5,572
Payables	1,275,096	(235,952)
Consumer deposits	(13,254)	25,606
Accrued expenses and accumulated benefits	70,454	(80,332)
Consumer advances for construction	(113,264)	6,995
	<u>2,523,194</u>	<u>3,685,642</u>
Cash Flows from Investing Activities:		
Plant additions	(6,838,260)	(3,758,337)
Salvage, net of removal costs	(865,386)	(493,487)
Other investments, net	274,864	145,574
	<u>(7,428,783)</u>	<u>(4,106,251)</u>
Cash Flows from Financing Activities:		
Other equities and minority interests	232,650	197,553
Additional long term borrowings	4,000,000	7,160,886
Short term borrowings (repayments)	1,346,472	(2,974,118)
Payments on long term debt	(1,843,658)	(1,764,552)
Retirement of patronage capital	(599,902)	(592,321)
Invest in cushion of credit	-	(531,769)
	<u>3,135,562</u>	<u>1,495,679</u>
Net increase in cash	(1,770,027)	1,075,070
Cash balances - beginning of period	<u>3,900,145</u>	<u>2,825,075</u>
Cash balances - end of period	<u>\$ 2,130,118</u>	<u>\$ 3,900,145</u>
Supplemental cash flows information:		
Interest paid on long term debt	\$1,525,127	\$1,585,673

The accompanying notes are an integral part of the financial statements.

Shelby Energy Cooperative, Inc.
Notes to Financial Statements, continued

Note 1. Summary of Significant Accounting Policies

Shelby Energy Cooperative, Inc. ("Shelby Energy") maintains its records in accordance with the policies prescribed or permitted by the Kentucky Public Service Commission ("PSC") and the United States Department of Agriculture, Rural Utilities Service ("RUS"), which conform in all material respects with generally accepted accounting principles. The more significant of these policies are as follows:

Principles of Consolidation The consolidated financial statements include the accounts of Shelby Energy, Shelby Energy Services Corporation ("Service Corporation") and Shelby Propane Plus, LLC ("Propane Plus"). Service Corporation owns 100% of the outstanding stock of Propane Plus. All significant inter company accounts and transactions have been eliminated.

Business Activity Shelby Energy provides distribution electric service to residential, business, and commercial consumers in a ten (10) county area of central Kentucky. Service Corporation provides overall business direction to Propane Plus. Propane Plus sells propane and related accessories to residential and commercial customers in central Kentucky.

Cash and Cash Equivalents Shelby Energy considers all short-term, highly liquid investments with original maturities of three months or less to be cash equivalents.

Restricted Cash Included in cash and cash equivalents are funds that are solely for economic development activities in the amount of \$566,734 and \$320,416, for 2016 and 2015, respectively. At December 31, 2016, Shelby Energy had \$92,407 advanced for economic development activities.

Off Balance Sheet Risk Shelby Energy has some off-balance sheet risk in that they maintain cash deposits in financial institutions in excess of the amounts insured by the Federal Deposit Insurance Corporation (FDIC). At December 31, 2016, the financial institutions reported deposits in excess of the \$250,000 FDIC insured limit several times during the audit period. Deposits in excess of the FDIC limit are 100% secured with collateral at the financial institution.

Revenue Shelby Energy records revenue as billed to its consumers based on monthly meter-reading cycles. Consumers are required to pay a refundable deposit, however, it may be waived under certain circumstances. Shelby Consumers must pay their bill within 15 days of billing, or consumers will forfeit a 10% discount, at which time a disconnect notice is sent with payment to be within 15 days. If not paid, then consumers are subject to disconnect. Accounts are written off when they are deemed to be uncollectible. The allowance for uncollectible accounts is based on the aging of receivables. There were no individual account balances that exceeded 10% of outstanding accounts receivable at December 31, 2016 and 2015.

Propane Plus recognizes revenue when earned, regardless of the period in which they are billed. Propane sales are recognized when deliveries are made; tank rental is recognized monthly; and sales of related accessories at the time of sale.

The Companies are required to collect, on behalf of the Commonwealth of Kentucky, sales taxes based on 6 percent of gross sales from non-residential consumers, a 3 percent school tax from certain counties on most gross sales, and franchise fees in certain cities. The Company's policy is to exclude sales tax from revenue when collected and expenses when paid and instead, record collection and payment of sales taxes through a liability account.

Propane Inventory Propane is measured at the end of each month and valued based on the current purchase price of propane.

Shelby Energy Cooperative, Inc.
Notes to Financial Statements, continued

Note 1. Summary of Significant Accounting Policies, continued

Propane Purchased Propane Plus purchases all of its propane requirements from an unrelated parties through Kentucky Propane Plus, LLC, which is a related party. Propane is delivered to bulk tanks owned by Propane Plus, then delivered to customers on an as needed basis.

Cost of Power Shelby Energy is one of sixteen (16) members of East Kentucky Power Cooperative (“East Kentucky”). Under a wholesale power agreement, Shelby Energy is committed to purchase its electric power and energy requirements from East Kentucky until 2051. The rates charged by East Kentucky are subject to approval of the PSC. The cost of purchased power is recorded monthly, during the period in which the energy is consumed, based upon billings from East Kentucky. There are certain surcharges, clauses, and credits that East Kentucky includes to Shelby Energy that are passed on to consumers using a methodology prescribed by the Commission.

Utility Plant Electric plant is stated at original cost, which is the cost when first dedicated to public service. Such amount includes applicable supervisory and overhead cost including any construction period interest and taxes. There was no interest required to be capitalized during the year.

The cost of maintenance and repairs, including renewals of minor items of property, is charged to operating expense. The cost of replacement of depreciable property units, as distinguished from minor items, is charged to electric plant. The units of property replaced or retired, including cost of removal net of any salvage value, is charged to accumulated depreciation.

Propane Plus’s fixed assets consist primarily of propane tanks located on customers’ premises, bulk tanks, trucks used for delivery, and buildings and office equipment.

The major classifications of utility plant in service consist of:

	<u>2016</u>	<u>2015</u>
Distribution plant	\$85,250,049	\$82,166,935
General plant	<u>4,438,596</u>	<u>4,045,283</u>
Subtotal electric plant	<u>89,688,645</u>	<u>86,212,218</u>
Propane tanks on customer premises	979,214	1,050,798
Bulk tanks	364,791	306,940
Delivery and other trucks	707,399	707,399
Land and buildings	350,878	307,529
Office and other equipment	<u>75,194</u>	<u>62,902</u>
Subtotal propane plant	<u>2,477,476</u>	<u>2,435,568</u>
	<u>\$92,166,121</u>	<u>\$88,647,786</u>

Depreciation Shelby Energy’s provision has been made for depreciation, on the basis of the estimated lives of assets, using the straight-line method. Distribution plant depreciation is based on a composite rate of 2.98% per annum. General plant rates are as follows:

Structures and improvements	2.5%
Transportation equipment	10% - 20%
Other general plant	5% - 10%

Propane Plus’s depreciation is computed using the straight-line method over the useful lives of its assets.

Shelby Energy Cooperative, Inc.
Notes to Financial Statements, continued

Note 1. Summary of Significant Accounting Policies, continued

Management Services Propane Plus is one of four (4) members of a group of propane companies that utilize the abilities of an individual who manages the day to day operations of each propane company and arranges for the purchase of bulk propane. Propane Plus shares the cost equally for the labor, benefits, and other costs of this manager.

Advertising Shelby Energy expenses advertising costs as incurred.

Goodwill The goodwill has been recorded in connection with the purchase of one-half (1/2) of the interest from an unrelated party on June 30, 2000. The excess of the payment price over the value of assets acquired has been recorded as goodwill. Goodwill was tested for impairment and it was determined that goodwill has not been impaired, therefore, there was no amortization for 2016 or 2015.

Fair Value Measurements The Fair Value Measurements and Disclosures Topic of the FASB ASC 820, *Fair Value Measurements and Disclosures*, defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal, or most advantageous, market for the asset or liability in an orderly transaction between market participants at the measurement date. The Fair Values Measurements Topic establishes a three-level fair value hierarchy that prioritizes the inputs used to measure fair value. This hierarchy requires entities to maximize the use of observable inputs when possible. The three levels of inputs used to measure fair value are as follows:

Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities

Level 2: Quoted prices in markets that are not considered to be active or financial instruments for which all significant inputs are observable, either directly or indirectly.

Level 3: Prices or valuations that require inputs that are both significant to the fair value measure and unobservable.

A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The carrying amounts of Shelby Energy's cash and cash equivalents, accounts receivables, accounts payable, and other liabilities approximate fair value due to their short maturity. Investments in associated organizations are not considered a financial instrument because they represent nontransferable interests in associated organizations. Other assets and liabilities are not considered financial instruments because they represent activities specifically related to Shelby Energy. Long term debt can not be traded in the market, and is specifically for electric cooperatives and, therefore, a value other than its outstanding principal cannot be determined.

Shelby Energy may, and also does, invest idle funds in local banks and CFC Commercial Paper. The inputs used to measure idle funds are Level 1 measurements, as these funds are exchange traded funds in an active market.

Estimates The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates used in the preparation of the financial statements.

Shelby Energy Cooperative, Inc.
Notes to Financial Statements, continued

Note 1. Summary of Significant Accounting Policies, continued

Risk Management Shelby Energy is exposed to various forms of losses of assets associated with, but not limited to, fire, personal liability, theft, vehicular accidents, errors and omissions, fiduciary responsibility, workers compensation, etc. Each of these areas is covered through the purchase of commercial insurance.

Income Tax Status Shelby Energy is exempt from federal and state income taxes under provisions of Section 501(c)(12). Accordingly, the financial statements for Shelby Energy include no provision for income taxes. Income taxes for Service Corporation are provided on income as reported in the accompanying statements regardless of when such taxes are payable. Propane Plus is a limited liability company treated as a partnership for federal income tax purposes. All tax related issues would be passed on to Service Corporation. Propane Plus uses the same depreciation for book and taxes, therefore, deferred taxes are considered immaterial and are not recorded.

Effective January 1, 2008, Shelby Energy adopted the provisions of the *Income Taxes Topic* of the FASB ASC that pertains to accounting for uncertainty in income taxes. Shelby Energy had no prior unrecognized tax benefits as a result of the implementation. Management evaluates its potential exposures from tax positions taken that have or could be challenged by taxing authorities. These potential exposures result because taxing authorities may take positions that differ from those taken by management in the interpretation and application of statutes, regulations, and rules. There are no tax positions for which the ultimate deductibility is highly uncertain included in the accompanying financial statements. Shelby Energy recognizes interest accrued related to unrecognized tax benefits in interest expense and penalties in operating expenses. Shelby Energy did not recognize any interest or penalties during the years ended December 31, 2016 or 2015. Shelby Energy's income tax return is subject to possible examination by taxing authorities until the expiration of related statutes of limitations on the return, which is generally three years.

Comprehensive Income Comprehensive income includes both net margin and other comprehensive income. Other comprehensive income represents the change in funded status of the accumulated postretirement benefit obligation.

Subsequent Events Management has evaluated subsequent events through February 28, 2017, the date the financial statements were available to be issued. There were no significant subsequent events to report.

Note 2. Investments in Associated Organizations

Investments in associated organizations consist of:

	<u>2016</u>	<u>2015</u>
East Kentucky, patronage capital	\$21,994,666	\$19,862,502
CFC, CTC's	635,840	638,073
CFC, patronage capital	251,979	240,343
CFC, Member capital security	25,000	25,000
Other associated organizations	720,494	699,351
Economic development loans	<u>92,407</u>	<u>335,157</u>
Total	<u>\$23,720,386</u>	<u>\$21,800,426</u>

Shelby Energy records patronage capital assigned by associated organizations in the year in which such assignments are received. The Capital Term Certificates ("CTCs") of CFC are recorded at cost. The CTCs were purchased from CFC as a condition of obtaining long-term financing. The CTCs bear interest at 0%, 3%, and 5% and are scheduled to mature at varying times from 2020 to 2080.

Shelby Energy Cooperative, Inc.
Notes to Financial Statements, continued

Note 3. Patronage Capital

Under provisions of the long-term debt agreement, return to patrons of capital contributed by them is limited to amounts which would not allow the total equities and margins to be less than 30% of total assets, except that distributions may be made to estates of deceased patrons. The debt agreement provides, however, that should such distributions to estates not exceed 25% of the net margins for the next preceding year, Shelby Energy may distribute the difference between 25% and the payments made to such estates. The equity at December 31, 2016 was 39% of total assets. Patronage capital consists of:

	<u>2016</u>	<u>2015</u>
Assigned to date	\$45,347,999	\$43,136,250
Assignable margins	1,550,088	2,340,367
Unassigned margins	1,341,780	1,274,270
Retirements to date	<u>(8,827,326)</u>	<u>(8,272,630)</u>
Total	<u>\$39,412,541</u>	<u>\$38,478,257</u>

Note 4. Long Term Debt

All assets of Shelby Energy Cooperative, except vehicles, are pledged as collateral on the long term debt to RUS, Federal Financing Bank ("FFB"), and CFC under a joint mortgage agreement. During 2015 Shelby Energy Services executed a \$560,886 loan from East Kentucky for the purchase of treasury stock. The note is for ten (10) years. Long term debt consists of:

	<u>2016</u>	<u>2015</u>
<i>Shelby Energy Cooperative</i>		
RUS, 2.125% to 4.50%	\$2,170,898	\$18,143,913
FFB, 0.274% to 5.316%	32,222,683	29,072,308
CFC:		
3.65% to 6.65% notes	2,396,902	2,553,180
Refinance RUS loans 2.6% to 5.05%	<u>17,276,455</u>	<u>2,091,965</u>
	54,066,938	51,861,366
Less current portion	<u>1,920,000</u>	<u>1,750,000</u>
	<u>52,146,938</u>	<u>50,111,366</u>
<i>Shelby Energy Services</i>		
East Kentucky Power Cooperative 3.0%	491,426	540,655
Less current portion	<u>50,000</u>	<u>50,000</u>
	<u>441,426</u>	<u>490,655</u>
Total long term portion	<u>\$52,588,364</u>	<u>\$50,602,021</u>

The interest rates on the notes to CFC are subject to repricing at various dates for each individual note. The long term debt is due in quarterly and monthly installments of varying amounts through 2039. RUS assesses 12.5 basis points to administer the FFB loans. At December 31, 2016, there was \$9,400,000 of FFB loan funds unadvanced. During 2016, Shelby Energy refinanced \$15,684,215 of higher interest rate loans from RUS with funds from CFC.

As of December 31, 2016, the annual principal payments for the next five years are as follows: 2017 - \$1,920,000; 2018 - \$2,050,000; 2019 - \$2,200,000; 2020 - \$2,350,000; 2021 - \$2,500,000.

Shelby Energy Cooperative, Inc.
Notes to Financial Statements, continued

Note 4. Short Term Borrowings

At December 31, 2016, Shelby Energy had a short term line of credit of \$6,000,000 available from CFC. Advances against this line of credit amounted to \$1,346,472, with an interest rate of 2.10%.

Note 5. Pension Plan

All eligible employees of Shelby Energy participate in the NRECA Retirement and Security Plan ("R&S Plan"), a defined benefit pension plan qualified under section 401 and tax exempt under section 501(a) of the Internal Revenue Code. It is a multiemployer plan under the accounting standards. The Plan sponsor's identification number is 53-0116145 and the Plan Number is 333. Eligible employees include employees hired prior to September 2, 2009. Non-eligible employees are those hired after September 2, 2009. A unique characteristic of a multiemployer plan compared to a single employer plan is that all plan assets are available to pay benefits of any plan participant. Separate asset accounts are not maintained for participating employers. This means that assets contributed by one employer may be used to provide benefits to employees of other participating employers.

Shelby Energy's contributions to the R&S Plan in 2016 and 2015 represent less than 5 percent of the total contributions made to the plan by all participating employers. Shelby Energy made contributions to the plan of \$262,133 in 2016 and \$260,202 in 2015. There have been no significant changes that affect the comparability of 2016 and 2015. Employees hired after September 2, 2009 can only participate in the NRECA 401(k) plan. Employer contributions to the 401(k) plan amounted to \$113,838 for 2016 and \$100,500 for 2015.

In the R&S Plan, a "zone status" determination is not required, and therefore not determined, under the Pension Protection Act ("PPA") of 2006. In addition, the accumulated benefit obligations and plan assets are not determined or allocated separately by individual employer. In total, the R&S Plan was over 80 percent funded at January 1, 2016 and 2015 based on the PPA funding target and PPA actuarial value of assets on those dates. Because the provisions of the PPA do not apply to the R&S Plan, funding improvement plans and surcharges are not applicable. Future contribution requirements are determined each year as part of the actuarial valuation of the plan and may change as a result of plan experience.

At the December 2012 meeting of the I&FS Committee of the NRECA Board of Directors, the Committee approved an option to allow participating cooperatives in the Retirement Security ("R&S") Plan (a defined benefit multiemployer pension plan) to make a prepayment and reduce future required contributions. The prepayment amount is a cooperative share, as of January 1, 2013, of future contributions required to fund the R&S Plan's unfunded value of benefits earned to date using Plan actuarial valuation assumptions. The prepayment amount will typically equal approximately 2.5 times a cooperative's annual R&S Plan required contribution as of January 1, 2013. After making the prepayment, for most cooperatives the billing rate is reduced by approximately 25%, retroactive to January 1, 2013. The 25% differential in billing rates is expected to continue for approximately 15 years. However, changes in interest rates, asset returns and other plan experience different from that expected, plan assumptions changes, and other factors may have an impact on the differential in billing rates and the 15 year period. During 2013 Shelby Energy made the prepayment contribution.

Propane Plus has a profit sharing plan of 10% of net profits before the pension amount, where managers receive 5% of the plan amount and the remaining employees sharing 5%. The pension amount for 2016 was \$9,480 and 2015 was \$8,795.

Shelby Energy Cooperative, Inc.
Notes to Financial Statements, continued

Note 6. Postretirement Benefits

Shelby Energy sponsors a noncontributory defined benefit plan that provides medical insurance coverage to retired employees hired prior to July 1, 1996. Employees hired after July 1, 1996 are not eligible to participate. The plan calls for benefits to be paid at retirement based primarily upon years of service with Shelby Energy. There have been no significant changes that affect the comparability of 2016 and 2015.

The discount rate used in determining the APBO was 4.5% for 2016 and 2015. The health care cost trend rate used to compute the APBO in an 8% annual rate of increase for 2016, and decreasing gradually to 5.5%, then remain at that level thereafter.

The funded status of the plan is as follows:

	<u>2016</u>	<u>2015</u>
Projected benefit obligation	(1,997,479)	(\$1,984,457)
Plan assets at fair value	-	-
Total	<u>(\$1,997,479)</u>	<u>(\$1,984,457)</u>

The components of net periodic postretirement benefit costs are as follows:

	<u>2016</u>	<u>2015</u>
Benefit obligation at beginning of year	\$1,984,457	\$1,970,182
Components of net periodic benefit cost:		
Service cost	43,271	34,365
Interest cost	89,594	98,500
Net periodic benefit cost	132,865	132,865
Benefits paid	(119,843)	(118,590)
Adjustments	-	-
Benefit obligation at end of year	<u>\$1,997,479</u>	<u>\$1,984,457</u>

Amounts recognized in the balance sheet consists of:

Noncurrent liabilities	<u>\$1,997,479</u>	<u>\$1,984,457</u>
------------------------	--------------------	--------------------

Amounts included in other comprehensive income:

Unrecognized actuarial gain (loss)	<u>(\$198,702)</u>	<u>(\$209,741)</u>
------------------------------------	--------------------	--------------------

Effect of 1% increase in the health care trend:

Postemployment benefit obligation	\$2,127,000
Net periodic benefit cost	141,500

Projected retiree benefit payments for the next five years are expected to be as follows: 2017 - \$125,000; 2018 - \$120,000; 2019 - \$115,000; 2020 - \$105,000; 2021 - \$94,000.

Shelby Energy Cooperative, Inc.
Notes to Financial Statements, continued

Note 7. Commitments

Shelby Energy has various other agreements outstanding with local contractors. Under these agreements, the contractors will perform certain construction, maintenance, and other work at specified hourly rates or unit cost, or on an as needed basis. The duration of these contracts are one to three years.

Note 8. Related Party Transactions

Several of the Directors of Shelby Energy, its President & CEO, and another employee are on the boards of directors of various associated organizations.

Note 9. Labor Force

Approximately 35% of Shelby Energy's labor force is subject to a collective bargaining agreement. A three (3) year agreement was negotiated and approved for the period starting September, 2015 between Shelby Energy and the International Brotherhood of Electric Workers ("IBEW").

Note 10. Environmental Contingency

Shelby Energy from time to time is required to work with and handle PCBs, herbicides, automotive fluids, lubricants, and other hazardous materials in the normal course of business. As a result, there is the possibility that environmental conditions may arise which would require Shelby Energy to incur cleanup costs. The likelihood of such an event, or the amount of such costs, if any, cannot be determined at this time. However, management does not believe such costs, if any, would materially affect Shelby Energy's financial position or its future cash flows.

Note 11. Contingencies

Shelby Energy, on occasion, is involved in litigation arising in the normal course of business. While the results of such litigation cannot be predicted with certainty, management, based upon advice of counsel, believes that the final outcome will not have a material adverse effect on the financial statements.

* * * * *

Shelby Energy Cooperative and Subsidiary
Consolidating Balance Sheet, December 31, 2016

<u>Assets</u>	<u>Energy</u>	<u>Services</u>	<u>Propane</u>	<u>Eliminations</u>	<u>Consolidated</u>
Utility Plant, at original cost:					
In service	\$89,688,645		\$2,477,476		\$92,166,121
Under construction	1,186,875				1,186,875
	90,875,520		2,477,476		93,352,996
Less accumulated depreciation	17,163,110		1,246,551		18,409,661
	73,712,410		1,230,925		74,943,335
Investments and Other Assets:					
Associated organizations	23,720,386				23,720,386
Goodwill, net of amortization			368,414		368,414
Subsidiary	1,775,642	2,224,339		(3,999,981)	-
	25,496,028	2,224,339	368,414	(3,999,981)	24,088,800
Current Assets:					
Cash and cash equivalents	1,551,427	23,667	555,024		2,130,118
Accounts receivable, less allowance for Energy of \$429,034 and Propane of \$28,000	4,141,947		169,882	-	4,311,829
Material and supplies, at average cost	669,486		60,551		730,037
Prepayments	190,881		21,200		212,081
	6,553,741	23,667	806,657		7,384,065
 Total	 \$105,762,179	 \$2,248,006	 \$2,405,996	 (\$3,999,981)	 \$106,416,200
<u>Members' Equities and Liabilities</u>					
Members' and Stockholder's Equities:					
Capital investment		\$1,379,000	\$860,941	(\$2,239,941)	\$0
Patronage capital and retained earnings	39,412,541	396,642	1,366,751	(1,763,393)	39,412,541
Other equities	2,446,557	(19,062)		3,353	2,430,848
Other comprehensive income	(198,702)				(198,702)
	41,660,396	1,756,580	2,227,692	(3,999,981)	41,644,687
Long Term Debt	52,146,938	441,426			52,588,364
Accumulated Postretirement Benefits	1,997,479				1,997,479
Current Liabilities:					
Accounts payable	4,404,754		178,304	-	4,583,058
Short term borrowings	1,346,472			-	1,346,472
Current portion of long term debt	1,920,000	50,000			1,970,000
Consumer deposits	1,529,886				1,529,886
Accrued expenses	385,171				385,171
	9,586,283	50,000	178,304		9,814,587
Consumer Advances for Construction	371,083				371,083
 Total	 \$105,762,179	 \$2,248,006	 \$2,405,996	 (\$3,999,981)	 \$106,416,200

The accompanying notes are an integral part of the financial statements.

Shelby Energy Cooperative, Inc. and Subsidiary
Consolidating Statement of Revenue and Comprehensive Income
for the year ended December 31, 2016

Witness: James Adkins

	<u>Energy</u>	<u>Services</u>	<u>Propane</u>	<u>Eliminations</u>	<u>Consolidated</u>
Operating Revenues	\$44,666,885		\$1,481,653		\$46,148,538
Operating Expenses:					
Cost of purchases	33,721,739		546,398		34,268,137
Distribution - operations	1,704,628		423,536		2,128,164
Distribution - maintenance	3,531,327				3,531,327
Consumer accounts	706,504		108,459		814,963
Customer service and information	444,955				444,955
Sales	4,105				4,105
Administrative and general	988,871	4,165	124,142		1,117,178
Depreciation, excluding \$137,357 charged to clearing accounts	2,729,386		132,714		2,862,100
Taxes	52,282	1,355	18,754		72,391
Interest on long term debt	1,508,329	14,881			1,523,210
Other interest	11,186				11,186
Other	7,342				7,342
Total cost of electric service	45,410,654	20,401	1,354,003		46,785,058
Operating Margins	(743,769)	(20,401)	127,650		(636,520)
Nonoperating Margins:					
Interest income	38,060		1,661		39,721
Subsidiary and others	60,973	135,470	6,159	(250,539)	(47,937)
	99,033	135,470	7,820	(250,539)	(8,216)
Patronage Capital assigned from:					
East Kentucky Power Cooperative	2,132,164				2,132,164
Other organizations	62,660				62,660
	2,194,824				2,194,824
Net Margins	1,550,088	115,069	135,470	(250,539)	1,550,088
Other comprehensive Income:					
Postretirement benefits	11,039				11,039
Total Comprehensive Income	\$1,561,127	\$115,069	\$135,470	(\$250,539)	\$1,561,127

The accompanying notes are an integral part of the financial statements.

ALAN M. ZUMSTEIN
CERTIFIED PUBLIC ACCOUNTANT

1032 CHETFORD DRIVE
LEXINGTON, KENTUCKY 40509
(859) 264-7147
zumstein@windstream.net

MEMBER
• AMERICAN INSTITUTE OF CPA'S
• KENTUCKY SOCIETY OF CPA'S
• INDIANA SOCIETY OF CPA'S
• AICPA DIVISION FOR FIRMS

Report on Internal Control Over Financial Reporting and on Compliance
and Other Matters Based on an Audit of Financial Statements
Performed in Accordance with *Government Auditing Standards*

To the Board of Directors
Shelby Energy Cooperative, Inc.

I have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Shelby Energy Cooperative, Inc. (the "Cooperative"), which comprise the balance sheets as of December 31, 2016 and 2015, and the related statements of revenue and comprehensive income, members' equities, and cash flows for the years then ended, and related notes to the financial statements, and have issued my report thereon dated February 28, 2017.

Internal Control Over Financial Reporting

In planning and performing my audit of the financial statements, I considered the Cooperative's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing my opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the Cooperative's internal control. Accordingly, I do not express an opinion on the effectiveness of the Cooperative's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

My consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during my audit I did not identify any deficiencies in internal control that I consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the Cooperative's financial statements are free of material misstatement, I performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the

To the Board of Directors
Shelby Energy Cooperative, Inc.

determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of my audit, and accordingly, I do not express such an opinion. The results of my tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of my testing on internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the organization's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the organization's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Alan Zumstein

Alan M. Zumstein, CPA
February 28, 2017

ALAN M. ZUMSTEIN
CERTIFIED PUBLIC ACCOUNTANT

1032 CHETFORD DRIVE
LEXINGTON, KENTUCKY 40509
(859) 264-7147
zumstein@windstream.net

MEMBER
• AMERICAN INSTITUTE OF CPA'S
• KENTUCKY SOCIETY OF CPA'S
• INDIANA SOCIETY OF CPA'S
• AICPA DIVISION FOR FIRMS

Independent Auditor's Report on Compliance with Aspects of Contractual
Agreements and Regulatory Requirements for Electric Borrowers

Board of Directors
Shelby Energy Cooperative, Inc.

Independent Auditor's Report

I have audited, in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of Shelby Energy Cooperative, Inc. (the "Cooperative"), which comprise the balance sheet as of December 31, 2016, and the related statements of revenue and comprehensive income, patronage capital, and changes in cash flows for the year then ended, and the related notes to the financial statements, and have issued my report thereon dated February 28, 2017. In accordance with *Government Auditing Standards*, we have also issued my report dated February 28, 2017, on my consideration of the Cooperative's internal control over financial reporting and on my tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. No reports other than the reports referred to above related to my audit have been furnished to management.

In connection with my audit, nothing came to my attention that caused me to believe that the Cooperative failed to comply with the terms, covenants, provisions, or conditions of their loan, grant, and security instruments as set forth in 7 CFR Part 1773, *Policy on Audits of Rural Utilities Service Borrowers*, §1773.33 and clarified in the RUS policy memorandum dated February 28, 2017, insofar as they relate to accounting matters as enumerated below. However, my audit was not directed primarily toward obtaining knowledge of noncompliance. Accordingly, had I performed additional procedures, other matters may have come to my attention regarding the Cooperative's noncompliance with the above-referenced terms, covenants, provisions, or conditions of the contractual agreements and regulatory requirements, insofar as they relate to accounting matters. In connection with my audit, I noted no matters regarding the Cooperative's accounting and records to indicate that the Cooperative did not:

- Maintain adequate and effective accounting procedures;
- Utilize adequate and fair methods for accumulating and recording labor, material, and overhead costs, and the distribution of these costs to construction, retirement, and maintenance or other expense accounts;
- Reconcile continuing property records to the controlling general ledger plant accounts;
- Clear construction accounts and accrue depreciation on completed construction;
- Record and properly price the retirement of plant;
- Seek approval of the sale, lease, or transfer of capital assets and disposition of proceeds for the sale or lease of plant, material, or scrap;

Board of Directors
Shelby Energy Cooperative, Inc.

- Maintain adequate control over material and supplies;
- Prepare accurate and timely Financial and Operating Reports;
- Obtain written RUS approval to enter into any contract for the management, operation, or maintenance of the borrower’s system if the contract covers all or substantially all of the electric system;
- Disclose material related party transactions in the financial statements, in accordance with requirements for related parties in generally accepted accounting principles;
- Record depreciation in accordance with RUS requirements (“See RUS Bulletin 183-1, Depreciation Rates and Procedures”);
- Comply with the requirements for the detailed schedule of deferred debits and deferred credits; and
- Comply with the requirements for the detailed schedule of investments, which are listed below.

The deferred credits are as follows:

Consumer advances for construction	<u>\$371,083</u>
------------------------------------	------------------

Shelby Energy is a 100% owner of a subsidiary, Shelby Energy Services Corporation, which is engaged in the distribution sales of propane gas through a limited liability company (LLC) in and around the areas in which Shelby Energy provides electric service. The investment is accounted for using the equity method of accounting. The original investment was \$7,500. The investment is as follows:

	<u>Investment</u>	<u>Profits</u>
Balance, beginning of year	\$1,379,000	\$281,573
Activity for 2016	<u>-</u>	<u>115,069</u>
Balance, end of year	<u>\$1,379,000</u>	<u>\$396,642</u>

This report is intended solely for the information and use of the board of directors, management, RUS, and supplemental lenders and is not intended to be and should not be used by anyone other than these specified parties. However, this report is a matter of public record and its distributions is not limited.

Alan Zumstein
Alan M. Zumstein, CPA
February 28, 2017

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

19. Refer to the Application, Exhibit Q. Provide the monthly Financial and Statistical Report for the months of August 2016 to date. Consider this an ongoing request.

Response 19.

Refer to **Exhibit 2-19** for monthly financials August, 2016 through January, 2017 which is included as part of this response.

Shelby Energy will provide the monthly Financial and Statistical Report going forward during this proceeding.

USDA-RUS FINANCIAL AND STATISTICAL REPORT	BORROWER DESIGNATION
	KY0030
	PERIOD ENDED
	08/2016

Part A. Statement of Operations

ITEM	Year-to-Date	Year-to-Date	Year-to-Date	This Month
	Last Year	This Year	Budget	
	(a)	(b)	(c)	(d)
1. Operating Revenue and Patronage Capital	29,886,935	30,058,164	30,579,058	4,121,064
2. Power Production Expense	0	0	0	0
3. Cost of Purchased Power	22,862,445	22,828,340	23,532,688	3,195,345
4. Transmission Expense	0	0	0	0
5. Regional Market Operations Expense	0	0	0	0
6. Distribution Expense - Operation	986,681	1,138,011	1,134,322	151,026
7. Distribution Expense - Maintenance	1,287,025	2,016,194	1,928,172	217,057
8. Consumer Accounts Expense	371,344	460,594	440,738	42,649
9. Customer Service and Informational Expense	325,813	295,942	362,017	32,169
10. Sales Expense	(53,038)	6,172	(53,498)	(5,570)
11. Administrative and General Expense	725,086	641,280	843,689	100,955
12. Total Operation & Maintenance Expense (2 thru 11)	26,505,357	27,386,534	28,188,129	3,733,632
13. Depreciation and Amortization Expense	1,639,998	1,805,666	1,721,603	229,391
14. Tax Expense - Property & Gross Receipts	0	0	0	0
15. Tax Expense - Other	37,155	36,151	37,447	4,033
16. Interest on Long-Term Debt	1,062,097	1,038,537	1,126,197	204,715
17. Interest Charged to Construction - Credit	0	0	0	0
18. Interest Expense - Other	16,711	3,949	12,821	470
19. Other Deductions	3,505	5,898	7,198	319
20. Total Cost of Electric Service (12 thru 19)	29,264,823	30,276,734	31,093,395	4,172,559
21. Patronage Capital & Operating Margins (1 minus 20)	622,112	(218,570)	(514,337)	(51,496)
22. Non Operating Margins - Interest	22,164	25,564	20,985	2,790
23. Allowance for Funds Used During Construction	0	0	0	0
24. Income (Loss) from Equity Investments	0	0	0	0
25. Non Operating Margins - Other	(18,616)	87	0	0
26. Generation and Transmission Capital Credits	162,895	145,813	145,547	145,813
27. Other Capital Credits and Patronage Dividends	16,447	6,585	11,396	0
28. Extraordinary Items	0	0	0	0
29. Patronage Capital or Margins (21 thru 28)	805,001	(40,522)	(336,410)	97,107

Part B. Data on Transmission and Distribution Plant

ITEM	Year-to-Date	Year-to-Date
	Last Year	This Year
	(a)	(b)
1. New Services Connected	110	137
2. Services Retired	64	70
3. Total Services in Place	17,223	17,386
4. Idle Services (Exclude Seasonals)	963	869
5. Miles Transmission	0.00	0.00
6. Miles Distribution - Overhead	1,891.831	1,888.524
7. Miles Distribution - Underground	229.442	235.156
8. Total Miles Energized (5+6+7)	2,121.273	2,123.680

Witness: Debra Martin

USDA-RUS FINANCIAL AND STATISTICAL REPORT		BORROWER DESIGNATION KY0030	
		PERIOD ENDED 08/2016	
Part C. Balance Sheet			
ASSETS AND OTHER DEBITS		LIABILITIES AND OTHER CREDITS	
1. Total Utility Plant in Service	88,622,706	30. Memberships	0
2. Construction Work in Progress	990,060	31. Patronage Capital	37,038,911
3. Total Utility Plant (1+2)	89,612,766	32. Operating Margins - Prior Years	825,830
4. Accum. Provision for Depreciation and Amort.	17,740,326	33. Operating Margins - Current Years	-105,972
5. Net Utility Plant (3-4)	71,872,440	34. Non-Operating Margins	581,400
6. Non-Utility Property (Net)	0	35. Other Margins and Equities	2,065,700
7. Investments in Subsidiary Companies	1,660,573	36. Total Margins & Equities (30 thru 35)	40,405,869
8. Invest. In Assoc. Org. - Patronage Capital	20,818,582	37. Long-Term Debt - RUS (NET)	2,204,948
9. Invest. In Assoc. Org. - Other - General Funds	0	(Payments - Unapplied)	0
10. Invest. In Assoc. Org. - Non General Funds	669,540	38. Long-Term Debt - FFB - RUS Guaranteed	28,708,074
11. Investments in Economic Development Projects	187,421	39. Long-Term Debt - Other - RUS Guaranteed	0
12. Other Investments	114,706	40. Long-Term Debt Other (Net)	20,037,911
13. Special Funds	0	41. Long-Term Debt - RUS - Econ. Devel. (Net)	0
14. Total Other Property & Investments (6 thru 13)	23,450,822	42. Payments - Unapplied	0
15. Cash - General Funds	1,114,229	43. Total Long-Term Debt (37 thru 40)	50,950,934
16. Cash - Construction Funds - Trustee	0	44. Obligations Under Capital Leases - Noncurrent	0
17. Special Deposits	425	45. Accumulated Operating Provisions	1,998,189
18. Temporary Investments	0	46. Total Other Noncurrent Liabilities (44+45)	1,998,189
19. Notes Receivable (Net)	0	47. Notes Payable	1,493,654
20. Accounts Receivable - Sales of Energy (Net)	4,017,678	48. Accounts Payable	3,984,952
21. Accounts Receivable - Other (Net)	176,160	49. Consumers Deposits	1,534,633
22. Renewable Energy Credits	0	50. Current Maturities Long-Term Debt	0
23. Materials and Supplies - Electric & Other	753,145	51. Current Maturities Long-Term Debt-Economic Development	0
24. Prepayments	96,382	52. Current Maturities Capital Leases	0
25. Other Current and Accrued Assets	11,909	53. Other Current and Accrued Liabilities	766,526
26. Total Current and Accrued Assets (15 thru 25)	6,169,928	54. Total Current & Accrued Liabilities (47 thru 53)	7,779,765
27. Regulatory Assets	0	55. Regulatory Liabilities	0
28. Other Deferred Debits	1	56. Other Deferred Credits	358,433
29. Total Assets and Other Debits (5+14+26+ thru 28)	101,493,191	57. Total Liabilities and Other Credits (36+43+46+54 thru 56)	101,493,191

USDA-RUS FINANCIAL AND STATISTICAL REPORT		BORROWER DESIGNATION KY0030			
		PERIOD ENDED 09/2016			
Part A. Statement of Operations					
ITEM	Year-to-Date Last Year (a)	Year-to-Date This Year (b)	Year-to-Date Budget (c)	Year-to-Date This Month (d)	
1.	Operating Revenue and Patronage Capital	33,390,477	33,656,826	34,163,854	3,598,662
2.	Power Production Expense	0	0	0	0
3.	Cost of Purchased Power	25,497,949	25,590,792	26,245,455	2,762,452
4.	Transmission Expense	0	0	0	0
5.	Regional Market Operations Expense	0	0	0	0
6.	Distribution Expense - Operation	1,102,970	1,277,231	1,265,331	139,220
7.	Distribution Expense - Maintenance	1,534,925	2,300,245	2,117,181	284,051
8.	Consumer Accounts Expense	418,124	519,373	496,005	58,779
9.	Customer Service and Informational Expense	354,484	330,851	395,034	34,909
10.	Sales Expense	(67,621)	7,851	(67,222)	1,678
11.	Administrative and General Expense	810,256	731,453	951,481	90,173
12.	Total Operation & Maintenance Expense (2 thru 11)	29,651,088	30,757,795	31,403,265	3,371,262
13.	Depreciation and Amortization Expense	1,847,822	2,035,366	1,939,761	229,700
14.	Tax Expense - Property & Gross Receipts	0	0	0	0
15.	Tax Expense - Other	41,800	40,183	42,128	4,033
16.	Interest on Long-Term Debt	1,184,254	1,110,818	1,255,182	72,281
17.	Interest Charged to Construction - Credit	0	0	0	0
18.	Interest Expense - Other	27,300	9,795	20,797	5,846
19.	Other Deductions	3,797	7,207	7,728	1,308
20.	Total Cost of Electric Service (12 thru 19)	32,756,060	33,961,164	34,668,861	3,684,430
21.	Patronage Capital & Operating Margins (1 minus 20)	634,417	(304,338)	(505,007)	(85,768)
22.	Non Operating Margins - Interest	25,023	28,729	23,692	3,165
23.	Allowance for Funds Used During Construction	0	0	0	0
24.	Income (Loss) from Equity Investments	0	0	0	0
25.	Non Operating Margins - Other	(18,616)	87	0	0
26.	Generation and Transmission Capital Credits	162,895	145,813	145,547	0
27.	Other Capital Credits and Patronage Dividends	49,098	41,120	34,019	34,535
28.	Extraordinary Items	0	0	0	0
29.	Patronage Capital or Margins (21 thru 28)	852,817	(88,590)	(301,749)	(48,068)
Part B. Data on Transmission and Distribution Plant					
ITEM	Year-to-Date Last Year (a)	Year-to-Date This Year (b)			
1.	New Services Connected	132	155		
2.	Services Retired	64	70		
3.	Total Services in Place	17,245	17,404		
4.	Idle Services (Exclude Seasonals)	969	884		
5.	Miles Transmission	0.00	0.00		
6.	Miles Distribution - Overhead	1,892.179	1,889.460		
7.	Miles Distribution - Underground	230.124	235.676		
8.	Total Miles Energized (5+6+7)	2,122.303	2,125.136		

USDA-RUS		BORROWER DESIGNATION	Witness: Debra Martin
FINANCIAL AND STATISTICAL REPORT		KY0030	
		PERIOD ENDED	
		09/2016	
Part C. Balance Sheet			
ASSETS AND OTHER DEBITS		LIABILITIES AND OTHER CREDITS	
1. Total Utility Plant In Service	88,745,507	30. Memberships	0
2. Construction Work in Progress	1,171,657	31. Patronage Capital	37,030,380
3. Total Utility Plant (1+2)	89,917,164	32. Operating Margins - Prior Years	832,664
4. Accum. Provision for Depreciation and Amort.	17,836,351	33. Operating Margins - Current Years	-164,039
5. Net Utility Plant (3-4)	72,080,813	34. Non-Operating Margins	584,565
6. Non-Utility Property (Net)	0	35. Other Margins and Equities	2,089,414
7. Investments in Subsidiary Companies	1,660,573	36. Total Margins & Equities (30 thru 35)	40,352,985
8. Invest. In Assoc. Org. - Patronage Capital	20,839,228	37. Long-Term Debt - RUS (NET)	2,196,420
9. Invest. In Assoc. Org. - Other - General Funds	0	(Payments - Unapplied)	0
10. Invest. In Assoc. Org. - Non General Funds	669,540	38. Long-Term Debt - FFB - RUS Guaranteed	32,477,762
11. Investments in Economic Development Projects	179,251	39. Long-Term Debt - Other - RUS Guaranteed	0
12. Other Investments	114,706	40. Long-Term Debt Other (Net)	20,037,911
13. Special Funds	0	41. Long-Term Debt - RUS - Econ. Devel. (Net)	0
14. Total Other Property & Investments (6 thru 13)	23,463,298	42. Payments - Unapplied	0
15. Cash - General Funds	1,349,981	43. Total Long-Term Debt (37 thru 40)	54,712,093
16. Cash - Construction Funds - Trustee	0	44. Obligations Under Capital Leases - Noncurrent	0
17. Special Deposits	425	45. Accumulated Operating Provisions	2,000,868
18. Temporary Investments	1,242,276	46. Total Other Noncurrent Liabilities (44+45)	2,000,868
19. Notes Receivable (Net)	0	47. Notes Payable	0
20. Accounts Receivable - Sales of Energy (Net)	3,483,215	48. Accounts Payable	3,121,936
21. Accounts Receivable - Other (Net)	201,956	49. Consumers Deposits	1,531,943
22. Renewable Energy Credits	0	50. Current Maturities Long-Term Debt	0
23. Materials and Supplies - Electric & Other	802,878	51. Current Maturities Long-Term Debt-Economic Development	0
24. Prepayments	169,326	52. Current Maturities Capital Leases	0
25. Other Current and Accrued Assets	14,211	53. Other Current and Accrued Liabilities	728,259
26. Total Current and Accrued Assets (15 thru 25)	7,264,269	54. Total Current & Accrued Liabilities (47 thru 53)	5,382,138
27. Regulatory Assets	0	55. Regulatory Liabilities	0
28. Other Deferred Debits	0	56. Other Deferred Credits	360,296
29. Total Assets and Other Debits (5+14+26+ thru 28)	102,808,380	57. Total Liabilities and Other Credits (36+43+46+54 thru 56)	102,808,380

USDA-RUS FINANCIAL AND STATISTICAL REPORT		BORROWER DESIGNATION			
		KY0030			
		PERIOD ENDED			
		10/2016			
Part A. Statement of Operations					
ITEM	Year-to-Date	Year-to-Date	Year-to-Date		
	Last Year	This Year	Budget	This Month	
	(a)	(b)	(c)	(d)	
1.	Operating Revenue and Patronage Capital	36,480,990	36,876,957	37,325,960	3,220,131
2.	Power Production Expense	0	0	0	0
3.	Cost of Purchased Power	27,790,452	27,896,442	28,605,166	2,305,650
4.	Transmission Expense	0	0	0	0
5.	Regional Market Operations Expense	0	0	0	0
6.	Distribution Expense - Operation	1,238,271	1,394,507	1,411,620	117,276
7.	Distribution Expense - Maintenance	1,869,764	2,632,853	2,293,821	332,608
8.	Consumer Accounts Expense	457,508	579,430	543,162	60,056
9.	Customer Service and Informational Expense	382,265	361,955	424,165	31,104
10.	Sales Expense	(69,579)	9,245	(69,344)	1,394
11.	Administrative and General Expense	899,572	820,130	1,052,417	88,677
12.	Total Operation & Maintenance Expense (2 thru 11)	32,568,252	33,694,561	34,261,007	2,936,766
13.	Depreciation and Amortization Expense	2,056,033	2,265,843	2,158,326	230,478
14.	Tax Expense - Property & Gross Receipts	0	0	0	0
15.	Tax Expense - Other	46,444	44,216	46,809	4,033
16.	Interest on Long-Term Debt	1,319,469	1,200,620	1,398,856	89,802
17.	Interest Charged to Construction - Credit	0	0	0	0
18.	Interest Expense - Other	27,452	10,262	20,949	468
19.	Other Deductions	3,972	7,031	8,137	(176)
20.	Total Cost of Electric Service (12 thru 19)	36,021,621	37,222,534	37,894,084	3,261,370
21.	Patronage Capital & Operating Margins (1 minus 20)	459,369	(345,576)	(568,124)	(41,238)
22.	Non Operating Margins - Interest	29,065	32,485	27,519	3,756
23.	Allowance for Funds Used During Construction	0	0	0	0
24.	Income (Loss) from Equity Investments	0	0	0	0
25.	Non Operating Margins - Other	(18,616)	87	0	0
26.	Generation and Transmission Capital Credits	162,895	145,813	145,547	0
27.	Other Capital Credits and Patronage Dividends	49,099	41,120	34,020	0
28.	Extraordinary Items	0	0	0	0
29.	Patronage Capital or Margins (21 thru 28)	681,811	(126,072)	(361,038)	(37,482)
Part B. Data on Transmission and Distribution Plant					
ITEM	Year-to-Date	Year-to-Date			
	Last Year	This Year			
	(a)	(b)			
1.	New Services Connected	159	172		
2.	Services Retired	64	76		
3.	Total Services in Place	17,272	17,415		
4.	Idle Services (Exclude Seasonals)	972	895		
5.	Miles Transmission	0.00	0.00		
6.	Miles Distribution - Overhead	1,893,370	1,889,563		
7.	Miles Distribution - Underground	230,556	237,122		
8.	Total Miles Energized (5+6+7)	2,123,926	2,126,685		

Witness: Debra Martin

USDA-RUS FINANCIAL AND STATISTICAL REPORT		BORROWER DESIGNATION KY0030	
		PERIOD ENDED 10/2016	
Part C. Balance Sheet			
ASSETS AND OTHER DEBITS		LIABILITIES AND OTHER CREDITS	
1. Total Utility Plant In Service	88,952,233	30. Memberships	0
2. Construction Work in Progress	1,391,994	31. Patronage Capital	37,012,786
3. Total Utility Plant (1+2)	90,344,227	32. Operating Margins - Prior Years	837,818
4. Accum. Provision for Depreciation and Amort.	17,760,828	33. Operating Margins - Current Years	-210,429
5. Net Utility Plant (3-4)	72,583,400	34. Non-Operating Margins	588,321
6. Non-Utility Property (Net)	0	35. Other Margins and Equities	2,077,288
7. Investments In Subsidiary Companies	1,660,573	36. Total Margins & Equities (30 thru 35)	40,305,782
8. Invest. In Assoc. Org. - Patronage Capital	20,839,228	37. Long-Term Debt - RUS (NET)	2,188,064
9. Invest. In Assoc. Org. - Other - General Funds	0	(Payments - Unapplied)	0
10. Invest. In Assoc. Org. - Non General Funds	669,540	38. Long-Term Debt - FFB - RUS Guaranteed	32,477,762
11. Investments in Economic Development Projects	171,063	39. Long-Term Debt - Other - RUS Guaranteed	0
12. Other Investments	114,708	40. Long-Term Debt Other (Net)	20,037,911
13. Special Funds	0	41. Long-Term Debt - RUS - Econ. Devel. (Net)	0
14. Total Other Property & Investments (6 thru 13)	23,455,111	42. Payments - Unapplied	0
15. Cash - General Funds	1,190,083	43. Total Long-Term Debt (37 thru 40)	54,703,738
16. Cash - Construction Funds - Trustee	0	44. Obligations Under Capital Leases - Noncurrent	0
17. Special Deposits	425	45. Accumulated Operating Provisions	2,003,474
18. Temporary Investments	1,005,782	46. Total Other Noncurrent Liabilities (44+45)	2,003,474
19. Notes Receivable (Net)	0	47. Notes Payable	0
20. Accounts Receivable - Sales of Energy (Net)	2,775,775	48. Accounts Payable	2,672,980
21. Accounts Receivable - Other (Net)	253,349	49. Consumers Deposits	1,529,538
22. Renewable Energy Credits	0	50. Current Maturities Long-Term Debt	0
23. Materials and Supplies - Electric & Other	621,323	51. Current Maturities Long-Term Debt-Economic Development	0
24. Prepayments	170,297	52. Current Maturities Capital Leases	0
25. Other Current and Accrued Assets	2,598	53. Other Current and Accrued Liabilities	478,365
26. Total Current and Accrued Assets (15 thru 25)	6,019,633	54. Total Current & Accrued Liabilities (47 thru 53)	4,680,902
27. Regulatory Assets	0	55. Regulatory Liabilities	0
28. Other Deferred Debits	0	56. Other Deferred Credits	364,247
29. Total Assets and Other Debits (5+14+26+ thru 28)	102,058,144	57. Total Liabilities and Other Credits (36+43+46+54 thru 56)	102,058,144

USDA-RUS FINANCIAL AND STATISTICAL REPORT		BORROWER DESIGNATION KY0030 PERIOD ENDED 11/2016			
Part A. Statement of Operations					
ITEM	Year-to-Date Last Year (a)	Year-to-Date This Year (b)	Year-to-Date Budget (c)	Year-to-Date This Month (d)	
1.	Operating Revenue and Patronage Capital	39,815,772	40,302,506	41,547,191	3,425,549
2.	Power Production Expense	0	0	0	0
3.	Cost of Purchased Power	30,354,432	30,392,523	31,623,197	2,496,081
4.	Transmission Expense	0	0	0	0
5.	Regional Market Operations Expense	0	0	0	0
6.	Distribution Expense - Operation	1,374,030	1,555,527	1,560,754	161,021
7.	Distribution Expense - Maintenance	2,151,566	2,929,153	2,438,669	296,300
8.	Consumer Accounts Expense	497,788	649,330	590,964	69,900
9.	Customer Service and Informational Expense	423,672	407,288	469,598	45,333
10.	Sales Expense	(67,888)	10,885	(67,986)	1,640
11.	Administrative and General Expense	976,823	895,610	1,152,578	75,480
12.	Total Operation & Maintenance Expense (2 thru 11)	35,710,424	36,840,316	37,767,775	3,145,755
13.	Depreciation and Amortization Expense	2,265,033	2,497,049	2,377,719	231,206
14.	Tax Expense - Property & Gross Receipts	0	0	0	0
15.	Tax Expense - Other	51,089	48,249	51,490	4,033
16.	Interest on Long-Term Debt	1,435,586	1,426,302	1,523,396	225,682
17.	Interest Charged to Construction - Credit	0	0	0	0
18.	Interest Expense - Other	27,591	10,717	21,089	454
19.	Other Deductions	4,416	7,316	9,102	285
20.	Total Cost of Electric Service (12 thru 19)	39,494,139	40,829,948	41,750,571	3,607,414
21.	Patronage Capital & Operating Margins (1 minus 20)	321,633	(527,442)	(203,380)	(181,865)
22.	Non Operating Margins - Interest	32,199	35,216	30,487	2,730
23.	Allowance for Funds Used During Construction	0	0	0	0
24.	Income (Loss) from Equity Investments	0	0	0	0
25.	Non Operating Margins - Other	(18,616)	87	0	0
26.	Generation and Transmission Capital Credits	162,895	145,813	145,547	0
27.	Other Capital Credits and Patronage Dividends	49,099	41,120	34,020	0
28.	Extraordinary Items	0	0	0	0
29.	Patronage Capital or Margins (21 thru 28)	547,210	(305,207)	6,674	(179,135)
Part B. Data on Transmission and Distribution Plant					
ITEM	Year-to-Date Last Year (a)	Year-to-Date This Year (b)			
1.	New Services Connected	184	208		
2.	Services Retired	67	86		
3.	Total Services in Place	17,294	17,441		
4.	Idle Services (Exclude Seasonals)	997	906		
5.	Miles Transmission	0.00	0.00		
6.	Miles Distribution - Overhead	1,893.794	1,890.380		
7.	Miles Distribution - Underground	230.822	237.402		
8.	Total Miles Energized (5+6+7)	2,124.616	2,127.782		

Witness: Debra Martin

USDA-RUS FINANCIAL AND STATISTICAL REPORT		BORROWER DESIGNATION KY0030	
		PERIOD ENDED 11/2016	
Part C. Balance Sheet			
ASSETS AND OTHER DEBITS		LIABILITIES AND OTHER CREDITS	
1. Total Utility Plant in Service	89,245,650	30. Memberships	0
2. Construction Work in Progress	1,436,987	31. Patronage Capital	36,527,703
3. Total Utility Plant (1+2)	90,682,637	32. Operating Margins - Prior Years	840,715
4. Accum. Provision for Depreciation and Amort.	17,786,112	33. Operating Margins - Current Years	-395,194
5. Net Utility Plant (3-4)	72,896,525	34. Non-Operating Margins	591,052
6. Non-Utility Property (Net)	0	35. Other Margins and Equities	2,231,941
7. Investments in Subsidiary Companies	1,660,573	36. Total Margins & Equities (30 thru 35)	39,796,218
8. Invest. In Assoc. Org. - Patronage Capital	20,839,228	37. Long-Term Debt - RUS (NET)	2,179,492
9. Invest. In Assoc. Org. - Other - General Funds	0	(Payments - Unapplied)	0
10. Invest. In Assoc. Org. - Non General Funds	669,540	38. Long-Term Debt - FFB - RUS Guaranteed	32,477,762
11. Investments in Economic Development Projects	162,874	39. Long-Term Debt - Other - RUS Guaranteed	0
12. Other Investments	114,706	40. Long-Term Debt Other (Net)	19,673,357
13. Special Funds	0	41. Long-Term Debt - RUS - Econ. Devel. (Net)	0
14. Total Other Property & Investments (6 thru 13)	23,446,921	42. Payments - Unapplied	0
15. Cash - General Funds	1,662,266	43. Total Long-Term Debt (37 thru 40)	54,330,611
16. Cash - Construction Funds - Trustee	0	44. Obligations Under Capital Leases - Noncurrent	0
17. Special Deposits	425	45. Accumulated Operating Provisions	2,005,356
18. Temporary Investments	5,208	46. Total Other Noncurrent Liabilities (44+45)	2,005,356
19. Notes Receivable (Net)	0	47. Notes Payable	497,812
20. Accounts Receivable - Sales of Energy (Net)	2,945,404	48. Accounts Payable	3,128,761
21. Accounts Receivable - Other (Net)	327,477	49. Consumers Deposits	1,546,812
22. Renewable Energy Credits	0	50. Current Maturities Long-Term Debt	0
23. Materials and Supplies - Electric & Other	640,436	51. Current Maturities Long-Term Debt-Economic Development	0
24. Prepayments	146,557	52. Current Maturities Capital Leases	0
25. Other Current and Accrued Assets	4,900	53. Other Current and Accrued Liabilities	402,957
26. Total Current and Accrued Assets (15 thru 25)	5,732,673	54. Total Current & Accrued Liabilities (47 thru 53)	5,576,341
27. Regulatory Assets	0	55. Regulatory Liabilities	0
28. Other Deferred Debits	0	56. Other Deferred Credits	367,593
29. Total Assets and Other Debits (5+14+26+ thru 28)	102,076,119	57. Total Liabilities and Other Credits (36+43+46+54 thru 56)	102,076,119

USDA-RUS FINANCIAL AND STATISTICAL REPORT	BORROWER DESIGNATION
	KY0030
	PERIOD ENDED
12/2016	

Part A. Statement of Operations

ITEM	Year-to-Date	Year-to-Date	Year-to-Date	This Month
	Last Year	This Year	Budget	
	(a)	(b)	(c)	
1. Operating Revenue and Patronage Capital	43,507,714	44,666,885	45,831,004	4,364,379
2. Power Production Expense	0	0	0	0
3. Cost of Purchased Power	33,144,801	33,721,739	34,788,899	3,329,216
4. Transmission Expense	0	0	0	0
5. Regional Market Operations Expense	0	0	0	0
6. Distribution Expense - Operation	1,507,071	1,704,628	1,702,930	149,101
7. Distribution Expense - Maintenance	2,618,855	3,531,327	2,596,021	602,174
8. Consumer Accounts Expense	420,839	706,504	659,137	57,175
9. Customer Service and Informational Expense	450,669	444,955	498,830	37,667
10. Sales Expense	(66,722)	4,104	(66,717)	(6,780)
11. Administrative and General Expense	1,073,309	988,871	1,262,824	93,261
12. Total Operation & Maintenance Expense (2 thru 11)	39,148,822	41,102,129	41,441,924	4,261,813
13. Depreciation and Amortization Expense	2,474,514	2,729,386	2,597,618	232,337
14. Tax Expense - Property & Gross Receipts	0	0	0	0
15. Tax Expense - Other	53,496	52,281	56,171	4,033
16. Interest on Long-Term Debt	1,570,256	1,508,329	1,665,000	82,027
17. Interest Charged to Construction - Credit	0	0	0	0
18. Interest Expense - Other	28,644	11,186	21,915	469
19. Other Deductions	4,251	7,342	7,500	26
20. Total Cost of Electric Service (12 thru 19)	43,279,983	45,410,654	45,790,128	4,580,706
21. Patronage Capital & Operating Margins (1 minus 20)	227,731	(743,769)	40,876	(216,327)
22. Non Operating Margins - Interest	35,909	38,060	34,000	2,845
23. Allowance for Funds Used During Construction	0	0	0	0
24. Income (Loss) from Equity Investments	35,101	115,069	0	115,069
25. Non Operating Margins - Other	(3,501)	(54,097)	0	(54,184)
26. Generation and Transmission Capital Credits	1,972,964	2,132,164	1,762,847	1,986,351
27. Other Capital Credits and Patronage Dividends	72,162	62,660	50,000	21,540
28. Extraordinary Items	0	0	0	0
29. Patronage Capital or Margins (21 thru 28)	2,340,367	1,550,088	1,887,723	1,855,295

Part B. Data on Transmission and Distribution Plant

ITEM	Year-to-Date	Year-to-Date
	Last Year	This Year
	(a)	(b)
1. New Services Connected	211	238
2. Services Retired	69	98
3. Total Services in Place	17,319	17,459
4. Idle Services (Exclude Seasonals)	991	917
5. Miles Transmission	0.00	0.00
6. Miles Distribution - Overhead	1,894.472	1,891.005
7. Miles Distribution - Underground	231.456	237.876
8. Total Miles Energized (5+6+7)	2,125.928	2,128.881

USDA-RUS FINANCIAL AND STATISTICAL REPORT		BORROWER DESIGNATION KY0030 WITNESS: Debra Martin	
		PERIOD ENDED 12/2016	
Part C. Balance Sheet			
ASSETS AND OTHER DEBITS		LIABILITIES AND OTHER CREDITS	
1. Total Utility Plant in Service	89,688,645	30. Memberships	0
2. Construction Work in Progress	1,186,875	31. Patronage Capital	36,520,674
3. Total Utility Plant (1+2)	90,875,520	32. Operating Margins - Prior Years	844,148
4. Accum. Provision for Depreciation and Amort.	17,163,110	33. Operating Margins - Current Years	1,392,938
5. Net Utility Plant (3-4)	73,712,410	34. Non-Operating Margins	654,782
6. Non-Utility Property (Net)	0	35. Other Margins and Equities	2,247,855
7. Investments in Subsidiary Companies	1,775,642	36. Total Margins & Equities (30 thru 35)	41,660,396
8. Invest. In Assoc. Org. - Patronage Capital	22,825,579	37. Long-Term Debt - RUS (NET)	2,170,897
9. Invest. In Assoc. Org. - Other - General Funds	0	(Payments - Unapplied)	0
10. Invest. In Assoc. Org. - Non General Funds	669,540	38. Long-Term Debt - FFB - RUS Guaranteed	32,222,683
11. Investments in Economic Development Projects	92,407	39. Long-Term Debt - Other - RUS Guaranteed	0
12. Other Investments	132,858	40. Long-Term Debt Other (Net)	19,673,357
13. Special Funds	0	41. Long-Term Debt - RUS - Econ. Devel. (Net)	0
14. Total Other Property & Investments (6 thru 13)	25,496,028	42. Payments - Unapplied	0
15. Cash - General Funds	1,551,002	43. Total Long-Term Debt (37 thru 40)	54,066,938
16. Cash - Construction Funds - Trustee	0	44. Obligations Under Capital Leases - Noncurrent	0
17. Special Deposits	425	45. Accumulated Operating Provisions	1,997,479
18. Temporary Investments	0	46. Total Other Noncurrent Liabilities (44+45)	1,997,479
19. Notes Receivable (Net)	0	47. Notes Payable	1,346,472
20. Accounts Receivable - Sales of Energy (Net)	3,832,423	48. Accounts Payable	4,404,754
21. Accounts Receivable - Other (Net)	309,524	49. Consumers Deposits	1,529,866
22. Renewable Energy Credits	0	50. Current Maturities Long-Term Debt	0
23. Materials and Supplies - Electric & Other	669,486	51. Current Maturities Long-Term Debt-Economic Development	0
24. Prepayments	183,603	52. Current Maturities Capital Leases	0
25. Other Current and Accrued Assets	7,278	53. Other Current and Accrued Liabilities	385,172
26. Total Current and Accrued Assets (15 thru 25)	6,553,741	54. Total Current & Accrued Liabilities (47 thru 53)	7,666,283
27. Regulatory Assets	0	55. Regulatory Liabilities	0
28. Other Deferred Debits	0	56. Other Deferred Credits	371,083
29. Total Assets and Other Debits (5+14+26+ thru 28)	105,762,179	57. Total Liabilities and Other Credits (36+43+46+54 thru 56)	105,762,179

USDA-RUS FINANCIAL AND STATISTICAL REPORT	BORROWER DESIGNATION
	KY0030
	PERIOD ENDED
01/2017	

Part A. Statement of Operations

ITEM	Year-to-Date	Year-to-Date	Year-to-Date	This Month
	Last Year	This Year	Budget	
	(a)	(b)	(c)	
1. Operating Revenue and Patronage Capital	4,710,438	4,143,067	4,781,268	4,143,067
2. Power Production Expense	0	0	0	0
3. Cost of Purchased Power	3,458,468	3,268,473	3,517,790	3,268,473
4. Transmission Expense	0	0	0	0
5. Regional Market Operations Expense	0	0	0	0
6. Distribution Expense - Operation	159,098	163,590	166,335	163,590
7. Distribution Expense - Maintenance	224,582	275,546	238,130	275,546
8. Consumer Accounts Expense	66,436	71,593	64,895	71,593
9. Customer Service and Informational Expense	54,080	30,326	59,679	30,326
10. Sales Expense	2,551	(1,652)	2,603	(1,652)
11. Administrative and General Expense	64,824	84,205	104,126	84,205
12. Total Operation & Maintenance Expense (2 thru 11)	4,030,040	3,892,081	4,153,558	3,892,081
13. Depreciation and Amortization Expense	477,570	228,666	230,026	228,666
14. Tax Expense - Property & Gross Receipts	0	0	0	0
15. Tax Expense - Other	4,681	4,444	4,843	4,444
16. Interest on Long-Term Debt	133,371	123,026	128,547	123,026
17. Interest Charged to Construction - Credit	0	0	0	0
18. Interest Expense - Other	473	838	473	838
19. Other Deductions	256	1,669	227	1,669
20. Total Cost of Electric Service (12 thru 19)	4,646,392	4,250,724	4,517,674	4,250,724
21. Patronage Capital & Operating Margins (1 minus 20)	64,046	107,657	263,594	107,657
22. Non Operating Margins - Interest	3,630	2,588	3,166	2,588
23. Allowance for Funds Used During Construction	0	0	0	0
24. Income (Loss) from Equity Investments	0	0	0	0
25. Non Operating Margins - Other	(331)	300	(331)	300
26. Generation and Transmission Capital Credits	0	0	0	0
27. Other Capital Credits and Patronage Dividends	0	900	0	900
28. Extraordinary Items	0	0	0	0
29. Patronage Capital or Margins (21 thru 28)	67,345	(103,869)	266,429	(103,869)

Part B. Data on Transmission and Distribution Plant

ITEM	Year-to-Date	Year-to-Date
	Last Year	This Year
	(a)	(b)
1. New Services Connected	15	17
2. Services Retired	0	8
3. Total Services in Place	17,334	17,468
4. Idle Services (Exclude Seasonals)	1,342	922
5. Miles Transmission	0.00	0.00
6. Miles Distribution - Overhead	1,895.396	1,891.037
7. Miles Distribution - Underground	231.611	237.918
8. Total Miles Energized (5+6+7)	2,127.007	2,128.955

USDA-RUS FINANCIAL AND STATISTICAL REPORT		BORROWER DESIGNATION KY0030 PERIOD ENDED 01/2017		Witness: Debra Martin
Part C. Balance Sheet				
ASSETS AND OTHER DEBITS		LIABILITIES AND OTHER CREDITS		
1. Total Utility Plant In Service	88,422,075	30. Memberships		0
2. Construction Work in Progress	820,646	31. Patronage Capital		36,507,077
3. Total Utility Plant (1+2)	89,242,721	32. Operating Margins - Prior Years		2,240,581
4. Accum. Provision for Depreciation and Amort.	15,473,470	33. Operating Margins - Current Years		(110,251)
5. Net Utility Plant (3-4)	73,769,251	34. Non-Operating Margins		657,870
6. Non-Utility Property (Net)	0	35. Other Margins and Equities		2,254,200
7. Investments in Subsidiary Companies	1,775,642	36. Total Margins & Equities (30 thru 35)		41,549,276
8. Invest. In Assoc. Org. - Patronage Capital	22,825,579	37. Long-Term Debt - RUS (NET)		2,162,683
9. Invest. In Assoc. Org. - Other - General Funds	0	(Payments - Unapplied)		0
10. Invest. In Assoc. Org. - Non General Funds	657,156	38. Long-Term Debt - FFB - RUS Guaranteed		32,222,683
11. Investments In Economic Development Projects	89,789	39. Long-Term Debt - Other - RUS Guaranteed		0
12. Other Investments	132,858	40. Long-Term Debt Other (Net)		19,673,357
13. Special Funds	0	41. Long-Term Debt - RUS - Econ. Devel. (Net)		0
14. Total Other Property & Investments (6 thru 13)	25,481,025	42. Payments - Unapplied		0
15. Cash - General Funds	1,415,461	43. Total Long-Term Debt (37 thru 40)		54,058,723
16. Cash - Construction Funds - Trustee	0	44. Obligations Under Capital Leases - Noncurrent		0
17. Special Deposits	425	45. Accumulated Operating Provisions		1,998,621
18. Temporary Investments	0	46. Total Other Noncurrent Liabilities (44+45)		1,998,621
19. Notes Receivable (Net)	0	47. Notes Payable		2,145,079
20. Accounts Receivable - Sales of Energy (Net)	4,082,692	48. Accounts Payable		3,418,844
21. Accounts Receivable - Other (Net)	24,061	49. Consumers Deposits		1,541,336
22. Renewable Energy Credits	0	50. Current Maturities Long-Term Debt		0
23. Materials and Supplies - Electric & Other	659,813	51. Current Maturities Long-Term Debt-Economic Development		0
24. Prepayments	217,874	52. Current Maturities Capital Leases		0
25. Other Current and Accrued Assets	9,513	53. Other Current and Accrued Liabilities		577,224
26. Total Current and Accrued Assets (15 thru 25)	6,409,839	54. Total Current & Accrued Liabilities (47 thru 53)		7,682,483
27. Regulatory Assets	0	55. Regulatory Liabilities		0
28. Other Deferred Debits	0	56. Other Deferred Credits		371,011
29. Total Assets and Other Debits (5+14+26+ thru 28)	105,660,114	57. Total Liabilities and Other Credits (36+43+46+54 thru 56)		105,660,114

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

20. Refer to the Application, Exhibit Q, page 23 of 24.

a. Explain what Idle Services are and whether Idle Services are included in the Total Services in Place.

b. If the answer to part a. is that Idle Services are not in Total Services in Place, explain whether there are still facilities in place to serve the Idle Services.

c. Explain whether Idle Services are capable of providing service.

d. Explain how the costs to serve Idle Services are included in the cost of service study ("COSS").

e. Explain whether any revenue is collected from idle services.

Response 20a.

Idle Services are the total number of delivery points to which service wires remain physically in place but for which no bill is being rendered. At any point in time, the number of idle services may vary and classification of an Idle Service can change to an Active Service, or vice versa, as customers connect or disconnect a service.

Response 20b.

Yes, Idle Services are included in Total Services in Place.

Response 20c.

Yes, Idle Services are capable of providing service. If an idle service becomes obsolete or incapable of providing adequate or safe service, the service is retired from plant.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 20d.

Idle Services are not considered as an integral part of the COSS. No value is placed on the idle service much less of an allocation of that value to an assumed idle service comprised of a meter, a service drop, a transformer or even any overhead lines (poles and conductor).

Response 20e.

When a service is classified as an Idle Service, there is no revenue collected. When the service is connected and becomes classified as an Active Service, revenue is collected.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

21. Refer to the Application, Exhibit R, the COSS.

a. Refer to page 3 of 42. Explain why Account 595 - Maintenance of Line Transformers has a negative balance.

b. Refer to page 4 of 42. Explain why Account 912 - Demonstration and Selling Expenses has a negative balance.

c. Refer to page 18 of 42. For Account 594 - Maintenance of Underground Lines, explain why an amount of \$31,448 does not appear in the Services column as it does on page 11 of 42.

d. Refer to pages 22-25 of 42. Explain the different methods (zero intercept and minimum size) used to determine the customer- and demand-related components for Account 364, Poles; Account 365, Overhead Conductors; and Account 368, Transformers; and the reason Shelby Energy used the selected method for each of the accounts.

e. Refer to page 24 of 42. Explain the calculation of the minimum size of 3.05413 and why the minimum size would not be 3.97 instead.

f. Refer to page 29 of 42.

(1) Refer to Table A - Lines and Table B - Transformers. The number of customers for Schedule 5 - Outdoor & Security Lights is shown as 31. State whether this indicates that 31 customer accounts are billed for outdoor and/or security lights. If not, explain what the 31 represents.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

(2) Refer to Table B - Transformers. Explain why the minimum transformer cost for Schedule 2 - Large Power is less than the minimum transformer cost for the Residential and General Service rate classes.

g. Refer to page 30 of 42, Table C. Services.

(1) Explain why the minimum service cost is the same for the first five rate classes shown.

(2) Explain why there is no minimum service cost for Schedules B1 and B2.

h. Refer to page 30 of 42, Table D. Meters. Explain why there is no minimum service cost for Schedules B1 and B2.

i. Refer to page 31 of 42. Explain why the Relative Weight Consumer Records column in the top table does not equal the Relative Weight Consumer Records column in the bottom table.

j. Refer to Staff's First Request, Item 56, Excel spreadsheet for Exhibit R, Tab "StmntOper-Unbund," row 47. Explain the origin of the amounts in this row and why they do not reconcile to the billing determinants in the Application, Exhibit J.

k. Provide a schedule showing the calculation of the customer charge supported by the COSS for each rate class.

l. Refer to pages 37 and 39 of 42. Given the results of the COSS, explain why Shelby Energy is proposing an increase for Rate Schedules B 1 and B2.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

m. Refer to page 41 of 42. This schedule shows the class rates of return at proposed rates. Provide a schedule showing class rates of return at current rates.

Response 21a.

Refer to Response 56e. of the Second Data Request of Commission Staff.

Response 21b.

Refer to Response 23 of the Second Data Request of Commission Staff.

Response 21c.

A change has been made to this allocation. See results on Page 18 of 42 in the attached COSS included on the **USB drive (B)** which is included as part of this response.

Response 21d.

Two primary methods exist for the determination of the demand related and the consumer related investments and expenses for the functions of lines and transformers. These two methods are the minimum size method and the minimum or zero intercept method.

The minimum size method assumes that a minimum size distribution system exists to serving the minimum load requirements for the customers of the utility. The minimum size includes the development of the minimum size pole, conductor, and transformer that currently exists on the distribution system. The average book cost for this minimum size for each piece of equipment is multiplied by the number of pieces of this type of equipment to determine the minimum investment or customer related investment. The remainder of the plant investment is considered to be demand related. The proportions of consumer

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

related and demand related investment is then used to indicate how plant expenses are divided into the demand related expenses and the consumer related expenses.

The minimum or zero intercept method attempts to identify that portion of plant at the no load or zero intercept situation. The zero intercept approach requires more data than the minimum size method. The average installed book cost for each type of plant, the number of units for each size of plant and the size of each type of plant. Regression equations are utilized that integrate the size of plant, the average book cost of plant, and the number of units of plant to determine the minimum or zero intercept of this type plant. The zero intercept amount multiplied by the number of units of plant is used to determine the minimum investment or consumer related investment. The remainder of the plant investment is demand related. The proportions of consumer related and demand related investment is then used to show how plant expenses are divided into the demand related expenses and the consumer related expenses. The zero intercept method is preferable over the minimum size method.

One of these two approaches were used to determine the demand related and consumer related investments for poles, conductor, and transformers. The zero intercept method was utilized when it produced reasonable results. Otherwise, the minimum size method was used when the zero intercept method did not prove to be satisfactory. Listed below are the approaches in this COSS.

- Account 364 - Poles – The minimum size method was used for this plant investment to determine the consumer and demand related investments because

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

the way poles are grouped in the continuous property records (CPR's) results in a negative zero intercept results.

- Account 365 - Overhead Conductor – For this account, the zero intercept method to determine the consumer and demand related investments was used because it did seem to provide satisfactory results. The zero intercept amount seems to be reasonable because it is a positive amount and well within the range of the unit prices for items within this plant account.
- Account 367 - Underground Conductor – For this account, the results of the regression equation were utilized to determine a minimum size amount even though the zero intercept is a negative amount. An amount at the minimum size of 185 amps was used because most of the investment in underground conductor was about 185 amps. The end results for the demand related and consumer related investments seem to be reasonable.
- Account 368 - Transformers – For this account, the minimum or zero intercept method was utilized to determine the customer related and the demand related investment. Only transformers up to 50 KVA have been utilized in the regression analysis to determine the zero intercept. The results from this method seem to be reasonably satisfactory.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 21e.

Please see the table below for a comparison of minimum sizes.

Comparison of Minimum Size Amounts				
Classification	Minimum Size \$3.054		Minimum Size \$3.967	
	Investment	Percent	Investment	Percent
Total Amount of Conductor in Feet	790,181		790,181	
Use Minimum Size	3.0541		3.9672	
Minimum Size Investment - Consumer	2,413,318	69.4%	3,134,823	90.1%
Demand Related	1,065,729	30.6%	344,224	9.9%
Investment in Conductor	3,479,047	100.0%	3,479,047	100.0%

The results for the \$3.97 approach seemed much too large an investment in underground conductor that is consumer related. The amount of 90.1% is extremely high and unreasonable. This has been a judgment decision on using the smaller consumer related amount.

Response 21f (1).

(1) The number 31 represents the number of consumers that have a light only account and no other charges are billed on this account.

(2) A change has been made to increase the minimum size for Schedule 2 – Large Power to minimum size of 50 KVA. Please see the revised COSS with this change attached to this response.

Response 21g (1).

(1) The service drop for the first four rate classes are very similar in size and power requirements. That is the reason for the same size of services. The amount for

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

the fifth rate class, Schedule 2 – Large Power has been changed to coincide with the service drop needed for this type of customer. This change has also been made to the COSS attached to this response.

(2) The customers for B1 and B2 supply their own service drops. Shelby does not provide the service drop to serve these customers.

Response 21h.

The services for members in this rate class are provided by the members.

Response 21i.

They do not equal due to a mistake in a copy and paste function. They are now equal in the attached COSS contained on **USB Drive B**.

Response 21j.

This information came from a previous use of the COSS template. It has been updated to agree with Exhibit J in the Application. The data on Line 47 of this tab has not been used anywhere else in COSS. The updated information is included in the COSS attached to this response.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 21k.

Please see the table provided in this response which contains the customer related costs.

Consumer Related Costs from Revised COSS,	
Rate 12, Residential Service	\$ 35.78
Off Peak Marketing Rate (ETS)	\$ 13.04
Rate 15, Prepay Service	\$ 33.67
Rate 11, General Service	\$ 43.43
Rate 5, Outdoor and Street Light	\$ 11.42
Rate 2, Large Power	\$ 45.32
Schedule B1, Large Industrial R	\$ 294.73
Schedule B2, Large Industrial R	\$ 2,622.92

Response 21l:

Shelby wanted to increase the demand charge for these two rate classes to make it equal to the demand rate of the wholesale power supplier's Schedule B rate. Also, an increase is proposed for these two rate classes at the direction of the Board of Directors for Shelby Energy. The Board felt that the increase was reasonable for these two rate classes because these classes did not receive any or very little of increase in rates that occurred in 2010. The only increases in rates that these classes have had were due to pass through of wholesale power increases.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 21m:

The table below provides the requested rates of return based on current rates.

Return on Rate Base before Rate Increase	
Rate 12, Residential Service	0.23%
Off Peak Marketing Rate (ETS)	2.72%
Rate 15, Prepay Service	0.99%
Rate 11, General Service	-14.25%
Rate 5, Outdoor and Street Lighting	-2.16%
Rate 2, Large Power	-1.46%
Schedule B1, Large Industrial Rate	16.26%
Schedule B2, Large Industrial Rate	3.97%
Total	1.26%

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

22. If it is necessary to update Exhibits J and/or R in response to questions contained in this information request, provide the updated versions in Excel spreadsheet format.

Response 22.

Refer to **Exhibit 2-22** for updated Exhibit J and **Exhibit 2-22 (1)** for Exhibit R. The updated Excel spreadsheet for Exhibit R and Exhibit J are on the **USB Drive (B)** which is made a part of this response.

Residential Service - Rate 12

Description	Billing Determinants	Test Year Revenues	Normalized 2010-00509		Phase 1 Proposed		Phase 2 Proposed		Phase 3 Proposed	
			Rates	Revenues	Rates	Revenues	Rates	Revenues	Rates	Revenues
Consumer Facility Charge	145,617	\$1,476,556	\$10.14	\$1,476,556	\$13.06	\$1,901,758	\$14.03	\$2,043,007	\$15.00	\$2,184,255
Energy charge per kWh	195,123,986	17,289,936	\$0.08861	17,289,936	\$0.08989	17,539,695	\$0.09039	17,637,257	\$0.09088	17,732,868
Difference to partials		10,427		10,427		10,427		10,427		10,427
Total from base rates		18,776,920		<u>\$18,776,920</u>		<u>\$19,451,880</u>		<u>\$19,690,691</u>		<u>\$19,927,550</u>
Fuel adjustment		(817,558)								
Environmental surcharge		2,328,108								
Total revenues		<u>\$20,287,470</u>								
Amount				\$0		\$674,960		\$238,810		\$236,859
Percent				0.0%		3.6%		1.2%		1.2%
Average monthly bill	1,340	\$128.95		\$128.95		\$133.58		\$135.22		\$136.85
Amount				\$0.00		\$4.64		\$1.64		\$1.63
Percent				0.0%		3.6%		1.2%		1.2%

Off-Peak Retail Marketing Rate (ETS)

Description	Billing Determinants	Test Year Revenues	Normalized 2010-00509		Phase 1 Proposed		Phase 2 Proposed		Phase 3 Proposed	
			Rates	Revenues	Rates	Revenues	Rates	Revenues	Rates	Revenues
Consumer Facility Charge	667									
Energy charge per kWh	253,124	15,486	\$0.06118	15,486	\$0.06216	15,734	\$0.06248	15,815	\$0.06281	15,899
Total from base rates		15,486		<u>\$15,486</u>		<u>\$15,734</u>		<u>\$15,815</u>		<u>\$15,899</u>
Fuel adjustment		(936)								
Environmental surcharge		<u>1,888</u>								
Total revenues		<u>\$16,438</u>								
Amount				\$0		\$248		\$81		\$84
Percent				0.0%		1.6%		0.5%		0.5%
Average monthly bill	379	\$23.22		\$23.22		\$23.59		\$23.71		\$23.84
Amount				\$0.00		\$0.37		\$0.12		\$0.13
Percent				0.0%		1.6%		0.5%		0.5%

Prepay Service - Rate 15

Description	Billing Determinants	Test Year Revenues	Normalized 2010-00509		Phase 1 Proposed		Phase 2 Proposed		Phase 3 Proposed	
			Rates	Revenues	Rates	Revenues	Rates	Revenues	Rates	Revenues
Consumer Facility Charge (per day)	7,166	\$51,896	\$0.338	\$51,896	\$0.4350	\$93,516	\$0.4680	\$100,611	\$0.5000	\$107,490
Energy charge per kWh	9,471,107	839,235	\$0.08861	839,235	\$0.08989	851,358	\$0.09039	856,093	\$0.09088	860,734
Prepay Service Fee (per day)	7,166	15,354	\$0.100	15,354	\$0.100	21,498	\$0.100	21,498	\$0.100	21,498
Total from base rates		906,485		<u>\$906,485</u>		<u>\$966,372</u>		<u>\$978,202</u>		<u>\$989,722</u>
Fuel adjustment		(43,891)								
Environmental surcharge		113,313								
Total revenues		<u>\$975,907</u>								
Amount				(\$0)		\$59,887		\$11,830		\$11,520
Percent				0.0%		6.6%		1.2%		1.2%
Average monthly bill	1,322	\$126.50		\$126.50		\$134.86		\$136.51		\$138.11
Amount				(\$0.00)		\$8.36		\$1.65		\$1.61
Percent				0.0%		6.6%		1.2%		1.2%

General Service - Rate 11

Description	Billing Determinants	Test Year Revenues	Normalized 2010-00509		Phase 1 Proposed		Phase 2 Proposed		Phase 3 Proposed	
			Rates	Revenues	Rates	Revenues	Rates	Revenues	Rates	Revenues
Consumer Facility Charge										
Single phase	35,906	\$467,855	\$13.03	\$467,855	\$16.01	\$574,855	\$17.01	\$610,761	\$18.00	\$646,308
Three phase	2,778	94,119	\$33.88	94,119	\$37.55	104,314	\$38.78	107,731	\$40.00	111,120
Demand charge (contract)	0	0	\$5.17	0	\$5.17	0	\$5.17	0	\$5.17	0
Energy charge per kWh	31,793,552	2,867,778	\$0.09020	2,867,778	\$0.09193	2,922,781	\$0.09250	2,940,904	\$0.09308	2,959,344
Primary metering discount 5% Rate 23		(371)		(371)		(380)		(382)		(385)
Total from base rates		\$3,429,381		\$3,429,381		\$3,601,570		\$3,659,013		\$3,716,387
Fuel adjustment		(135,228)								
Environmental surcharge		424,585								
Total revenues		\$3,718,738								
Amount				\$0		\$172,189		\$57,443		\$57,373
Percent				0.0%		5.0%		1.6%		1.6%
Average monthly bill	822	\$95.51		\$95.51		\$100.31		\$101.91		\$103.50
Amount				\$0.00		\$4.80		\$1.60		\$1.60
Percent				0.0%		5.0%		1.6%		1.6%

Large Power Service - Rate 2

Description	Billing Determinants	Test Year Revenues	Normalized 2010-00509		Phase 1 Proposed		Phase 2 Proposed		Phase 3 Proposed	
			Rates	Revenues	Rates	Revenues	Rates	Revenues	Rates	Revenues
Consumer Facility Charge	636	\$33,186	\$52.18	33,186	\$58.06	\$36,926	\$64.12	\$40,780	\$70.00	\$44,520
Demand charge	157,131	812,367	\$5.17	812,367	\$5.46	857,935	\$5.76	905,075	\$6.05	950,643
Interruptible Credit \$4.90 - Rate 5	0	0	(\$4.90)	0	(\$4.90)	0	(\$4.90)	0	(\$4.90)	0
Energy charge per kWh	52,584,285	3,383,799	\$0.06435	3,383,799	\$0.06419	3,375,385	\$0.06402	3,366,446	\$0.06385	3,357,507
Primary meter discount 5% - Rate 32		(50,630)		(50,630)		(51,223)		(51,685)		(52,129)
Total from base rates		4,178,722		<u>\$4,178,722</u>		<u>\$4,219,024</u>		<u>\$4,260,616</u>		<u>\$4,300,540</u>
Fuel adjustment		(220,288)								
Environmental surcharge		495,351								
Total revenues		<u>\$4,453,785</u>								
Amount				\$0		\$40,301		\$41,592		\$39,924
Percent				0.0%		1.0%		1.0%		0.9%
Average monthly bill	82,680	\$6,570.32		\$6,570.32		\$6,633.69		\$6,699.08		\$6,761.86
Amount				\$0.00		\$63.37		\$65.40		\$62.77
Percent				0.0%		1.0%		1.0%		0.9%

Large Industrial Rate - Schedule B1

Description	Billing Determinants	Test Year Revenues	Normalized 2010-00509		Phase 1 Proposed		Phase 2 Proposed		Phase 3 Proposed	
			Rates	Revenues	Rates	Revenues	Rates	Revenues	Rates	Revenues
Consumer Facility Charge	167	\$102,585	\$614.28	\$102,585	\$614.28	\$102,585	\$614.28	\$102,585	\$614.28	\$102,585
Demand Charge										
Contract Demand	240,100	1,483,818	\$6.18	1,483,818	\$6.51	1,563,051	\$6.84	1,642,284	\$7.17	1,721,517
Excess of contract Demand	25,252	226,763	\$8.98	226,763	\$9.31	235,096	\$9.65	243,682	\$9.98	252,015
Energy charge	126,170,360	6,606,280	\$0.05236	6,606,280	\$0.05232	6,601,233	\$0.05231	6,599,972	\$0.05230	6,598,710
Energy charge, contract minimum	3,955,428	207,106	\$0.05236	207,106	\$0.05232	206,948	\$0.05231	206,908	\$0.05230	206,869
Primary meter discount 5% - Rate 38		(114,999)		(114,999)		(116,185)		(117,353)		(118,518)
Total from base rates		8,511,553		<u>\$8,511,553</u>		<u>\$8,592,728</u>		<u>\$8,678,078</u>		<u>\$8,763,177</u>
Fuel adjustment		(534,455)								
Environmental surcharge		<u>994,045</u>								
Total revenues		<u>\$8,971,143</u>								
Amount				\$0		\$81,175		\$85,349		\$85,100
Percent				0.0%		1.0%		1.0%		1.0%
Average monthly bill	779,196	\$50,967.38		\$50,967.38		\$51,453.46		\$51,964.54		\$52,474.12
Amount				\$0.00		\$486.08		\$511.07		\$509.58
Percent				0.0%		1.0%		1.0%		1.0%

Large Industrial Rate - Schedule B2

Description	Billing Determinants	Test Year Revenues	Normalized 2010-00509		Phase 1 Proposed		Phase 2 Proposed		Phase 3 Proposed	
			Rates	Revenues	Rates	Revenues	Rates	Revenues	Rates	Revenues
Consumer Facility Charge	12	\$14,729	\$1,227.41	\$14,729	\$1,227.41	\$14,729	\$1,227.41	\$14,729	\$1,227.41	\$14,729
Demand Charge										
Contract Demand	97,500	602,550	\$6.18	602,550	\$6.77	660,075	\$6.97	679,575	\$7.17	699,075
Excess of contract Demand	3,389	30,433	\$8.98	30,433	\$9.58	32,467	\$9.78	33,144	\$9.98	33,822
Energy charge	63,560,133	2,963,173	\$0.04662	2,963,173	\$0.04625	2,939,656	\$0.04612	2,931,393	\$0.04600	2,923,766
Total from base rates		3,610,886		<u>\$3,610,886</u>		<u>\$3,646,927</u>		<u>\$3,658,842</u>		<u>\$3,671,392</u>
Fuel adjustment		(263,048)								
Environmental surcharge		417,184								
Total revenues		<u>\$3,765,021</u>								
Amount				\$0		\$36,041		\$11,915		\$12,551
Percent				0.0%		1.0%		0.3%		0.3%
Average monthly bill	5,296,678	\$300,907.13		\$300,907.13		\$303,910.56		\$304,903.47		\$305,949.35
Amount				\$0.00		\$3,003.43		\$992.92		\$1,045.88
Percent				0.0%		1.0%		0.3%		0.3%

Outdoor and Street Lighting Service - Rate 3 and 3L (LED)

Description	Billing Determinants	Test Year Revenues	Normalized 2010-00509		Phase 1 Proposed		Phase 2 Proposed		Phase 3 Proposed	
			Rates	Revenues	Rates	Revenues	Rates	Revenues	Rates	Revenues
Rate 3:										
100 Watt HPS Security Light	41,041	\$387,017	\$9.43	\$387,017	\$9.86	\$404,664	\$10.03	\$411,641	\$10.17	\$417,387
100 Watt Decorative Colonial Light	2,055	26,057	\$12.68	26,057	\$13.29	27,311	\$13.49	27,722	\$13.69	28,133
400 Watt Directional Flood Light	2,038	39,109	\$19.19	39,109	\$20.11	40,984	\$20.42	41,616	\$20.73	42,248
250 Watt Directional Flood Light	4,590	63,709	\$13.88	63,709	\$14.55	66,785	\$14.77	67,794	\$14.99	68,804
150 Watt Decorative Acorn	207	3,136	\$15.15	3,136	\$15.88	3,287	\$16.12	3,337	\$16.36	3,387
Rate 3L:										
Standard	1,224	12,264	\$10.02	12,264	\$10.50	12,852	\$10.66	13,048	\$10.82	13,244
Decorative Colonial	170	2,118	\$12.46	2,118	\$13.06	2,220	\$13.26	2,254	\$13.46	2,288
Cobra Head	4	55	\$13.63	55	\$14.28	57	\$14.50	58	\$14.72	59
Directional Flood Light	155	2,889	\$18.64	2,889	\$19.53	3,027	\$19.83	3,074	\$20.13	3,120
kWh	2,450,356			0		0		0		0
Total from base rates		536,355		\$536,355		\$561,188		\$570,544		\$578,669
Fuel adjustment		(766)								
Environmental surcharge		5,215								
Total revenues		\$540,804								
Amount				\$0		\$24,833		\$9,356		\$8,125
Percent				0.0%		4.6%		1.7%		1.4%
Average monthly bill	48	\$10.42		\$10.42		\$10.90		\$11.08		\$11.24
Amount				\$0.00		\$0.48		\$0.18		\$0.16
Percent				0.0%		4.6%		1.7%		1.4%

Envirowatts

Description	Billing Determinants	Test Year Revenues	Normalized 2010-00509		Phase 1 Proposed		Phase 2 Proposed		Phase 3 Proposed	
			Rates	Revenues	Rates	Revenues	Rates	Revenues	Rates	Revenues
Envirowatts kWh	131,500	3,616	\$0.02750	3,616	\$0.02750	3,616	\$0.02825	0	\$0.02750	3,616
Billing Correction adjustments										
Total from base rates		3,616		<u>\$3,616</u>		<u>\$3,616</u>		<u>\$0</u>		<u>\$3,616</u>
Fuel adjustment										
Environmental surcharge										
Total revenues		<u>\$3,616</u>								
Amount				\$0		\$0		(\$3,616)		\$3,616
Percent				0.0%		0.0%		-100.0%		13149900.0%

Shelby Energy Cooperative.
Shelbyvile, KY

Case No. 2016-00434

COST OF SERVICE STUDY
Test Year -
Twelve Months Ending July 2016

Prepared: March 2016

J. Adkins

**SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434**

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins
Page 2 of 42
Witness: James R Adkins

OUTLINE

Schedule

- A Test Year - Actual & Adjusted
- B Functionalization of Expenses
- C Functionalization Footnotes
- D Rate Base Functionalized
- E Classification of Expenses
- F Determination of Demand & Consumer Related Plant Investments
- G Allocation of Costs
- H Demand & Energy Allocators
- I Consumer Allocators
- J Unbundled Statement of Operations
- K Increase Amounts by Rate Class & Rate Design
- L Rate Base for Each Rate Class

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434
ACTUAL TEST YEAR EXPENSES WITH ADJUSTMENTS

Acct No.	Description	Actual \$\$\$\$	Test Year Adjustments						Pro Forma \$\$\$\$
			Adjustment 1, 2 & 7	Adjustment 3, 4 & 5	Adjustment 6,8,9,10,&11	Adjustment 12	Adjustment 14	Adjustment 18	
555	Demand Charges	6,449,265							6,449,265
	Energy Charges	25,765,598					(2,427,882)		23,337,716
	Load Center Charges	560,772							560,772
	Power Factor Penalty	5,153							5,153
	Total Purchased Power	32,780,788	-	-	-	-	(2,427,882)	-	30,352,906
580	Operations Supv & Eng	73,514	(700)						72,813
583	Overhead Line Exp.	621,508	(905)						620,603
584	Underground Line Exp	18,650	-						18,650
585	Street Lighting - Signal Exp	900							900
586	Meter Expense	263,977	(1,748)						262,229
587	Consumer Installations	179,808	(117)						179,692
588	Misc. Distribution Exp	481,355	(2,373)	32,519					511,501
	Total Operations	1,639,712	(5,843)	32,519	-	-	-	-	1,666,388
590	Maint Supv & Eng	27,769	(155)						27,614
592	Maint of Station Equip	-							-
593	Maint. Overhead Lines	3,090,074	(5,490)		(495,798)			-	2,588,787
594	Maint of Underground Lines	189,088	(1,611)						187,477
595	Maint Line Transformers	(1,795)	(13)						(1,808)
596	Maint of St Lg & Signal Sys	-							-
597	Maintenance of Meters	10,533	(99)						10,434
598	Maint Misc Distrib Plant	117,699	(1,060)	1,391					118,030
	Total Distribut Maintenance	3,433,368	(8,428)	1,391	(495,798)	-	-	-	2,930,534

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434
ACTUAL TEST YEAR EXPENSES WITH ADJUSTMENTS

Acct	Description	Actual \$\$\$\$	Test Year Adjustments						Pro Forma \$\$\$\$
			Adjustment 1, 2 & 7	Adjustment 3, 4 & 5	Adjustment 6,8,9,10,&11	Adjustment 12	Adjustment 14	Adjustment 18	
901	Supervision	117,396	(1,140)						116,256
902	Meter Reading Expense	179,242	(1,114)						178,127
903	Cons Recds & Collections	316,216	(1,282)	358					315,292
904	Uncollectible Accounts	(102,825)	-						(102,825)
	Total Consumer Accounts	510,028	(3,536)	358					506,849
907	Supervision	33,244	(293)						32,951
908	Customer Assist. Expense	81,627	(1,330)						80,297
909	Customer Information Exp	62,926	(426)						62,500
910	Misc Customer Service Exp	250,407	(2,332)	295					248,370
912	Demonstration & Selling Exp	(11,891)	(138)						(12,029)
	Total Customer Service	416,313	(4,519)	295					412,088
	Total of Above	38,780,210	(22,326)	34,563	(495,798)	-	(2,427,882)	-	35,868,766
920	Administrative Salaries	325,701	(3,271)						322,430
921	Office Supplies	34,489							34,489
923	Outside Services	77,739			(31,332)				46,407
930.2	Misc. General Exp-Other	353,886	(404)	1,675		25,000			380,157
930.3	Directors Fees & Expenses	106,611			(73,181)				33,430
931	Rents	6,300			(17,562)				(11,262)
935	Maintenance of General Plant	82,402	(50)						82,352
	Total Admin & General	987,129	(3,725)	1,675	(122,075)	25,000	-	-	888,004

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434
ACTUAL TEST YEAR EXPENSES WITH ADJUSTMENTS

Acct	Description	Actual \$\$\$\$	Test Year Adjustments						Pro Forma \$\$\$\$
			Adjustment 1, 2 & 7	Adjustment 3, 4 & 5	Adjustment 6,8,9,10,&11	Adjustment 12	Adjustment 14	Adjustment 18	
403.6	Deprec. Distribution Plant	2,548,658		422,492					2,971,150
403.7	Deprec. General Plant	68,854							68,854
	Total Depreciation	2,617,512	-	422,492	-	-	-	-	3,040,004
408	Taxes Other Than Income Tax	53,102							53,102
426.1	Donations	6,869			(6,869)				-
	Total Miscellaneous	59,971	-	-	(6,869)	-	-	-	53,102
427	Total Interest on LTD	1,471,969		70,976	-				1,542,945
431	Total Short Term Interest	15,561		(11,597)					3,964
	Total Costs	43,932,351	(26,051)	518,109	(624,742)	25,000	(2,427,882)	-	41,396,785

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434

		Wages &	Payroll		
		Salaries	Taxes	Retirement	Total
Adjustments 1, 2 and 7		<u>1</u>	<u>2</u>	<u>7</u>	
	Distribution - operations	(4,184)	(433)	(1,226)	(5,843)
	Distribution - maintenance	(6,035)	(625)	(1,768)	(8,428)
	Consumer accounts	(2,532)	(262)	(742)	(3,536)
	Customer service	(3,138)	(325)	(919)	(4,382)
	Sales	(99)	(10)	(29)	(138)
	Administrative and general	(2,667)	(276)	(781)	(3,724)
	Total operating expenses	(18,655)	(1,931)	(5,465)	(26,051)
Allocation of Adjustments to Accounts			Wage & Sal.	Percent of	Allocation
			Expenses	Total	Adjustments
580.00	Operations		46,156	2.7%	(700)
583.00	Overhead line		59,658	3.5%	(905)
584.00	Underground		0	0.0%	-
586.00	Meter		115,233	6.7%	(1,748)
587.00	Installations		7,682	0.4%	(117)
588.00	Miscellaneous distribution		156,393	9.1%	(2,373)
590.00	Maintenance		10,212	0.6%	(155)
593.00	Overhead line		361,827	21.1%	(5,490)
594.00	Underground		106,177	6.2%	(1,611)
595.00	Transformers		848	0.0%	(13)
597.00	Street lights		6,556	0.4%	(99)
598.00	Miscellaneous maintenance		69,869	4.1%	(1,060)
901.00	Supervision		75,148	4.4%	(1,140)
902.00	Meter reading		73,441	4.3%	(1,114)
903.00	Consumer records		84,509	4.9%	(1,282)
904.00	Consumer records		0	0.0%	-
907.00	Supervision, Customer service		19,338	1.1%	(293)
908.00	Consumer accounting		87,678	5.1%	(1,330)
909.00	Consumer information		28,086	1.6%	(426)
910.00	Misc customer information		153,686	9.0%	(2,332)
912.00	Customer demonstration		9,089	0.5%	(138)
920.00	Administrative		194,004	11.3%	(2,943)
926.00	Employee benefits		21,593	1.3%	(328)
930.00	Miscellaneous		26,628	1.6%	(404)
935.00	Maintenance general plant		3,270	0.2%	(50)
			1,717,081	1	(26,051)

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins
Page 7 of 42
Schedule A
Witness: James Adkins

	Depreciation	Property Taxes	Interest Expense	Total
	<u>3</u>	<u>4</u>	<u>5</u>	
Operating Expenses:				
Cost of power:				
Base rates				
Fuel and surcharge				
Distribution - operations	778	31,741		32,519
Distribution - maintenance	1,391			1,391
Consumer accounts	358			358
Customer service	295			295
Sales	-			-
Administrative and general	507	1,168		1,675
Depreciation	422,492			422,492
Taxes - other				-
Interest on long-term debt			70,976	70,976
Interest expense - other			(11,597)	(11,597)
Other deductions				-
Total	425,821	32,909	59,379	518,109

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Exhibit R
Page 8 of 42
Witness: James Adkins
Schedule B

Functionalization of Revenue Requirements

Acct No.	Description	Allocation Basis	Pro Forma \$\$\$\$	Power Supply	Substa-Station	Lines
555	Demand Charges	Direct Assign	6,449,265	6,449,265		
	Energy Charges	Direct Assign	23,337,716	23,337,716	-	
	Load Center Charges	Direct Assign	560,772	560,772		
	Power Factor Penalty	Direct Assign	5,153	5,153		
	Total Purchased Power		30,352,906	30,352,906		
580	Operations Supv & Eng	Prop. Exp(b)	72,813			35,800
583	Overhead Line Exp.	Plant Bal (a)	620,603			516,501
584	Underground Line Exp	Plant Bal (a)	18,650			15,522
585	Street Lighting - Signal Exp	Direct Assign	900			
586	Meter Expense	Direct Assign	262,229			
587	Consumer Installations	Direct Assign	179,692			
588	Misc. Distribution Exp	Prop. Exp(b)	511,501		0	251,489
589	Rents	Prop. Exp(b)			-	
	Total Operations		1,666,388	-	-	819,312
			-			
590	Maint Supv & Eng	Prop. Exp(b)	27,614			22,911
592	Maint of Station Equip	Direct Assign	-			
593	Maint. Overhead Lines	Plt Bal (a)	2,588,787			2,154,535

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Functionalization of Revenue Requirements

Acct No.	Description	Allocation Basis	Trans former	Services	Meters	Cons. & Acct Services	Outdoor Lighting
555	Demand Charges	Direct Assign					
	Energy Charges	Direct Assign					
	Load Center Charges	Direct Assign					
	Power Factor Penalty	Direct Assign					
	Total Purchased Power						
580	Operations Supv & Eng	Prop. Exp(b)	-	7,216	17,646		12,152
583	Overhead Line Exp.	Plant Bal (a)		104,102			
584	Underground Line Exp	Plant Bal (a)		3,128			
585	Street Lighting - Signal Exp	Direct Assign					900
586	Meter Expense	Direct Assign			262,229		
587	Consumer Installations	Direct Assign					179,692
588	Misc. Distribution Exp	Prop. Exp(b)		50,688	123,957		85,366
589	Rents	Prop. Exp(b)					
	Total Operations		-	165,134	403,832	-	278,110
590	Maint Supv & Eng	Prop. Exp(b)	(18)	4,618	103		
592	Maint of Station Equip	Direct Assign					
593	Maint. Overhead Lines	Plt Bal (a)		434,252			

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Exhibit R
Page 10 of 42
Witness: James Adkins
Schedule B

Functionalization of Revenue Requirements

		Allocation	Pro Forma	Power	Substa-	
Acct	Description	Basis	\$\$\$\$	Supply	Station	Lines
No.						
594	Maint of Underground Lines	Plt Bal (a)	187,477			156,029
595	Maint Line Transformers	Direct Assign	(1,808)			
596	Maint of St Lg & Signal Sys	Direct Assign				
597	Maintenance of Meters	Direct Assign	10,434			
598	Maint Misc Distrib Plant	Prop. Exp {c}	118,030			97,927
	Total Distribut Maintenance		2,930,534	-		2,431,402
901	Supervision	Direct Assign	116,256			
902	Meter Reading Expense	Direct Assign	178,127			
903	Cons Recds & Collections	Direct Assign	315,292			
904	Uncollectible Accounts	Direct Assign	(102,825)			
	Total Consumer Accounts		506,849			-
907	Supervision	Direct Assign	32,951			
908	Customer Assist. Expense	Direct Assign	80,297			
909	Customer Information Exp	Direct Assign	62,500			
910	Misc Customer Service Exp	Direct Assign	248,370			
912	Demonstration & Selling Exp	Direct Assign	(12,029)			
	Total Customer Service		412,088	-	-	-
	Total of Above		35,868,766	30,352,906	-	3,250,714

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Exhibit R
Page 11 of 42
Witness: James Adkins
Schedule B

Functionalization of Revenue Requirements

Acct No.	Description	Allocation Basis	Trans former	Services	Meters	Cons. & Acct Services	Outdoor Lighting
594	Maint of Underground Lines	Plt Bal (a)		31,448			
595	Maint Line Transformers	Direct Assign	(1,808)				
596	Maint of St Lg & Signal Sys	Direct Assign					
597	Maintenance of Meters	Direct Assign			10,434		
598	Maint Misc Distrib Plant	Prop. Exp {c}	(77)	19,737	442		
	Total Distribut Maintenance		(1,902)	490,055	10,979	-	-
901	Supervision	Direct Assign					
902	Meter Reading Expense	Direct Assign				178,127	
903	Cons Recds & Collections	Direct Assign				315,292	
904	Uncollectible Accounts	Direct Assign				(102,825)	
	Total Consumer Accounts		-	-		506,849	-
907	Supervision	Direct Assign				32,951	
908	Customer Assist. Expense	Direct Assign				80,297	
909	Customer Information Exp	Direct Assign				62,500	
910	Misc Customer Service Exp	Direct Assign				248,370	
912	Demonstration & Selling Exp	Direct Assign				(12,029)	
	Total Customer Service		-	-		412,088	-
	Total of Above		(1,902)	655,189	414,811	918,938	278,110

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Exhibit R
Page 12 of 42
Witness: James Adkins
Schedule B

Functionalization of Revenue Requirements

Acct No.	Description	Allocation Basis	Pro Forma \$\$\$\$	Power Supply	Substa-Station	Lines
920	Administrative Salaries	Prop. Exp(d)	322,430		-	190,021
921	Office Supplies	Prop. Exp(d)	34,489		-	20,326
923	Outside Services	Prop. Exp(d)	46,407		-	27,350
930.2	Misc. General Exp-Other	Prop. Exp(d)	380,157		-	224,042
930.3	Directors Fees & Expenses	Prop. Exp(d)	33,430		-	19,702
931	Rents	Prop. Exp(d)	(11,262)		-	(6,637)
935	Maintenance of General Plant	Prop. Exp(d)	82,352		-	48,534
	Total Admin & General		888,004		-	523,336
			-			
403	Deprec. Distribution Plant	Net Plant	2,971,150		-	1,961,646
403	Deprec. General Plant	Net Plant	68,854		-	45,460
	Total Depreciation		3,040,004	-	-	2,007,106
			-			
408	Taxes Other Than Income Tax	Rate Base	53,102		-	35,061
426.1	Donations	Rate Base	-		-	-
	Total Miscellaneous		53,102	-	-	35,061
			-			
	Total Interest on LTD		1,542,945	-	-	1,018,742
			-			
	Total Short Term Interest	Rate Base	3,964	-	-	2,617
			-			
	Total Costs		41,396,785	30,352,906	-	6,837,575

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Exhibit R
Page 13 of 42
Witness: James Adkins
Schedule B

Functionalization of Revenue Requirements

Acct No.	Description	Allocation	Trans			Cons. & Acct	Outdoor
		Basis	former	Services	Meters	Services	Lighting
920	Administrative Salaries	Prop. Exp(d)	(111)	38,299	24,248	53,717	16,257
921	Office Supplies	Prop. Exp(d)	(12)	4,097	2,594	5,746	1,739
923	Outside Services	Prop. Exp(d)	(16)	5,512	3,490	7,731	2,340
930.2	Misc. General Exp-Other	Prop. Exp(d)	(131)	45,156	28,589	63,334	19,168
930.3	Directors Fees & Expenses	Prop. Exp(d)	(12)	3,971	2,514	5,569	1,686
931	Rents	Prop. Exp(d)	4	(1,338)	(847)	(1,876)	(568)
935	Maintenance of General Plant	Prop. Exp(d)	(28)	9,782	6,193	13,720	4,152
	Total Admin & General		(306)	105,480	66,781	147,941	44,773
403	Deprec. Distribution Plant	Net Plant	354,391	393,281	151,804	17,542	92,486
403	Deprec. General Plant	Net Plant	8,213	9,114	3,518	407	2,143
	Total Depreciation		362,604	402,395	155,322	17,948	94,629
408	Taxes Other Than Income Tax	Rate Base	6,336	7,029	2,713	310	1,653
426.1	Donations	Rate Base	-	-	-	-	-
	Total Miscellaneous		6,336	7,029	2,713	310	1,653
	Total Interest on LTD		184,109	204,243	78,819	9,014	48,017
	Total Short Term Interest	Rate Base	473	525	202	23	123
	Total Costs		551,314	1,374,861	718,648	1,094,174	467,306

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE

CASE NO. 2016-00434

FUNCTIONALIZATION OF REVENUE REQUIREMENTS

FOOTNOTES

(a) Plant Balances		Amount	Percent					
	Poles, Towers & Fixtures	24,800,540						
	Overhead Conductor	24,273,854						
	Underground Conductor	6,924,847						
	Subtotal	55,999,240	83.2%					
	Services	11,286,785	16.8%					
	Total	67,286,025	100.0%					
(b) Expense Proportion		Stations	Lines	Transformers	Services	Meters	Lighting	Total
583	Overhead Line Exp.	-	516,501	-	104,102	-	-	620,603
584	Underground Line Exp	-	15,522	-	3,128	-	-	18,650
585	Street Lighting - Signal Exp						900	900
586	Meter Expense	-		-		262,229	-	262,229
587	Consumer Installations	-		-		-	179,692	179,692
	Total	-	532,023	-	107,230	262,229	180,592	1,082,074
	Percent	0.00%	49.17%	0.00%	9.91%	24.23%	16.69%	100.00%

CASE NO. 2016-00434

FUNCTIONALIZATION OF REVENUE REQUIREMENTS

FOOTNOTES

[c]	Expense Proportion	Lines	Transformers	Services	Meters	Total			
593	Maint. Overhead Lines	2,154,535	-	434,252	-	2,588,787			
594	Maint of Underground Li	156,029	-	31,448	-	187,477			
595	Maint Line Transformers	-	(1,808)		-	(1,808)			
596	Maint of St Lg & Signal Sy	-	-	-	-	-			
597	Maintenance of Meters	-	-	-	10,434	10,434			
	Total	2,310,564	(1,808)	465,700	10,434	2,784,890			
	Percent	82.97%	-0.06%	16.72%	0.37%	100.00%			
(d)	Expense Proportion	Station	Lines	Transformers	Services	Meters	Consumer	Lighting	Total
	Total Operations	-	819,312	-	165,134	403,832	-	278,110	1,666,388
	Total Distribut Maintena	-	2,431,401.79	(1,902.39)	490,055.02	10,979.29	-	-	2,930,534
	Total Consumer Account	-	-	-	-	-	506,849		506,849
	Total Customer Service	-	-	-	-	-	412,088	-	412,088
	Total	-	3,250,714	(1,902)	655,189	414,811	918,938	278,110	5,515,860
	Percent	0.00%	58.93%	-0.03%	11.88%	7.52%	16.66%	5.04%	100.00%

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434
NET INVESTMENT RATE BASE

								Consumer & Accounting	Outdoor
	Description	\$\$\$\$	Stations	Lines	Transformers	Services	Consumer	Services	Lighting
360	Land & Land Rights	-		-					
362	Station Equipment	-	-						
364	Poles, Towers and Fixtures	24,800,540		24,800,540					-
365	Overhead Conductor	24,273,854		24,273,854					
366	Underground Conduit	307,821		307,821					
367	UG Conductor	6,924,847		6,924,847					
368	Line Transformers	10,505,808			10,505,808				
369	Services	11,286,785				11,286,785			-
370	Meters	4,265,011					4,265,011		
371	Install. On Consumer Prem.	2,516,980							2,516,980
373	Street Ltg & Signal Systems	67,096							67,096
	Total Distribution Plant	84,948,742	-	56,307,061	10,505,808	11,286,785	4,265,011	-	2,584,076
			0.00%	66.28%	12.37%	13.29%	5.02%	0.00%	3.04%
	Total General Plant	3,121,045	-	1,839,355	(1,076)	370,727	234,713	519,964	157,363
			0.0%	58.9%	0.0%	11.9%	7.5%	16.7%	5.0%
	Total Utility Plant	88,069,787	-	58,146,416	10,504,732	11,657,511	4,499,724	519,964	2,741,440
	Accum. Depreciation	17,810,020	-	11,758,730	2,124,332	2,357,454	909,962	105,150	554,391
	Net Plant	70,259,767	-	46,387,686	8,380,400	9,300,057	3,589,762	414,813	2,187,049
		88,843,077	0.00%	66.02%	11.93%	13.24%	5.11%	0.59%	3.11%
	CWIP	773,290	-	512,564	95,635	102,744	38,824	-	23,523
		71,033,057	-	46,900,251	8,476,034	9,402,801	3,628,587	414,813	2,210,572
	Plus								
	Cash Working Capital	873,319	-	576,592	104,167	115,598	44,620	5,156	27,185
	Materials & Supplies	298,301	-	196,948	35,581	39,485	15,241	1,761	9,286
	Prepayments	77,834	-	51,389	9,284	10,303	3,977	460	2,423
	Minus: Consumer Advances	17,909	-	11,871	2,215	2,379	899	-	545
	Net Investment Rate Base	72,264,602	-	47,713,308	8,622,851	9,565,807	3,691,525	422,190	2,248,920
	Percentage		0.00%	66.03%	11.93%	13.24%	5.11%	0.58%	3.11%

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434

CLASSIFICATION OF FUNCTIONALIZED COSTS

Acct No.	Description	Pro Forma \$\$\$\$	Power Supply			Distribution Station	Lir Demand
			Demand	Energy	Load Center		
555	Demand Charges	6,449,265	6,449,265				
	Energy Charges	23,337,716	-	23,337,716			
	Load Center Charges	560,772			560,772		
	Power Factor Penalty	5,153	5,153				
	Total Purchased Power	30,352,906	6,454,418	23,337,716	560,772		
580	Operations Supv & Eng	72,813					16,673
583	Overhead Line Exp.	620,603	-				251,280
584	Underground Line Exp	18,650					4,755
585	Street Lighting - Signal Exp	900					
586	Meter Expense	262,229					
587	Consumer Installations	179,692					
588	Misc. Distribution Exp	511,501				0	117,127
589	Rents						
	Total Operations	1,666,388					389,834
590	Maint Supv & Eng	27,614					10,670
593	Maint. Overhead Lines	2,588,787					1,048,190
594	Maint of Underground Lines	187,477					47,796
595	Maint Line Transformers	(1,808)					
596	Maint of St Lg & Signal Sys						
597	Maintenance of Meters	10,434					
598	Maint Misc Distrib Plant	118,030					45,608

Exhibit 2-22(1)
 Revised Exhibit R
 Witness: James Adkins

**SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434**

CLASSIFICATION OF FUNCTIONALIZED COSTS

Acct No.	Description	Pro Forma \$\$\$\$	Consumer	Demand	Transformers Consumer	Services Consumer	Meters Consumer	Cons & Acct Consumer	Outdoor Lighting
555	Demand Charges	6,449,265							
	Energy Charges	23,337,716							
	Load Center Charges	560,772							
	Power Factor Penalty	5,153							
	Total Purchased Power	30,352,906							
580	Operations Supv & Eng	72,813	19,127	-	-	7,216	17,646		12,152
583	Overhead Line Exp.	620,603	265,221			104,102			
584	Underground Line Exp	18,650	10,767			3,128			
585	Street Lighting - Signal Exp	900							900
586	Meter Expense	262,229					262,229		
587	Consumer Installations	179,692							179,692
588	Misc. Distribution Exp	511,501	134,363			50,688	123,957		85,366
589	Rents								
	Total Operations	1,666,388	429,478	-		165,134	403,832		278,110
590	Maint Supv & Eng	27,614	12,240	(9)	(9)	4,618	103		
593	Maint. Overhead Lines	2,588,787	1,106,345			434,252			
594	Maint of Underground Lines	187,477	108,233			31,448			
595	Maint Line Transformers	(1,808)		(907)	(901)				
596	Maint of St Lg & Signal Sys								
597	Maintenance of Meters	10,434					10,434		
598	Maint Misc Distrib Plant	118,030	52,319	(38)	(38)	19,737	442	-	-

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434

CLASSIFICATION OF FUNCTIONALIZED COSTS

Acct	Description	Pro Forma \$\$\$\$	Power Supply			Distribution	Lir Demand
			Demand	Energy	Load Center	Station	
	Total Distribut Maintenance	2,930,534	-	-	-	-	1,152,264
901	Supervision	116,256					
902	Meter Reading Expense	178,127					
903	Cons Recds & Collections	315,292	#REF!				
904	Uncollectible Accounts	(102,825)					
	Total Consumer Accounts	506,849					-
907	Supervision	32,951					
908	Customer Assist. Expense	80,297					
909	Customer Information Exp	62,500					
910	Misc Customer Service Exp	248,370					
912	Demonstration & Selling Exp	(12,029)					
	Total Customer Service	412,088	-		-		-
	Total of Above	35,868,766	6,454,418	23,337,716	560,772	-	1,542,098
920	Administrative Salaries	322,430				-	88,499
921	Office Supplies	34,489				-	9,466
923	Outside Services	46,407				-	12,738
930.2	Misc. General Exp-Other	380,157				-	104,343
930.3	Directors Fees & Expenses	33,430				-	9,176
931	Rents	(11,262)				-	(3,091)
935	Maintenance of General Plant	82,352				-	22,604
	Total Admin & General	888,004				-	243,734

**SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434**

CLASSIFICATION OF FUNCTIONALIZED COSTS

Acct	Description	Pro Forma	es		Transformers		Services	Meters	Cons & Acct	Outdoor
			Consumer	Demand	Consumer	Consumer	Consumer	Consumer	Consumer	Lighting
	Total Distribut Maintenance	2,930,534	1,279,138	(954)	(948)	490,055	10,979	-	-	
901	Supervision	116,256						116,256		
902	Meter Reading Expense	178,127						178,127		
903	Cons Recds & Collections	315,292						315,292		
904	Uncollectible Accounts	(102,825)						(102,825)		
	Total Consumer Accounts	506,849		-	-	-	-	506,849	-	
907	Supervision	32,951						32,951		
908	Customer Assist. Expense	80,297						80,297		
909	Customer Information Exp	62,500						62,500		
910	Misc Customer Service Exp	248,370						248,370		
912	Demonstration & Selling Exp	(12,029)						(12,029)		
	Total Customer Service	412,088		-	-	-		412,088	-	
	Total of Above	35,868,766	1,708,616	(954)	(948)	655,189	414,811	918,938	278,110	
920	Administrative Salaries	322,430	101,522	(56)	(55)	38,299	24,248	53,717	16,257	
921	Office Supplies	34,489	10,859	(6)	(6)	4,097	2,594	5,746	1,739	
923	Outside Services	46,407	14,612	(8)	(8)	5,512	3,490	7,731	2,340	
930.2	Misc. General Exp-Other	380,157	119,698	(66)	(65)	45,156	28,589	63,334	19,168	
930.3	Directors Fees & Expenses	33,430	10,526	(6)	(6)	3,971	2,514	5,569	1,686	
931	Rents	(11,262)	(3,546)	2	2	(1,338)	(847)	(1,876)	(568)	
935	Maintenance of General Plant	82,352	25,930	(14)	(14)	9,782	6,193	13,720	4,152	
	Total Admin & General	888,004	279,602	(154)	(153)	105,480	66,781	147,941	44,773	

Exhibit 2-22(1)
 Revised Exhibit R
 Witness: James Adkins

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434

CLASSIFICATION OF FUNCTIONALIZED COSTS

Acct	Description	Pro Forma \$\$\$\$	Power Supply			Distribution	Lin
			Demand	Energy	Load Center	Station	Demand
403	Deprec. Distribution Plant	2,971,150				-	913,601
403	Deprec. General Plant	68,854				-	21,172
	Total Depreciation	3,040,004	-	-	-	-	934,773
		-					
408	Taxes Other Than Income Taxes	53,102				-	16,329
426.1	Donations	-				-	-
	Total Miscellaneous	53,102	-	-	-	-	16,329
		-					-
	Total Interest on LTD	1,542,945	-			-	474,461
		-					-
	Total Short Term Interest	3,964	-			-	1,219
		-					-
	Total Costs	41,396,785	6,454,418	23,337,716	560,772	-	3,212,613

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434

CLASSIFICATION OF FUNCTIONALIZED COSTS

Acct	Description	Pro Forma	es		Transformers		Services	Meters	Cons & Acct	Outdoor
			\$\$\$\$	Consumer	Demand	Consumer	Consumer	Consumer	Consumer	Lighting
403	Deprec. Distribution Plant	2,971,150	1,048,045	177,719	176,672	393,281	151,804	17,542	92,486	
403	Deprec. General Plant	68,854	24,288	4,119	4,094	9,114	3,518	407	2,143	
	Total Depreciation	3,040,004	1,072,333	181,838	180,766	402,395	155,322	17,948	94,629	
		-								
408	Taxes Other Than Income Taxes	53,102	18,732	3,177	3,159	7,029	2,713	310	1,653	
426.1	Donations	-	-	-	-	-	-	-	-	
	Total Miscellaneous	53,102	18,732	3,177	3,159	7,029	2,713	310	1,653	
		-	-							
	Total Interest on LTD	1,542,945	544,282	92,327	91,783	204,243	78,819	9,014	48,017	
		-	-							
	Total Short Term Interest	3,964	1,398	237	236	525	202	23	123	
		-	-							
	Total Costs	41,396,785	3,624,962	276,471	274,842	1,374,861	718,648	1,094,174	467,306	

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Determination of Certain Plant Investments as Demand Related or Consumer Related

<u>Account 364 - Poles</u>				
<u>Pole</u>	<u>Investment</u>	<u>Number of Units</u>	<u>Unit Cost</u>	<u>Size</u>
35' & Under	2,634,217	13,291	198.20	35.00
40 & 45'	11,840,278	21,056	562.32	45.00
50 & Over	1,257,023	1,557	807.34	60.00
Total for Sample	<u>15,731,518</u>	<u>35,904</u>		
X Variable - (Size)	33.87			
Zero Intercept	(863.64)			321.86
Use Minimum Size Pole			198.20	
Number of poles			35,904.00	
Consumer Related Investment			7,116,013.12	
Total Investment for sample			15,731,518	
Percent Customer Related			45.23%	
Percent Demand Related			54.77%	

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Determination of Certain Plant Investments as Demand Related or Consumer Related.

Account 365 - Overhead Conductor				
<u>Conductor</u>	<u>Investment</u>	<u>Number of Units</u>	<u>Unit Cost</u>	<u>Amps</u>
8ACWC	144,436	3,382,293	\$ 0.0427	100
1/0 ACSR	122,795	2,155,455	\$ 0.0570	230
3/0 ACSR	215,626	1,012,084	\$ 0.2131	315
4/0 ACSR	999,372	1,187,731	\$ 0.8414	350
2 ACSR	5,550,889	9,450,023	\$ 0.5874	175
4 ACSR	70,958	832,312	\$ 0.0853	140
336 ACSR	2,570,689	2,183,060	\$ 1.1776	500
6ACWC	20,278	336,616	\$ 0.0602	140
Duplex	37,748	74,155	\$ 0.5090	
Triplex	1,093,054	542,053	\$ 2.0165	
#2 ACWC	321	16,101	\$ 0.0199	
#4 ACWC	22,278	336,616	\$ 0.0662	
#9 1/2 ACWC	1,663	54,226	\$ 0.0307	
#2 3-7 Strand Copper	31,412	315,395	\$ 0.0996	
4-3 Strand Copper	29,821	445,246	\$ 0.0670	
# 6 Strand Copper	166	1,528	\$ 0.1086	
1/0 7 Strand Copper	10,494	81,873	\$ 0.1282	
4/0 Quadraplex	29,441	5,966	\$ 4.9348	
2/0 Neural Copper	50	50	\$ 1.0000	
350 MCM	893	610	\$ 1.4639	
500 MCM	9,336	1,897	\$ 4.9215	
#477 MCM	4,349	1,584	\$ 2.7456	
1/0 Solid-ALXLP Conductor	374	290	\$ 1.2897	
Total for Sample	10,966,443	22,417,164	\$ 0.4892	
X Variable - (Size)	0.00298			
Zero Intercept	0.29412			
Total Amount of Conductor in Feet		22,417,164		
Use Zero Intercept		0.29412		
Minimum Size Investment -Consumer Related		6,593,286.67	60.12%	
Demand Related		4,373,156	39.88%	
Investment in Conductor	\$ 10,966,443		100.00%	

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Determination of Certain Plant Investments as Demand Related or Consumer Related

<u>Account 367 - Underground Conductor</u>					
<u>Conductor</u>	<u>Investment</u>	<u>Number of Units</u>	<u>Unit Cost</u>	<u>Amps</u>	
4 URD Primary	276,154	32,719	8.44	240	
350 URD Triplex	569,555	59,455	9.58	320	
1/0 KLP 25KV Primary	2,378,857	599,628	3.97	185	
350 Primary UG	90,461	25,874	3.50	320	
500 Primary UG	80,044	6,394	12.52	520	
#2 Triplex URD	19,961	22,313	0.89	120	
4/0 URD Triplex	18,768	5,279	3.56	240	
1/0 UG Cable	4,218	3,546.00	1.19	185	
#2 Solid 15KV	10,361	15,437.00	0.67	182	
#4 Underground	374	578	0.65	140	
1/0 SOL, KLP Conductor	17,442	12,977	1.34	155	
# 10 URD	72	210	0.34	120	
#4 Duplex URD	240	370	0.65	184	
#6 Duplex	2,702	2,213	1.22	225	
2/0 URD Triplex	8,835	2,656	3.33	225	
4/0 QUAD UG	1,003	532	1.89	225	
32 UG Triplex	79	85	0.93		
Total for Sample	3,479,047	790,181	4.40		
X Variable - (Size)	0.02686				
Zero Intercept	-1.91445				
Total Amount of Conductor in Feet		790,181			\$ 3.05
Use Minimum Size		3,05413			
Minimum Size Investment -Consumer Related		2,413,318	69.37%		
Demand Related		1,065,729	30.63%		
Investment in Conductor		3,479,047.00	100.00%		
Breakdown of Lines into Demand Related and Consumer Related Components					
	Total Sample Investment	Percent Consumer	Amount Consumer	Percent Demand	Amount Demand
Underground Conductor	3,479,047	69.37%	2,413,317.57	30.63%	1,065,729
Overhead Conductor	10,966,443	60.12%	6,593,286.67	39.88%	4,373,156
Poles	15,731,518	45.23%	7,116,013.12	54.77%	8,615,505
	26,697,960		13,709,300		12,988,661
Percentage Allocations For Overhead Lines			51.35%		48.65%
	30,177,007		16,122,617		14,054,390
Percentage Allocation for All Lines			53.43%		46.57%

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Determination of Certain Plant Investments as Demand Related or Consumer Related

Account 368-Transformers					
Pole	Investment	Number of Units	Unit Cost	Predicted Value	Size
1.5KVA	16,287	30.00	542.89	1.50	
3.KVA CSP	7,200	49.00	146.94	3.00	
5KVA CSP	21,760	166.00	131.08	5.00	
10KVA CSP	728,571	1,988.00	366.48	10.00	
15KVA CSP	4,211,823	7,660.00	549.85	15.00	
25KVA CSP	1,469,741	2,256.00	651.48	25.00	
37.5 KVA	212,769	278.00	765.36	37.50	
50 KVA	143,187	165.00	867.80	50.00	
75KVA	81,798	65.00	1,258.43		
100 KVA	31,121	17.00	1,830.65		
167 KVA	29,448	18.00	1,636.00		
250 KVA	16,688	5.00	3,337.60		
500 KVA	40,741	11.00	3,703.73		
500 KVA URD	40,445	8.00	5,055.66		
1000 KVA	39,733	7.00	5,676.14		
200 KVA PDMT	186,492	23.00	8,108.35		
300 KVA PDMT	109,895	15.00	7,326.33		
750 KVA PDMT	174,189	16.00	10,886.81		
2500 & 3000 KVA PDMT	341,838	15.00	22,789.20		
500 KVA PDM	101,836	15.00	6,789.07		
225 KVA PDMT	31,860	6.00	5,310.00		
1500 KVA PDMT	101,196	8.00	12,649.50		
2000 KVA PDMT	82,964	4.00	20,741.00		
1000 KVA PDMT	58,064	6.00	9,677.33		
STEP DOWN TRANSFORMER	60,678	10.00	6,067.80		
1500 KVA PAD MT	9,265	1.00	9,265.00		
Total Sample Investment	8,349,589	12,842	650.18		
X Variable - (Size)	16.52				
Zero Intercept	324.13				
Number of Transformers			12,842.00		
Zero Intercept			324.13		
Consumer Related Investment			4,162,455.86		
Total Investment			8,349,589.08		
Percentage of Investment Consumer Related			49.85%		
Percentage of Investment Demand Related			50.15%		

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434

Exhibit 2-22(1)
 Revised Exhibit R
 Witness: James Adkins
 PAGE 21 OF 47
 WITNESS: James Adkins
 Schedule G

REVENUE REQUIREMENTS FOR EACH RATE CLASS

	A	B	C	D	E
1					Schedule 12
2		Category		Enviro	Residential
3			Amount	Watts	Service
4		<u>Purchased Power Costs</u>			
5		Demand - EKPC Sched E-2	4,345,844		2,825,682
6		Demand - EKPC Sched B	2,108,574		
7		Load Center Charges	560,772		241,830
8		Total Purchased Power Demand	7,015,190	-	3,067,512
9					
10		<u>Energy - EKPC Sched E-2</u>	15,556,216	3,123	10,406,938
11		<u>Energy - EKPC Sched B</u>	7,781,500		
12					
13		<u>Distribution Costs</u>			
14		<u>Demand Related</u>			
15		Lines	3,212,613		1,385,424
16		Transformers	276,471		176,118
17		Total Demand Related	3,489,085		1,561,542
18					
19		<u>Consumer Related</u>			
20		Lines	3,624,962		2,736,109
21		Transformers	274,842		199,663
22		Services	1,374,861		1,037,013
23		Meters	718,648		536,100
24		Consumer Svc			
25		& Accouting	1,094,174		701,788
26		Total Consumer Related	7,087,488		5,210,673
27					
28		Outdoor Lighting	467,306		
29					
30		Total Costs	41,396,785	3,123	20,246,665
31					
32					
33		Purchased Power Demand Costs	7,015,190	-	3,067,512
34		Purchased Power Energy Costs	23,337,716	3,123	10,406,938
35		Distribution Demand Costs	3,489,085		1,561,542
36		Distribution Consumer Costs	7,087,488		5,210,673
37		Distribution Outdoor Lighting	467,306		
38					
39			41,396,785	3,123	20,246,665

**SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434**

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins
Exhibit R
PAGE 28 OF 42
WITNESS: James Adkins
Schedule G

REVENUE REQUIREMENTS FOR EACH RATE CLASS

	B	C	F	G	H	I
1			Schedule 12	Schedule 15	Schedule 11	Schedule 2
2	Category		Residential	Prepay	General	Large
3		Amount	ETS	Service	Service	Power
4	<u>Purchased Power Costs</u>					
5	Demand - EKPC Sched E-2	4,345,844	-	154,913	414,484	933,484
6	Demand - EKPC Sched B	2,108,574				
7	Load Center Charges	560,772	-	13,130	37,975	78,937
8	Total Purchased Power Demand	7,015,190	-	168,043	452,460	1,012,421
9						
10	<u>Energy - EKPC Sched E-2</u>	15,556,216	13,491	504,801	1,694,567	2,802,694
11	<u>Energy - EKPC Sched B</u>	7,781,500				
12						
13	<u>Distribution Costs</u>					
14	<u>Demand Related</u>					
15	Lines	3,212,613	-	75,222	217,558	452,222
16	Transformers	276,471	-	9,686	26,698	19,720
17	Total Demand Related	3,489,085	-	84,908	244,255	471,943
18						
19	<u>Consumer Related</u>					
20	Lines	3,624,962	-	135,050	731,520	6,978
21	Transformers	274,842	-	9,855	63,248	1,374
22	Services	1,374,861	4,180	51,185	277,253	4,521
23	Meters	718,648	2,161	26,461	143,330	10,595
24	<u>Consumer Svc</u>					
25	& Accounting	1,094,174	2,357	18,763	343,985	5,355
26	Total Consumer Related	7,087,488	8,698	241,314	1,559,337	28,823
27						
28	Outdoor Lighting	467,306				
29						
30	Total Costs	41,396,785	22,190	999,066	3,950,619	4,315,881
31						
32						
33	Purchased Power Demand Costs	7,015,190	-	168,043	452,460	1,012,421
34	Purchased Power Energy Costs	23,337,716	13,491	504,801	1,694,567	2,802,694
35	Distribution Demand Costs	3,489,085	-	84,908	244,255	471,943
36	Distribution Consumer Costs	7,087,488	8,698	241,314	1,559,337	28,823
37	Distribution Outdoor Lighting	467,306				
38						
39		41,396,785	22,190	999,066	3,950,619	4,315,881

**SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434**

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins
Exhibit R
PAGE 29 OF 42
WITNESS: James Adkins
Schedule G

REVENUE REQUIREMENTS FOR EACH RATE CLASS

	B	C	J	K	L	M
1			Schedule B1	Schedule B2	Outdoor	
2	Category		Large	Large	& Street	
3		Amount	Industrial Rate	Industrial Rate	Lighting	Total
4	<u>Purchased Power Costs</u>					
5	Demand - EKPC Sched E-2	4,345,844	-	-	17,281	4,345,844
6	Demand - EKPC Sched B	2,108,574	1,505,553	603,021		2,108,574
7	Load Center Charges	560,772	136,476	49,127	3,297	560,772
8	Total Purchased Power Demand	7,015,190	1,642,029	652,148	20,577	7,015,190
9						
10	<u>Energy - EKPC Sched E-2</u>	15,556,216	-	-	130,602	15,556,216
11	<u>Energy - EKPC Sched B</u>	7,781,500	5,174,681	2,606,820		7,781,500
12						
13	<u>Distribution Costs</u>					
14	<u>Demand Related</u>					
15	Lines	3,212,613	781,859	281,441	18,886	3,212,613
16	Transformers	276,471	31,000	12,495	755	276,471
17	Total Demand Related	3,489,085	812,859	293,937	19,641	3,489,085
18						
19	<u>Consumer Related</u>					
20	Lines	3,624,962	11,929	3,151	225	3,624,962
21	Transformers	274,842	363	203	136	274,842
22	Services	1,374,861	-	-	709	1,374,861
23	Meters	718,648	-	-	-	718,648
24	Consumer Svc					
25	& Accounting	1,094,174	5,927	15,626	373	1,094,174
26	Total Consumer Related	7,087,488	18,219	18,980	1,443	7,087,488
27						
28	Outdoor Lighting	467,306			467,306	467,306
29						
30	Total Costs	41,396,785	2,473,108	965,064	639,569	41,396,785
31						
32						
33	Purchased Power Demand Costs	7,015,190	1,642,029	652,148	20,577	7,015,190
34	Purchased Power Energy Costs	23,337,716	5,174,681	2,606,820	130,602	23,337,716
35	Distribution Demand Costs	3,489,085	812,859	293,937	19,641	3,489,085
36	Distribution Consumer Costs	7,087,488	18,219	18,980	1,443	7,087,488
37	Distribution Outdoor Lighting	467,306			467,306	467,306
38						
39		41,396,785	7,647,788	3,571,884	639,569	41,396,785

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Demand Related Costs and Energy Related Costs Allocators

A. Energy Sales		Allocation is proportional on actual sales to end use customers								
	Schedule 12	Schedule 12	Schedule 15	Schedule 11	Schedule 2	Schedule B1	Schedule B2	Outdoor		
	Residential	Residential	Prepay	General	Large	Large	Large	& Street	Total	
Month	Service	ETS	Service	Service	Poewr	Industrial Rate	Industrial Rate	Lighting		
August	17,174,695	967	870,284	2,739,123	4,543,164	11,045,414	5,831,557	207,287	42,412,491	
September	13,841,511	2,294	473,055	2,460,851	4,266,648	10,180,109	5,487,469	204,948	36,916,885	
October	11,606,299	10,184	483,391	2,328,156	4,238,565	10,324,608	5,468,976	206,069	34,666,248	
November	14,697,943	30,292	820,517	2,413,762	4,040,863	9,647,402	5,153,374	208,106	37,012,259	
December	17,433,737	39,652	1,032,504	2,582,570	4,158,523	9,598,393	5,108,500	207,025	40,160,904	
January	24,223,972	63,486	1,136,214	3,188,907	4,742,109	10,211,443	5,265,218	205,734	49,037,083	
February	21,864,580	60,018	994,394	3,046,225	4,530,958	9,856,916	5,110,716	202,068	45,665,875	
March	14,419,581	27,747	738,181	2,444,967	4,310,673	10,595,459	5,207,473	202,832	37,946,913	
April	12,607,289	13,573	575,030	2,391,175	4,226,374	10,526,408	5,125,289	201,704	35,666,842	
May	12,005,147	4,640	621,024	2,292,839	4,326,537	11,133,512	5,411,781	202,904	35,998,384	
June	16,773,599	187	799,147	2,876,605	4,510,470	11,695,657	5,232,369	201,157	42,089,191	
July	18,607,133	84	927,366	3,028,372	4,689,401	11,355,039	5,157,411	200,522	43,965,328	
Total - EKPC Schedul E	195,255,486	253,124	9,471,107	31,793,552	52,584,285	-	-	2,450,356	291,807,910	
Percent	66.91%	0.09%	3.25%	10.90%	18.02%	0.00%	0.00%	0.84%	100.00%	
Total - EKPC Schedul B										
Percent						126,170,360	63,560,133		189,730,493	
						66.50%	33.50%		100.00%	

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Demand Related Costs and Energy Related Costs Allocators

B. Wholesale Billing CP Contributions										
	Schedule 12	Schedule 12	Schedule 15	Schedule 11	Schedule 2	Schedule B1	Schedule B2	Outdoor		
	Residential	Residential	Prepay	General	Large	Large	Large	& Street		Total
Month	Service	ETS	Service	Service	Poewr	Industrial Rate	Industrial Rate	Lighting		
August	34,700	-	3,169	6,936	11,169	21,674	8,735	-		86,383
September	34,331	-	1,658	8,552	11,320	20,996	8,735	-		85,592
October	20,522	-	1,023	3,466	9,546	20,252	8,530	-		63,339
November	31,508	-	1,815	5,005	9,805	20,267	8,243	511		77,154
December	33,471	-	1,666	4,876	10,718	19,284	8,173	507		78,695
January	56,149	-	2,374	3,429	13,292	19,472	8,113	507		103,336
February	48,807	-	2,538	4,133	12,483	19,598	8,268	506		96,333
March	35,666	-	1,878	2,187	12,704	20,142	7,914	504		80,995
April	25,136	-	1,355	2,640	12,901	20,863	8,120	-		71,015
May	23,945	-	1,327	6,298	9,843	22,175	8,286	-		71,874
June	33,879	-	1,897	7,490	10,832	23,400	8,545	-		86,043
July	36,401	-	2,025	5,791	12,325	23,343	9,058	-		88,943
Total - EKPC Schedul E	414,515	-	22,725	60,803	136,938	-	-	2,535		637,516
Percent	65.02%	0.00%	3.56%	9.54%	21.48%	0.00%	0.00%	0.40%		100.00%
Total - EKPC Schedul B						251,466	100,720			352,186
Percent						71.4%	28.6%			100%
Used to allocate wholesale power demand costs to rate classes. Wholesale power demand is billed on basis of CP demand.										

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Demand Related Costs and Energy Related Costs Allocators

C. Monthly Peak Demands for Each Rate Class										
	Schedule 12	Schedule 12	Schedule 15	Schedule 11	Schedule 2	Schedule B1	Schedule B2	Outdoor		
	Residential	Residential	Prepay	General	Large	Large	Large	& Street		Total
Month	Service	ETS	Service	Service	Poewr	Industrial Rate	Industrial Rate	Lighting		
August	34,756	-	3,174	7,089	12,002	21,715	8,735	514		87,985
September	34,331	-	1,658	8,552	11,924	21,040	8,735	504		86,744
October	23,511	-	1,173	3,466	11,337	20,291	8,530	508		68,816
November	38,322	-	1,925	5,005	11,301	20,272	8,243	511		85,579
December	41,020	-	2,041	4,876	11,503	19,278	8,173	507		87,398
January	56,149	-	2,448	4,901	13,292	19,520	8,113	507		104,930
February	48,807	-	2,538	4,961	12,483	19,616	8,268	507		97,180
March	36,533	-	1,922	4,247	12,704	20,170	7,914	506		83,996
April	27,012	-	1,456	6,601	12,901	20,900	8,120	504		77,494
May	28,645	-	1,588	6,298	11,829	22,223	8,286	505		79,374
June	34,850	-	1,952	7,490	11,778	23,430	8,545	505		88,550
July	42,288	-	2,353	6,586	12,600	23,370	9,058	505		96,760
Total	446,224	-	24,228	70,072	145,654	251,825	90,648	6,083		1,034,734
Percent	43.12%	0.00%	2.34%	6.77%	14.08%	24.34%	8.76%	0.59%		100.00%
Used to allocate distribution demand related costs to appropriate rate classes										

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434

Demand Related Costs and Energy Related Costs Allocators

	2,458	2,461	2,462	2,456	2,458	2,463	2,471	2,478	2,484	2,490	2,492
D. Sum of Consumers Individual Monthly Peak Demands											
		Schedule 12	Schedule 12	Schedule 15	Schedule 11	Schedule 2	Schedule B1	Schedule B2	Outdoor		
		Residential	Residential	Prepay	General	Large	Large	Large	& Street		Total
Month		Service	ETS	Service	Service	Poewr	Industrial Rate	Industrial Rate	Lighting		
August		102,777	-	9,385	18,537	13,029	21,561	8,735	514		174,538
September		104,535	-	5,048	19,183	12,864	20,885	8,735	504		171,754
October		115,281	-	5,751	16,439	12,688	20,140	8,530	508		179,337
November		133,055	-	6,682	21,330	13,433	20,103	8,243	511		203,357
December		131,813	-	6,559	21,500	12,930	19,116	8,173	507		200,598
January		123,492	-	6,272	12,927	13,754	19,339	8,113	507		184,404
February		130,728	-	6,799	16,745	13,588	19,426	8,268	506		196,060
March		126,956	-	6,678	16,051	13,916	19,988	7,914	504		192,007
April		119,787	-	6,457	16,263	12,705	20,747	8,120	505		184,584
May		115,173	-	6,386	19,380	12,824	22,068	8,286	506		184,623
June		105,088	-	5,885	19,467	13,126	23,284	8,545	505		175,900
July		110,935	-	6,172	17,379	14,099	23,222	9,058	506		181,371
Total		1,419,620	-	78,074	215,201	158,956	249,879	100,720	6,083		2,228,533
Percent		63.70%	0.00%	3.50%	9.66%	7.13%	11.21%	4.52%	0.27%		100.00%

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE

Case No. 2016-00434

Consumer Related Costs Allocators

A. Lines (poles and conduit)

	Number of Consumers	Allocation Percent
Schedule 12 - Residential	12,156	75.48%
Off-Peak Marketing-Ets	0	0.00%
Schedule 15 - Prepay Service	600	3.73%
Schedule 11 - General Service	3,250	20.18%
Schedule 2 - Large Power	53	0.19%
Schedule B1 - Large Industrial Rate	14	0.33%
Schedule B2 - Large Industrial Rate	1	0.09%
Schedule 5 - Outdoor & Security Lights	31	0.01%
Envirowatts	-	0.00%
	<u>16,105</u>	<u>1.0000</u>

Schedule 5 - Outdoor & Security Lights

31

B. Transformers

Rate Class	Number of Consumers	Minimum		Relative Cost	Weight	Allocation Percent
		Transformer	Cost			
Schedule 12 - Residential	12,156	\$ 549.85	1.00	12,156.00	72.647%	
Off-Peak Marketing-Ets	-	-	-	-	0.000%	
Schedule 15 - Prepay Service	600	\$ 549.85	1.00	600.00	3.586%	
Schedule 11 - General Service	3,250	651	1.18	3,850.70	23.013%	
Schedule 2 - Large Power	53	868	1.58	83.65	0.500%	
Schedule B1 - Large Industrial Rate	14	868	1.58	22.10	0.132%	
Schedule B2 - Large Industrial Rate	1	6,789	12.35	12.35	0.074%	
Schedule 5 - Outdoor & Security Lights	31	147	0.27	8.28	0.050%	
Envirowatts	-	NA	-	-	0.000%	
	<u>16,105</u>			<u>16,733.08</u>	<u>100.0%</u>	

SHELBY ENERGY COOPERATIVE

Case No. 2016-00434

Consumer Related Costs Allocators

C. Services

Rate Class	# of Consume	Minim Service Cost	Relative Cost	Weight	Allocation Percent
Schedule 12 - Residential	12,156	27.74	1.00	12,156.00	75.43%
Off-Peak Marketing-Ets	49	27.74	1.00	49.00	0.30%
Schedule 15 - Prepay Service	600	27.74	1.00	600.00	3.72%
Schedule 11 - General Service	3,250	27.74	1.00	3,250.00	20.17%
Schedule 2 - Large Power	53	27.74	1.00	53.00	0.33%
Schedule B1 - Large Industrial Rate	14	-	-	-	0.00%
Schedule B2 - Large Industrial Rate	1	-	-	-	0.00%
Schedule 5 - Outdoor & Security Lights	31	7.43	0.27	8.31	0.05%
Envirowatts	-	-	-	-	0.00%
	16,154			16,116.31	1.00

D. Meters

Rate Class	# of Consume	Minimum Meter Cost	Relative Cost	Weight	Allocation Percent
Schedule 12 - Residential	12,156	124.44	1.00	12,156.00	74.60%
Off-Peak Marketing-Ets	49	124.44	1.00	49.00	0.30%
Schedule 15 - Prepay Service	600	124.44	1.00	600.00	3.68%
Schedule 11 - General Service	3,250	124.44	1.00	3,250.00	19.94%
Schedule 2 - Large Power	53	564.09	4.53	240.25	1.47%
Schedule B1 - Large Industrial Rate	14	-	-	-	0.00%
Schedule B2 - Large Industrial Rate	14	-	-	-	0.00%
Schedule 5 - Outdoor & Security Lights	31	-	-	-	0.00%
Envirowatts	-	-	-	-	
	16,167			16,295.25	1.00

SHELBY ENERGY COOPERATIVE

Case No. 2016-00434

E. Consumer & Accounting Services Consumer Related Costs Allocators

Rate Class	Number of Consumers	Relative Weight Meter Read	Relative Weight Cons Rcds	Relative Weight Cust Asst	Combined Relative Weights	Weight	Allocation Percent
Schedule 12 - Residential	12,156	1.00	4.00	1.00	6.00	72,936	64.14%
Off-Peak Marketing-Ets	49	1.00	3.00	1.00	5.00	245	0.22%
Schedule 15 - Prepay Service	600	1.00	1.00	1.25	3.25	1,950	1.71%
Schedule 11 - General Service	3,250	1.00	8.00	2.00	11.00	35,750	31.44%
Schedule 2 - Large Power	53	2.00	0.50	8.00	10.50	557	0.49%
Schedule B1 - Large Industrial Rate	14	4.00	20.00	20.00	44.00	616	0.54%
Schedule B2 - Large Industrial Rate	14	4.00	72.00	40.00	116.00	1,624	1.43%
Schedule 5 - Outdoor & Security Lights	31	-	0.25	1.00	1.25	39	0.03%
Envirowatts	-	-	-	0.50	0.50	-	0.00%
						<u>113,716.25</u>	<u>100.00%</u>

	Meter Reading			Consumer Records		
	Factor	Weight	Relative Weight	Factor	Weight	Relative Weight
Schedule 12 - Residential	1.00	1.00	1.00	4.00	1.00	4.00
Off-Peak Marketing-Ets	1.00	1.00	1.00	3.00	1.00	3.00
Schedule 15 - Prepay Service	1.00	1.00	1.00	1.00	1.00	1.00
Schedule 11 - General Service	1.00	1.00	1.00	4.00	2.00	8.00
Schedule 2 - Large Power	2.00	1.00	2.00	0.25	2.00	0.50
Schedule B1 - Large Industrial Rate	4.00	1.00	4.00	5.00	4.00	20.00
Schedule B2 - Large Industrial Rate	4.00	1.00	4.00	12.00	6.00	72.00
Schedule 5 - Outdoor & Security Lights	-	1.00	-	0.50	6.00	0.25
Envirowatts	-	-	-	-	1.00	-

SHELBY ENERGY COOPERATIVE

Case No. 2016-00434

Consumer Related Costs Allocators

	Consumer Assistance		Relative
	Factor	Weight	Weight
Schedule 12 - Residential	1.00	1.00	1.00
Off-Peak Marketing-Ets	1.00	1.00	1.00
Schedule 15 - Prepay Service	1.00	1.25	1.25
Schedule 11 - General Service	1.00	2.00	2.00
Schedule 2 - Large Power	2.00	4.00	8.00
Schedule B1 - Large Industrial Rate	2.00	4.00	20.00
Schedule B2 - Large Industrial Rate	2.00	20.00	40.00
Schedule 5 - Outdoor & Security Lights	2.00	10.00	1.00
Envirowatts	0.50	1.00	0.50

SHELBY ENERGY COOPERATIVE

CASE NO. 2016-00434

REVENUE FROM RATES MATCHED WITH REVENUE REQUIREMENTS

Exhibit A
 Page 38 of 42
 Witness: James Adkins]
 Schedule J

		Enviro	Schedule 12	Schedule 12	Schedule 15	Schedule 11
	Amount	Watts	Residential	Residential	Prepay	General
			Service	ETS	Service	Service
Normalized Revenue from Rates	\$39,969,502	3,715	18,776,920	15,486	906,485	3,429,381
Wholesale Demand Costs						
Generation	6,454,418		2,825,682	-	154,913	414,484
Distribution Substation	560,772		241,830	-	13,130	37,975
Total Wholesale Demand	7,015,190	-	3,067,512	-	168,043	452,460
Wholesale Energy Costs	23,337,716	3,123	10,406,938	13,491	504,801	1,694,567
Total Wholesale Costs	30,352,906	3,123	13,474,450	13,491	672,844	2,147,027
Gross Margin	9,616,596	592	5,302,470	1,995	233,641	1,282,354
Distribution Demand Costs						
Lines	3,212,613		1,385,424	-	75,222	217,558
Transformers	276,471		176,118	-	9,686	26,698
Total Distribution Demand	3,489,085		1,561,542	-	84,908	244,255
Distribution Consumer						
Lines	3,624,962		2,736,109	-	135,050	731,520
Transformers	274,842		199,663	-	9,855	63,248
Services	1,374,861		1,037,013	4,180	51,185	277,253
Meters	718,648		536,100	2,161	26,461	143,330
Consumer Services	1,094,174	-	701,788	2,357	18,763	343,985
Lighting	467,306		-			
Total Distribution Consumer	7,554,794	-	5,210,673	8,698	241,314	1,559,337
Total Distribution Costs	11,043,879	-	6,772,215	8,698	326,222	1,803,593
Margin before Other Revenue	(1,427,283)	592	(1,469,745)	(6,704)	(92,582)	(521,238)
Allocation of Other Elec. Revenue	637,530		517,932	-	25,004	94,594
Allocation of Misc. Revenue	142,353	-	115,648	-	5,583	21,122
Net Margin	(647,399)	592	(836,164)	(6,704)	(61,995)	(405,522)

Exhibit 2-22(1)
 Revised Exhibit R
 Witness: James Adkins

**SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434**

REVENUE FROM RATES MATCHED WITH REVENUE REQUIREMENTS

Exhibit R
Page 39 of 42
Witness: James Adkins]
Schedule J

	Schedule 2	Schedule B1	Schedule B2	Outdoor	
	Large	Large	Large	& Street	
	Power	Industrial Rate	Industrial Rate	Lighting	Total
Normalized Revenue from Rates	4,178,722	8,511,553	3,610,886	536,355	39,969,502
Wholesale Demand Costs					
Generation	933,484	1,505,553	603,021	17,281	6,454,418
Distribution Substation	78,937	136,476	49,127	3,297	560,772
Total Wholesale Demand	1,012,421	1,642,029	652,148	20,577	7,015,190
Wholesale Energy Costs	2,802,694	5,174,681	2,606,820	130,602	23,337,716
Total Wholesale Costs	3,815,115	6,816,710	3,258,967	151,179	30,352,906
Gross Margin	363,607	1,694,843	351,918	385,176	9,616,596
Distribution Demand Costs					
Lines	452,222	781,859	281,441	18,886	3,212,613
Transformers	19,720	-	-	755	232,976
Total Distribution Demand	471,943	781,859	281,441	19,641	3,445,589
Distribution Consumer					-
Lines	6,978	11,929	3,151	225	3,624,962
Transformers	1,374	31,363	12,698	136	318,337
Services	4,521	-	-	709	1,374,861
Meters	10,595	-	-	-	718,648
Consumer Services	5,355	5,927	15,626	373	1,094,174
Lighting	-	-	-	467,306	467,306
Total Distribution Consumer	28,823	49,219	31,475	468,749	7,598,289
Total Distribution Costs	500,765	831,079	312,916	488,390	11,043,878
Margin before Other Revenue	(137,158)	863,764	39,002	(103,214)	(1,427,282)
Allocation of Other Elec. Revenue	-	-	-	-	637,530
Allocation of Misc. Revenue	-	-	-	-	142,353
Net Margin	(137,158)	863,764	39,002	(103,214)	(647,399)

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434
INCREASE FOR EACH RATE CLASS

	Enviro- Watts	Schedule 12 Residential Service	Schedule 12 Residential ETS	Schedule 15 Prepay Service	Schedule 11 General Service
Revenue Requirements					
Total Costs	\$ 3,123	\$ 20,246,665	\$ 22,190	\$ 999,066	\$ 3,950,619
Plus Margin Requirements	-	705,417	18,334	116,167	74,723
Revenue Requirements	\$ 3,123	\$ 20,952,082	\$ 40,524	\$ 1,115,234	\$ 4,025,342
Minus Revenue from Rates	3,715	18,776,920	15,486	906,485	3,429,381
Increase Amount	(592)	2,175,162	25,038	208,749	595,961
Less: Other Revenue	-	633,581	-	30,587	115,716
Net Increase Amount	(592)	1,541,581	25,038	178,162	480,245
Less: Increase for Rate Classes		\$ 1,150,630	\$ 413	\$ 83,237	\$ 287,006
Under (Over) Recovery	\$ (592)	\$ 390,951	\$ 24,625	\$ 94,925	\$ 193,239
Statement of Operations with					
Revenue from Rates	3,715	18,776,920	15,486	906,485	3,429,381
Rate Increase	\$ -	\$ 1,150,630	\$ 413	\$ 83,237	\$ 287,006
Purchased Power Costs	3,123	13,474,450	13,491	672,844	2,147,027
Gross Margins	592	6,453,100	2,408	316,878	1,569,360
Distribution Costs	-	6,772,215	8,698	326,222	1,803,593
Margins before Other Rev.	592	(319,115)	(6,291)	(9,345)	(234,232)
Plus Other Revenue	-	633,581	-	30,587	115,716
Net Margins with Increase	\$ 592	\$ 314,466	\$ (6,291)	\$ 21,242	\$ (118,516)
Interest Expense	-	940,556	24,446	154,890	99,631
TIER	-	1.33	0.74	1.14	(0.19)
OTIER		1.21	0.74	1.10	(0.40)
Rate Base		44,620,544	653,431	9,426,499	2,146,129
Return on Rate Base		2.81%	2.78%	1.87%	-0.88%

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434
INCREASE FOR EACH RATE CLASS

Exhibit R
Page 41 of 42
Witness: James Adkins
Schedule K

	Schedule 2	Schedule B1	Schedule B2	Outdoor	
	Large	Large	Large	& Street	Total
	Power	Industrial Rate	Industrial Rate	Lighting	
Revenue Requirements					
Total Costs	\$ 4,315,881	\$ 7,647,788	\$ 3,571,884	\$ 639,569	\$ 41,396,785
Plus Margin Requirements	62,680	103,897	37,396	38,593	\$ 1,157,209
Revenue Requirements	\$ 4,378,561	\$ 7,751,686	\$ 3,609,280	\$ 678,162	\$ 42,553,993
Minus Revenue from Rates	4,178,722	8,511,553	3,610,886	536,355	39,969,502
Increase Amount	199,839	(759,867)	(1,606)	141,807	2,584,491
Less: Other Revenue	-	-	-	-	779,884
Net Increase Amount	199,839	(759,867)	(1,606)	141,807	1,804,607
Less: Increase for Rate Class	\$ 121,818	\$ 251,625	\$ 60,507	\$ 42,314	1,997,550
Under (Over) Recovery	\$ 78,021	\$ (1,011,492)	\$ (62,113)	\$ 99,493	\$ (192,943)
Statement of Operations with					
Revenue from Rates	4,178,722	8,511,553	3,610,886	536,355	39,969,502
Rate Increase	\$ 121,818	\$ 251,625	\$ 60,507	\$ 42,314	1,997,550
Purchased Power Costs	3,815,115	6,816,710	3,258,967	151,179	30,352,906
Gross Margins	485,425	1,946,468	412,425	427,490	11,614,146
Distribution Costs	500,765	831,079	312,916	488,390	11,043,878
Margins before Other Rev.	(15,340)	1,115,389	99,509	(60,900)	570,268
Plus Other Revenue	-	-	-	-	779,884
Net Margins with Increase	\$ (15,340)	\$ 1,115,389	\$ 99,509	\$ (60,900)	\$ 1,350,151
Interest Expense	83,574	138,530	49,861	51,458	1,542,945
TIER	0.82	9.05	3.00	(0.18)	1.88
OTIER	0.82	9.05	3.00	(0.18)	1.78
Rate Base	3,664,555	6,164,673	2,237,709	2,397,186	71,310,726
Return on Rate Base	1.86%	20.34%	6.68%	-0.39%	4.06%

Exhibit 2-22(1)
Revised Exhibit R
Witness: James Adkins

SHELBY ENERGY COOPERATIVE

Exhibit R *R*
 Witness: James Adkins
 Schedule L

Case No. 2016-00434

Page 42 of 42

Unbundled Rate Base

		Schedule I	Schedule I	Schedule II	Schedule II	Schedule III	Schedule IV	Schedule IV-A	Schedule VI		
		Residential,	Marketing	Sml Com	Sml Com	3 Phase Schl	Large Power	Large Power	Outdoor		
	Amount	Schl & Chur	Rate	1 Phase	3 Phase	& Churches	2500 kW Plus	50-2500 kW	Lights	Total	
Function	Classification										
Stations											
	Demand	-	-	-	-	-	-	-	-	-	
Lines											
	Demand	47,713,308									
	Consumer	23,212,708	10,010,368	-	543,519	1,571,960	3,267,529	5,649,317	2,033,552	136,463	23,212,708
	Consumer	24,500,600	18,492,971	-	4,944,238	47,160	80,629	21,298	1,521	-	23,587,818
Transformer											
	Demand	8,622,851									
	Consumer	4,324,168	2,754,581	-	151,492	417,569	308,433	484,857	195,434	11,803	4,324,168
	Consumer	4,298,683	3,122,844	154,138	989,236	21,489	5,676	3,172	2,128	-	4,298,683
Services											
	Consumer	9,565,807	7,215,174	356,129	1,929,032	31,458	-	-	4,930	-	9,536,724
Meters											
	Consumer	3,691,525	2,753,820	135,924	736,255	54,426	-	-	-	-	3,680,425
Consumer Acct & Serv.											
		422,190	270,787	7,240	132,728	2,066	2,287	6,029	144	-	421,280
Outdoor Lighting											
		2,248,920							2,248,920	2,248,920	
Total											
		72,264,602	44,620,544	653,431	9,426,499	2,146,129	3,664,555	6,164,673	2,237,709	2,397,186	71,310,726

Exhibit 2-22(1)
 Revised Exhibit R
 Witness: James Adkins

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

23. Refer to the Application, Exhibit S, page 1 of 4. Explain why the account balance for Sales is a negative \$11,891, and provide a detail of the types of account activity that are included in the account balance.

Response 23.

The Sales line includes account 912.00 where incentive reimbursements for energy efficiency upgrades and marketing initiatives are received from East Kentucky Power Cooperative and distributed to the member eligible for the rebate or repayment for portions of marketing costs. When the sales is a negative amount, timing of the incentive reimbursements received compared to incentives paid will cause this balance to fluctuate between a positive and a negative.

Activity in this account includes Demand Side Management program advertisement costs, energy efficiency incentive payments, labor and transportation costs associated with DSM activities, and minimal general office expense.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

24. Refer to the Application, Exhibit S, page 2 of 4. Provide the detail of the \$581,054 in adjustments to the net change in assets and deferred debits.

Response 24.

The calculation is attached.

	<u>Application</u>	<u>Should Be</u>
Adjustment summary	(2,035,114)	(2,035,114)
Proposed increase	2,190,347	1,997,640
Accumulated depreciation	<u>425,821</u>	<u>425,821</u>
Net change in assets	<u><u>581,054</u></u>	<u><u>388,347</u></u>

The proposed increase in the application was based on a 1.88 TIER. The proposed increase should have been the increase as reflected on Page 4 of 4, Line 20 of Exhibit S.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

25. Refer to the Application, Exhibit T. Explain why the Depreciation amount for January of \$153,634 differs significantly from the Depreciation amount for other months.

Response 25.

There was a data entry issue where the percentage was entered incorrectly for meter depreciation. The entire year's depreciation amount was calculated for the month of January mistakenly. It was corrected and the annual amount is the correct amount for depreciation.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

26. Refer to the Application, Exhibit T. Explain the G&T amount of (\$145,547) for June.

Response 26.

The total annual 2016 budgeted amount of \$1,762,847 for G&T Capital Credits should have been placed in the month of December, 2016, but a portion, in the amount of \$145,547, was inadvertently entered into June, 2016 during the budgeting process.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

27. Refer to the Application, Exhibit V. Provide Shelby Energy's comparative December 31, 2016 and December 31, 2015 financial statements when they become available.

Response 27.

Refer to **Exhibit 2-27** for comparative financial statements 2015 and 2016 which is included as part of this response.

Shelby Energy Cooperative
Case No. 2016-00434
Statement of Operations
December 31, 2016

Exhibit V Format

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37

	<u>2016</u>	<u>2015</u>
Operating revenue	\$ 44,666,885	\$ 43,507,714
Operating expenses:		
Cost of power	33,721,739	33,144,801
Distribution-operations	1,704,628	1,507,071
Distribution-maintenance	3,531,327	2,618,855
Consumer accounts	706,505	420,839
Consumer service	444,955	450,669
Sales	4,104	(66,722)
Administrative and general	988,871	1,073,309
	<u>41,102,129</u>	<u>39,148,822</u>
Depreciation and amortization	2,729,386	2,474,514
Taxes-other	52,282	53,496
Interest on long term debt	1,508,329	1,570,256
Other interest expense	11,186	28,644
Other deductions	7,342	4,251
	<u>45,410,654</u>	<u>43,279,983</u>
Utility operating margins	(743,769)	227,731
Nonoperating margins, interest	38,060	35,910
Equity investments	115,070	35,101
Nonoperating margins, other	(54,097)	(3,501)
G & T capital credits	2,132,164	1,972,964
Other capital credits	62,660	72,162
	<u>\$ 1,550,088</u>	<u>\$ 2,340,367</u>
Net margins		
TIER excluding EKPC	0.61	1.23

Shelby Energy Cooperative
Case No. 2016-00434
Balance Sheet
December 31, 2016

Exhibit V Format

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49

<u>ASSETS</u>	<u>2016</u>	<u>2015</u>
Electric Plant:		
In service	\$ 89,688,645	\$ 85,237,158
Under construction	1,186,875	1,204,479
	<u>90,875,520</u>	<u>86,441,637</u>
Less accumulated depreciation	17,163,110	17,825,641
	<u>73,712,410</u>	<u>68,615,996</u>
Investments	<u>25,496,028</u>	<u>21,623,826</u>
Current Assets:		
Cash and temporary investments	1,558,705	2,254,394
Accounts receivable, net	4,141,947	3,525,764
Material and supplies	669,486	589,490
Prepayments	183,603	125,063
Total Current and Accrued Assets	<u>6,553,741</u>	<u>6,494,711</u>
Deferred assets	<u>-</u>	<u>-</u>
Total Assets	<u>\$ 105,762,179</u>	<u>\$ 96,734,533</u>
<u>MEMBERS' EQUITIES AND LIABILITIES</u>		
Margins and Equities:		
Patronage capital	\$ 36,520,674	\$ 37,462,298
Other equities	2,247,855	1,841,871
	<u>41,660,397</u>	<u>39,304,169</u>
Long Term Debt	<u>52,460,913</u>	<u>47,356,642</u>
Accumulated Operating Provisions	<u>1,997,479</u>	<u>1,985,175</u>
Current Liabilities:		
Notes payable	1,346,471	1,758,492
Accounts payable	4,404,753	3,715,684
Consumer deposits	1,529,886	1,539,139
Accrued expenses	385,172	628,171
	<u>9,272,307</u>	<u>7,641,486</u>
Consumer advances	<u>371,083</u>	<u>447,061</u>
Total Members' Equities and Liabilities	<u>\$ 105,762,179</u>	<u>\$ 96,734,533</u>

Shelby Energy Cooperative
Case No. 2016-00434
Statement of Cash Flows
December 31, 2016

Exhibit V Format

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45

	<u>2016</u>	<u>2015</u>
Cash Flows from Operating Activities:		
Net margins	\$ 1,550,088	\$ 2,340,367
Adjustments to reconcile to net cash provided by operating activities:		
Depreciation		
Charged to expense	2,729,386	2,474,514
Charged to clearing accounts	137,357	165,713
Patronage capital credits	(2,194,824)	(2,045,126)
Accumulated postretirement benefits	24,061	25,314
Net change in current assets and liabilities:		
Receivables	(931,608)	833,566
Material and supplies	(166,362)	47,643
Prepayments and deferred debits	15,075	(2,345)
Accounts payables	1,158,111	(228,542)
Consumer deposits	(13,254)	25,606
Accrued expenses	70,454	(80,332)
Consumer advances	(113,264)	6,995
	<u>2,265,220</u>	<u>3,563,373</u>
Cash Flows from Investing Activities:		
Plant additions	(7,593,855)	(4,096,222)
Additional investments, net of receipts	159,795	110,473
	<u>(7,434,060)</u>	<u>(3,985,749)</u>
Cash Flows from Financing Activities:		
Refund of capital credits	(599,902)	(592,321)
Other equities	232,650	197,553
Notes payable	1,346,472	(2,934,118)
Additional long-term borrowings	4,000,000	6,600,000
Payments on long-term debt	(1,794,429)	(1,668,993)
	<u>3,184,791</u>	<u>1,602,121</u>
Net increase in cash	(1,984,049)	1,179,745
Cash balances - beginning	<u>3,535,475</u>	<u>2,255,731</u>
Cash balances - ending	<u>\$ 1,551,427</u>	<u>\$ 3,535,475</u>

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

28. Refer to the Application, Exhibit 1, Payroll Adjustment, page 1 of 10.
- a. Provide the number of non-union employees and union employees.
 - b. Explain whether there are any union salaried employees, and if so, provide the employee number and job title.
 - c. Explain whether there are any non-union hourly employees, and if so, provide the employee number and job title.
 - d. Explain how the wage and salary rate increases for the union and non-union employees were determined for the years 2012 through 2016.
 - e. Explain why the wage and salary rate increases for the non-union employees are greater than those of the union employees in the years 2012 through 2016.
 - f. Provide the payroll increases for the union and non-union employees for 2017 and explain how they were determined.
 - g. Provide the payroll and payroll tax (Exhibit 2) adjustments assuming that the non-union payroll percentage increase was no greater than the percentage increase in the union payroll for 2016.

Response 28a.

Shelby Energy has fifteen (15) union and thirty-four (34) non-union employees.

Response 28b.

Shelby Energy has no union salaried employees.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 28c.

Shelby Energy does have non-union hourly employees which consists of office employees and engineering employees. Refer to **Exhibit 2-28c.** which is included as part of this response for a list of non-union job titles.

Response 28d.

Shelby Energy's wage and salary rate increases for union employees for the years 2012 through 2016 are determined by the Bargaining Unit Agreements ("Agreement") dated September 2, 2012 -September 1, 2015 and September 2, 2015 – September 1, 2018. Wage increases for union employees are determined through negotiation with the IBEW representatives and executed according to the agreed upon contract. Increases to non-union employees are performance based and determined via a formal performance review and executed according to the Wage & Salary Plan. The Wage & Salary plan was created using a formal quantitative point factor analysis. Salary ranges were created using comparative analysis to the local and regional market, with salary median set at the market price for each position.

Response 28e.

The wage and salary rate increases for the union employees are governed by the Agreements as negotiated between representatives of the union and representatives of Shelby Energy. Wage and salary rate increases and benefits, along with additional items that may be provided are considered at the time of the negotiation. The wage and salary

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

increases for non-union employees are governed by the annual wage and salary survey, where an employee's wages are in relationship to the established range of the salary rate for the job position, years of service and the appraisal and performance of the employee.

Union employees are guaranteed a wage increase based on the Agreement. All employees within an employee classification receive the same amount of wage increase, regardless of performance, advancement or lateral moves to other positions within the bargaining unit which considers seniority as a primary factor. Although a recommended base percentage is established for the non-union employees, in direct collaboration with the human resources consultant, all employees may not receive the same percent of increase. The determination of wage increase takes into consideration the factors provided above for each employee which results in some employees receiving less than the recommend base percentage, some receive the exact base percentage, others receive more than the recommended base percentage and some may receive no rate increase. Regardless of the result on pay rate increases, there must be data to support the decision made for each employee.

Performance based increases are prohibited for union employees regardless of merit, and are based on the agreed upon rates guaranteed in the negotiated union contract. Increases for non-union employees are based on merit and the results of the salaries paid in the local and regional market for comparable positions. Market based pricing is used to assure retention of high performing employees.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 28f.

For 2017, the payroll increases for the union were 2.93% and non-union employees had payroll increases of 2.04%. The increases were determined in the manner as described in the response to Question 28e.

Response 28g.

Refer to **Exhibit 2-28g** which is included as part of this response.

Shelby Energy Cooperative, Inc.
Non-Union Hourly Employees
Case No. 2016-00434

<u>ID</u>	<u>JOB TITLE</u>
301	Billing & Customer Service Specialist
304	Billing & Customer Service Specialist
310	Staff Assistant
403	Staff Accountant
501	Lead Staking Technician
705	Lead Billing & Customer Service Specialist - Dist Office
709	Energy Advisor
710	Executive Assistant
1101	Billing & Customer Service Specialist
1303	Human Resources Generalist
1306	Billing & Customer Service Specialist - Supr
1308	Lead Billing & Customer Service Specialist - Headquarters
1311	General Accountant
1313	Billing & Customer Service Specialist
1314	Safety Coordinator
1315	GIS Technician
1701	Information Technology Specialist
1911	Staking Technician

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37

Shelby Energy Cooperative
Case No. 2016-00464
July 31, 2016

Payroll Adjustment

To reflect the increase granted by the Board of Directors, the step increases granted and promotions during the year. To give recognition to employees terminated and employees hired during the test year. Overtime pay is calculated at 1-1/2 times regular pay rate for hours worked in excess of 8 hours per day.

Temporary employees are used for certain busy times of the month, or when an employee has scheduled vacation time off. This is expected to continue into the future.

Wage and salary increases are as follows:

	<u>Increase</u>	
	<u>Union</u>	<u>Non-Union</u>
2016	2.47%	3.82%
2015	2.13%	3.69%
2014	2.04%	2.73%
2013	3.00%	3.64%
2012	2.64%	3.63%

The amount of increase was allocated based on the actual test year.

Projected wages	\$ 2,845,305
Actual wages for test year	<u>\$ 2,839,514</u>
Adjustment	<u>\$ 5,791</u>

The allocation is on the following page:

Shelby Energy Cooperative
Case No. 2016-00464

Allocation of increase in payroll:

		Labor			
		<u>Distribution</u>	<u>Percent</u>	<u>Allocation</u>	
8	107.20	Construction work in progress	719,972	25.0%	1,449
9	108.80	Retirement work in progress	228,002	7.9%	459
10	143.00	Receivable from others	9,168	0.3%	18
11	163.00	Stores	61,223	2.1%	123
12	184.00	Transportation	0	0.0%	0
13	242.52	Employee sick leave/vacation	141,345	4.9%	285
14	580.00	Operations	46,156		
15	583.00	Overhead line	59,658		
16	584.00	Underground	0		
17	586.00	Meter	115,233		
18	587.00	Installations	7,682		
19	588.00	Miscellaneous distribution	156,393	13.4%	775
20	590.00	Maintenance	10,212		
21	593.00	Overhead line	361,827		
22	594.00	Underground	106,177		
23	595.00	Transformers	848		
24	597.00	Street lights	6,556		
25	598.00	Miscellaneous maintenance	69,869	19.3%	1,118
26	901.00	Supervision	75,148		
27	902.00	Meter reading	73,441		
28	903.00	Consumer records	84,509		
29	904.00	Consumer records	0	8.1%	469
30	907.00	Supervision, Customer service	19,338		
31	908.00	Consumer accounting	87,678		
32	909.00	Consumer information	28,086		
33	910.00	Misc customer information	153,686	10.0%	581
34	912.00	Customer demonstration	9,089	0.3%	18
35	920.00	Administrative	194,004		
36	926.00	Employee benefits	21,593		
37	930.00	Miscellaneous	26,628		
38	935.00	Maintenance general plant	<u>3,270</u>	<u>8.5%</u>	<u>494</u>
39					
40		Total	<u>2,876,791</u>	<u>100.0%</u>	<u>5,789</u>
41					
42					

Shelby Energy Cooperative
Employee Earnings and Hours

July 31, 2016

Employee Number	Hours Worked Test Year				Actual Test Year Wages								Rate no Greater Than Union	Normalized Test Year Wages						No Greater % that Union	New Rate
	Regular	Overtime	Vac Pay	Total	Regular	Overtime	Excess Vac Pay	Salary Overtime	Stanby Pay	Excess 50K Ins	Christmas	Total		Regular	Overtime	Excess Vac Pay	Salary Overtime	Stanby Pay	Normalized Total		
Salaried Employees:																					
601	2,080.00			2,080.00	█								█	█							
702	2,080.00		40.00	2,120.00	█		█		█				█	█							
706	2,080.00		40.00	2,120.00	█		█		█				█	█							
801	2,080.00			2,080.00	█				█				█	█							
1304	2,080.00		40.00	2,120.00	█		█		█				█	█							
1307	2,080.00		40.00	2,120.00	█		█		█				█	█							
1316	1,670.75			1,670.75	█								█	█							
2314	2,080.00			2,080.00	█								█	█							
Subtotal	16,230.75	0.00	160.00	16,390.75	656,977	0	7,520	2,940	25,080	3,793	0	692,517	669,662	0	7,520	2,940	25,080	705,202			
Hourly Employees:																					
208	2,080.00	18.00	40.00	2,138.00	█	█	█						█	█							
210	2,008.00	328.00	8.00	2,344.00	█	█	█						█	█							
301	2,080.00	4.25		2,084.25	█	█							█	█							
302	2,080.00	382.25	40.00	2,502.25	█	█	█						█	█							
304	2,080.00	5.50		2,085.50	█	█							█	█							
306	2,080.00	357.25		2,437.25	█	█							█	█							
310	2,080.00	15.25		2,095.25	█	█							█	█							
403	2,080.00	4.75		2,084.75	█	█							█	█							
501	2,080.00	169.50	40.00	2,289.50	█	█	█		█				█	█							
503	2,080.00	326.25		2,406.25	█	█							█	█							
705	1,828.25	34.25		1,862.50	█	█							█	█							
709	2,080.00	9.50		2,089.50	█	█							█	█							
710	2,080.00	5.00		2,085.00	█	█							█	█							
1101	2,080.00	9.50		2,089.50	█	█							█	█							
1303	2,080.00			2,080.00	█								█	█							
1306	2,080.00		40.00	2,120.00	█		█						█	█							
1308	1,919.00	4.50		1,923.50	█	█							█	█							
1310	2,080.00	336.00		2,416.00	█	█							█	█							
1311	2,080.00	13.75		2,093.75	█	█							█	█							
1313	2,080.00			2,080.00	█								█	█							
1314	1,920.00			1,920.00	█			█	█				█	█							
1315	2,072.00	9.50		2,081.50	█	█							█	█							
1317	1,037.00	251.25		1,288.25	█	█							█	█							
1403	2,080.00	360.00		2,440.00	█	█							█	█							
1701	2,080.00	40.00		2,120.00	█	█							█	█							
1801	2,080.00	296.00		2,376.00	█	█							█	█							
1902	2,080.00	352.25		2,432.25	█	█							█	█							
1911	2,072.50	121.00		2,193.50	█	█							█	█							
1912	2,080.00	402.50		2,482.50	█	█			█				█	█							
2306	2,040.00	317.50		2,357.50	█	█							█	█							
2309	2,080.00	313.25		2,393.25	█	█							█	█							
2312	1,927.00	154.75		2,081.75	█	█							█	█							
2315	2,063.00	352.00		2,415.00	█	█							█	█							
Subtotal	66,726.75	4,993.50	168.00	71,888.25	1,814,183	242,676	4,919	127	6,625	3,980	0	2,068,530	1,827,923	243,730	4,919	127	6,625	2,083,324			
Summer and Part Time Employees:																					
708	288.00	0.50		288.50	█	█							█	█							
1318	627.00	3.50		630.50	█	█							█	█							
1319	104.00	3.00		107.00	█	█							█	█							

Shelby Energy Cooperative
Case No. 2016-00464
Payroll Taxes

The employer's portion of FICA and Medicare rates remain the same for 2016 as they were for 2015. The FICA rate is 6.2% and Medicare is 1.45%. The wage limit increased to \$118,500 in 2016 and was \$117,000 in 2015 for FICA; all wages are subject to Medicare.

Federal unemployment rates are 0.80% for the first \$7,000 of wages and state unemployment rate is 2.01% for the first \$10,200 of wages.

Proposed FICA amounts

FICA	175,345	
Medicare	41,565	
	<u>216,910</u>	
Proposed FUTA	5,628	
Proposed SUTA	9,050	231,588

Test year amount

FICA and Medicare	221,625	
Test year FUTA	3,910	
Test year SUTA	9,313	234,848

Increase		<u>(3,260)</u>
----------	--	----------------

Adjustment:

	<u>Percent</u>	<u>Amount</u>
107 Capitalized	32.71%	(1,067)
163 - 416 Clearing and others	8.04%	(262)
580 Operations	13.29%	(433)
590 Maintenance	19.17%	(625)
901 Consumer accounts	8.04%	(262)
908 Customer service	9.96%	(325)
912 Sales	0.31%	(10)
920 Administrative and general	8.47%	(276)
	<u>100.00%</u>	<u>(\$3,260)</u>

State unemployment (SUTA) wage rates are as follows:

2016	2.01%
2015	2.02%
2014	1.80%
2013	1.80%
2012	1.80%

Shelby Energy Cooperative
Case No. 2016-00464
Payroll Tax Adjustment

Witness: James Adkins

Employee Number	Normalized Wages	Social Security Wages		Medicare Wages		Federal Unemployment		State Unemployment	
		Up To \$118,500	@ 6.20%	All Wages	1.45%	Up to \$7,000	1.80%	Up to \$10,200	2.010%
1313	████	████	████	████	████	7,000	126	10,200	205
1314	████	████	████	████	████	7,000	126	10,200	205
1315	████	████	████	████	████	7,000	126	10,200	205
1317	████	████	████	████	████	7,000	126	10,200	205
1403	████	████	████	████	████	7,000	126	10,200	205
1701	████	████	████	████	████	7,000	126	10,200	205
1801	████	████	████	████	████	7,000	126	10,200	205
1902	████	████	████	████	████	7,000	126	10,200	205
1911	████	████	████	████	████	7,000	126	10,200	205
1912	████	████	████	████	████	7,000	126	10,200	205
2306	████	████	████	████	████	7,000	126	10,200	205
2309	████	████	████	████	████	7,000	126	10,200	205
2312	████	████	████	████	████	7,000	126	10,200	205
2315	████	████	████	████	████	7,000	126	10,200	205
Subtotal hour	2,083,324	2,083,324	129,166	2,083,324	30,208	231,000	4,158	336,600	6,766
Summer and Part Time Employees:									
708	████	████	████	████	████	████	████	████	████
1318	████	████	████	████	████	7,000	126	10,200	205
1319	████	████	████	████	████	████	████	████	████
1802	████	████	████	████	████	████	████	████	████
2316	████	████	████	████	████	7,000	126	10,200	205
Subtotal sum:	50,988	50,988	3,161	50,988	739	25,624	461	32,024	644
Retirees:									
1305	0	0	0	0	0	0	0	0	0
Subtotal retir	0	0	0	0	0	0	0	0	0
Total	2,839,514	2,809,999	174,220	2,839,514	41,173	312,624	5,627	450,224	9,049

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

29. Refer to the Application, Exhibit 1, pages 2 through 10. Using the attached spreadsheets as an example, provide this response in the Excel Workbook provided with all columns and rows unprotected and accessible. Include the following actual full-year salary and benefit information for each employee, identified by employee number and job title, for the years 2012 through 2016 (in gross dollars - not hourly or monthly rates).

- a. Regular salary or pay.
- b. Overtime pay.
- c. Vacation payout.
- d. Standby / Dispatch pay.
- e. Bonus pay.
- f. Other amounts paid and reported on the employees' W-2 (specify).
- g. Healthcare benefit cost for each employee.
 - (1) Amount paid by Shelby Energy.
 - (2) Amount paid by each employee.
- h. Dental benefits cost for each employee.
 - (1) Amount paid by Shelby Energy.
 - (2) Amount paid by each employee.
- i. Vision benefits cost for each employee
 - (1) Amount paid by Shelby Energy.
 - (2) Amount paid by each employee.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

j. Life insurance cost for each employee.

(1) Amount paid by Shelby Energy.

(2) Amount paid by each employee.

k. Accidental death and disability benefits for each employee.

(1) Amount paid by Shelby Energy.

(2) Amount paid by each employee.

l. Defined Contribution - 401 (k) or similar plan cost for each employee. Provide the amount paid by Shelby Energy.

m. Defined Benefit Retirement cost for each employee.

(1) Amount paid by Shelby Energy.

(2) Amount paid by each employee.

n. Cost of any other benefit available to an employee (specify).

Response 29a-n.

Refer to the Confidential electronic version of the Excel Worksheet contained on **USB Drive (A)** which has been included with this response.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

30. For each item of benefits listed in Item 29 above where an employee is required to pay part of the cost, provide a detailed explanation as to how Shelby Energy arrived at the employee contribution rate.

Response 30.

Health Benefits Cost

The portion paid by Shelby Energy's non-union employees was determined many years ago, and has been maintained at the percentage of approximately 8%, because health care premium costs have been controlled for several years. The portion paid by Shelby Energy's union employees was determined during initial contract negotiations and has remained at 10% of the medical premium since 2009 and have remained consistent for the same reason as non-union employees.

AD&D – Accident, Death and Dismemberment

Shelby Energy carries a supplemental level of insurance coverage for management employees based on the requirements of these positions, normally requiring more travel for seminars, training, etc. Shelby Energy also determined many years ago that all management level employees would pay \$1.00 each month towards the supplemental AD&D premium versus a percentage of the premium.

401K Plan

When Shelby Energy terminated participation in the NRECA R&S Plan for new employees hired after 2009, Shelby Energy wanted to put something in place,

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

through the 401K plan, that would assist with the hiring and the retention of employees and encourage participation towards the employee's own retirement plan. For an employee elective contribution of 5% of base salary by non-union employees, Shelby Energy will contribute 12% of the employees' base salary. For an employee's elective contribution of 9% of base salary by union employees, Shelby Energy will contribute 10% of the employees' base salary. Employees may contribute to the 401K plan after a month of employment but are not eligible for a contribution by Shelby Energy until a full year of employment.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

31. a. Refer to the Application, Exhibit 1. Explain whether the projected wages are based on a 2,080 hour work year.

b. Provide the number of employees who didn't work 2,080 hours in the test year, and explain why those full-time employees didn't work 2,080 hours.

c. Provide by year for 2012-2016, the number of full-time employees that didn't work 2,080 in each of those calendar years.

Response 31a.

Yes, the projected wages are based on a 2,080-hour work year.

Response 31b.

Refer to **Exhibit 2-31b.** which is made a part of this response.

Response 31c.

Refer to **Exhibit 2-31c.** which is made a part of this response.

Shelby Energy Cooperative, Inc.
Case No. 2016-00434

Employee Annual Hours < 2,080
Test Period: August 1, 2015 - July 31, 2016

<u>ID</u>	<u>HOURS</u>	<u>EXPLANATION</u>
210	2,008	Union business
705	1,828	Retired - 05/16
1305	1,850	Changed job- 07/16
1308	1,919	Resigned - 07/16
1314	1,920	Changed job - 06/16
1315	2,072	Hired - 06/15 - unpaid leave
1316	1,671	Hired - 10/15
1317	1,037	Hired - 02/16
1318	627	Hired - 04/16
1911	2,072	Unpaid leave
2306	2,040	Union business
2312	1,927	Workers compensation
2315	2,063	Unpaid leave

Shelby Energy Cooperative, Inc.
Case No. 2016-00434
Employee Annual Hours < 2,080

<u>ID</u>	<u>2012 - HOURS</u>	<u>EXPLANATION</u>
709	2,010	PT to Full Time - 04/12
710	72	Hired - 12/12
1002	1,387	Changed job - 08/12
1100	1,720	Changed job - 10/12
1305	520	Hired - 10/12
1403	2,024	Workers compensation
1701	676	Hired - 09/12
2301	693	Retired - 04/12
2314	2,075	Unpaid leave

<u>ID</u>	<u>2013 - HOURS</u>	<u>EXPLANATION</u>
301	533	Hired - 09/13
305	1,320	Changed job - 08/13
306	2,024	Workers compensation
601	867	Hired - 08/13
710	2,022	Unpaid leave
1101	1,328	Hired - 05/13
1102	173	Hired - 12/13
2306	2,068	Union business

Shelby Energy Cooperative, Inc.
Case No. 2016-00434
Employee Annual Hours < 2,080

<u>ID</u>	<u>2014 - HOURS</u>	<u>EXPLANATION</u>
210	2,072	Union business
213	1,027	Resigned - 06/14
214	784	Hired - 05/14
309	102	Resigned - 01/14
1102	433	Resigned - 02/14
1303	1,157	Hired - 06/14
1311	944	Hired - 07/14
1313	457	Hired - 10/14
1314	457	Hired - 10/14
1501	1,389	Retired - 07/14
2315	2,048	Unpaid leave

<u>ID</u>	<u>2015 - HOURS</u>	<u>EXPLANATION</u>
210	2,024	Union business
1308	1,927	Unpaid leave
1313	2,072	Unpaid leave
1314	2,072	Unpaid leave
1315	1,160	Hired - 06/15
1316	457	Hired - 10/15

Shelby Energy Cooperative, Inc.
Case No. 2016 - 0434
Employee Annual Hours < 2,080

<u>ID</u>	<u>2016 - HOURS</u>	<u>EXPLANATION</u>
310	1,588	Changed job - 09/16
501	1,572	Retired - 08/16
705	956	Retired - 05/16
710	2,075	Unpaid leave
1305	1,055	Changed job - 07/16
1308	1,286	Resigned - 07/16
1314	1,053	Change job - 06/16
1316	2,011	Leave of absence
1317	1,917	Hired - 02/16
1318	1,464	Hired - 04/16
1320	796	Hired - 08/16
1321	760	Hired - 08/16
1322	636	Hired - 09/16
1323	560	Hired - 09/16
1324	80	Hired - 08/16 / Resigned - 10/16
2306	2,048	Union business
2312	1,935	Workers compensation
2315	2,070	Unpaid leave

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

32. a. Provide for each salaried position that receives Salary Overtime, the employee title and basis for overtime eligibility for that position.

b. Provide a detailed description of the of the employee pay category "Standby Pay," provide each employee title, and the employee responsibilities for each employee who receives Standby Pay. Include in the response an explanation if the Standby Pay amounts vary by employee.

c. Explain how a salaried employee can receive both Salary Overtime and Standby Pay.

Response 32a.

The following salaried positions are eligible to be paid Salary Overtime:

- VP, Operations & Engineering
- System Engineer
- Operations & Engineering Assistant
- Manager of Engineering
- SVP, Finance & Cooperative Services
- Manager of Billing & Customer Service
- *Safety Coordinator
- *Executive Assistant
- *Billing & Customer Service Supervisor

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Shelby Energy uses a combination of an after-hours answering service, The Cooperative Response Center ("CRC"), and Outage Standby teams ("Team") to serve as 24/7 dispatching. Shelby Energy uses this method because of complications for 24/7 dispatching in regards to staffing employees and backup employees, and the additional costs from wages and benefits associated with the employees.

CRC handles routine outage calls and dispatching of up to two of Shelby Energy's crews and takes after-hour payments for Shelby Energy members. Should additional crews be needed, Shelby Energy has two Teams that report to the office to dispatch Shelby Energy's crews and contractor crews, when needed. Each Team consists of four employees; each with specific duties. Should a Team report to the headquarters office to work outages, the salaried employees on that Team are not paid any additional compensation for the first two hours they work the outages. After two hours, the employee receives "straight time overtime." They receive an hourly rate of pay, Salary Overtime, which is calculated by using the annual base salary for the employee and divided by 2,080 hours. These employees are not paid a time-and-a-half rate.

Those employee titles marked with an (*) are eligible to receive Salary Overtime if asked to work during outage and emergency situations but do not serve as a member of a Team.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 32b.

The following positions receive Standby Pay:

VP, Operations & Engineering
System Engineer
Operations & Engineering Assistant
SVP, Finance & Cooperative Services
Manager of Billing & Customer Service
Manager of Engineering
Joint-Use Coordinator
(2) Staking Technicians

Seven members of the Teams are required to be on-call and serve alternating weeks. They are available to assist members in case of emergencies, take calls from crews working in the field and should assistance be needed in the field. When necessary field work involves general oversight and aid to the crews in whatever manner is needed. In addition, these employees are required to be available to report to the office to assist with dispatching during outage situations or other applicable emergency events. Other members of the team serve as backup staff for dispatching and provide daily after-hours assistance to members for issues other than outage situations and for which CRC needs help in responding to a Shelby Energy member. Issues include disconnects for non-payment, bill payment concerns, prepay service, remote payment centers and other various issues. This group of employees are responsible for opening, securing and

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

closing the headquarters office, each day, and serve as backup for other members of the team.

VP of Operations & Engineering and System Engineer – Each of these employees lead a Team. The employee is required to be on-call and available to report to the office or the field, if needed, on alternating weeks. The employees serve as a First Supervisor (“1st Supr”) and Primary Dispatcher (“Dispatcher”) by directing Shelby Energy crews, contractor crews and working with emergency management organizations. The Dispatcher communicates with CRC to obtain data to assess the outage situation and confirms with CRC that the Team will assume dispatching from the headquarters. This employee directs the other team members upon arriving at the office. Once the situation is assessed, the team members assume their duties. The Dispatcher works directly with other team members to provide updates to the PSC, as needed and provide updates for member communications and for other employees. The Dispatcher serves as a trainer for other members of the Team who are learning the dispatching functions and working to become Dispatchers or provide general assistance for the future. The Dispatchers support one another and provide relief for rest time when either has worked their limit of hours. They and other Team members work together to support the best approach to restoring power in a safe and prompt manner.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Operations & Engineering Assistant – This position serves as the Second Supervisor (“2nd Supr”) which manages software that communicates with CRC to organize outage calls based on priority and location, issues outage tickets and documents the cause for each outage, restores outages on the software to maintain outage records up to date, creates service orders for repairs or other service needs for members, provides updates on social media and assists with any updates to the PSC. CRC continues to take any after-hours telephone calls and enters outages into the software as members make contact regarding outages, and this employee monitors calls, organizes by areas and provides new information to the Dispatcher and brings to the attention of the Dispatcher any new or outstanding priority/urgent calls.

Manager of Billing & Customer Service – This position serves as backup for the 2nd Supr and serves in that capacity when needed to relieve the employee, cover during vacation or otherwise unavailable. In addition, this employee provides daily after-hours assistance to members for issues other than outage situations and for which CRC needs help in responding to a Shelby Energy member. For example, these issues include disconnects for non-payment, bill payment concerns, prepay service, remote payment centers and other various issues

This employee is responsible for securing the building and closing the headquarters office each business day, responds to situations regarding the alarm system and serves as a backup for opening the office and assisting with FEMA claims.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

SVP of Finance & Cooperative Services – This position also serves as backup for the 2nd Supr and serves in that capacity when needed to relieve the employee, cover during vacation or otherwise unavailable.

This employee coordinates and directs estimates for storm damage, organizes payroll data and processes FEMA claims for Shelby Energy on any applicable outages.

This employee serves as backup for daily after-hours assistance to members for issues other than outage situations and for which CRC needs help in responding to a Shelby Energy member.

This employee is responsible for opening the headquarters office for business each day, and serves as a backup for closing the office and alarm system alerts.

Manager of Engineering and Senior Staking Technician – Each of these positions work separately with one of the Teams and are currently training to become a future Dispatcher for Shelby Energy. Each employee works directly with the current Dispatcher on the Team, along with working with the 2nd Supr, to get a full understanding of the process, crew needs, member needs and needs of the public. In addition, these two employees work with the other Team member who is marking the wall map and verifying the outage management system (“OMS”) is working properly so members may view the outage map on the website and mobile app. These positions may prepare outage tickets, service orders and also serve as a “bird dog” employee who assists with locating services on Shelby Energy’s system when contractors may not be as familiar with Shelby Energy’s service territory.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Joint-Use Coordinator and Junior Staking Technician – Each of these positions work separately with one of the Teams and works with the Dispatcher and 2nd Supr to get a full understanding of the process, crew needs, member needs and needs of the public. In addition, these two employees mark the wall map, verify the outage management system (“OMS”) is working properly so members may view the outage map on the website and mobile app and work with incoming crews, as needed, on paper work and materials. These positions work with the 2nd Supr to prepare outage tickets, service orders and will serve as a “bird dog” employee who assists with locating services on Shelby Energy’s system when contractors may not be as familiar with Shelby Energy’s service territory.

Response 32c.

When a salaried employee is required to be on-call and available for an outage or emergency situations and support the 24/7 dispatching system that has been developed by Shelby Energy, it justifies and sustains payment of Standby Pay to employees; be it salaried or hourly. These employees serve the needs of the members and save additional cost to the members by avoiding hiring additional dispatch employees to perform 24/7 duties and hiring, even more, employees to cover as backup when the primary dispatch employees are unavailable. In addition, members would, most likely, continue to cover the cost of the after-hours answering service, because Shelby Energy doesn’t have the infrastructure through hardware and software to handle the call volume received during outages and the costs to members would be prohibitive. CRC provides these capabilities

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

along with a valued and essential element in Shelby Energy's emergency response and disaster recovery plans.

Many of Shelby Energy's salaried employees, regularly, work more than 40 hours each week, and are exempt from overtime pay. This is part of the job, and they understand that commitment and arrangement when hired. Also, they know the nature of the electric utility business and the service is a necessity and not a luxury or optional item for Shelby's members. Out of concern for the safety of employees, Shelby Energy controls the number of hours that salaried employees may work, as well as the employees who work in the field. However; when salaried employees report to the office to work during outage or emergency situations, Shelby Energy does not pay any additional compensation for the first two (2) hours of work. If they must continue to work the outages beyond two (2) hours, they are paid "**straight time overtime.**" Their base annual pay is divided by 2080 and they are paid the straight time rate calculated. This is 1/2080 of the year (52 weeks at 40 hours per week). They are not paid time and one-half that rate. Only hourly employees working outages are paid time-and-one-half, for any hours over 40 hours actually worked in the workweek, as required by Federal and State law.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

33. Provide a listing of all health care plan categories available to Shelby Energy's employees, i.e., single, married no dependents, single parent with dependents, family, etc., and include the associated employee contribution rates and Shelby Energy's contribution rates of the total premium cost for each category, and each of the plans deductible(s) amounts. Also, explain why there is not a proposed adjustment in the Application for health care expenses.

Response 33.

Refer to **Exhibit 2-33** for a listing of health care plan categories which is included as part of this response.

The participating cooperative representatives of the health care plan, in direct collaboration with the plan administrator, have managed the health plan to avoid increased premium costs for approximately five (5) years. With the historic control of premium costs, there is no proposed adjustment for the health care expense. Should there be an increase to premiums, Shelby Energy will consider passing any increase to employees.

Shelby Energy Cooperative, Inc.
Case No. 2016-00434

2017 Medical Premiums, Contributions & Deductibles

Coverage	Total Premiums	Employee Contributions	Employee Percentage	Shelby Contribution	Deductibles
		<u>Non-Union</u>		<u>Non-Union</u>	
Employee	426.68	33.10	8%	393.58	400.00
Employee & Spouse	1,025.35	79.30	8%	946.05	800.00
Employee & Child(ren)	926.91	79.24	9%	847.67	1,200.00
Employee & Family	1,410.78	105.56	7%	1,305.22	1,200.00
		<u>Union</u>		<u>Union</u>	
Employee	426.68	42.66	10%	384.02	800.00
Employee & Spouse	1,025.35	102.54	10%	922.81	1,600.00
Employee & Child(ren)	926.91	92.68	10%	834.23	2,400.00
Employee & Family	1,410.78	141.08	10%	1,269.70	2,400.00

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

34. a. Provide copies of all of Shelby Energy's pension plans, including but not limited to, its NRECA R&S Plan, its 401 (k) or other plans, and post-employment retirement plan.

b. Provide documentation of all employee programs that are available to Shelby Energy employees.

c. Explain any differences in the defined benefit programs between non-union employees and union employees.

Response 34a.

Shelby Energy's pension plan documents are included and made a part of this response as follows:

Exhibit 2-34a. – NRECA R&S Plan

Exhibit 2-34a.(1) – 401K Plan for Union and Non-Union employees with R&S Plan

Exhibit 2-34a.(2) – 401K Plan for Union employees without R&S Plan

Exhibit 2-34a.(3) – 401K Plan for Non-Union employees without R&S Plan

Response 34b.

Shelby Energy employees have an option as provided in **Exhibits 2-34a. (1-3)** to participate in a Roth Elective Contribution without contribution by Shelby Energy.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Shelby Energy provides a 457(b) Plan for elective participation by the President and CEO. In addition, there is a 457(f) Plan in which only Shelby Energy contributes on behalf of the CEO, since the CEO was removed from the NRECA R&S Plan in 2015. Refer to **Exhibits 2-34b.(1)** and **2-34b.(2)** for copies of the plan documents for each.

Response 34c.

Shelby Energy grandfathered employees participating in the R&S Plan, effective September, 2009 with new hires no longer participating in the R&S Plan. There are no differences between Union and Non-Union employees participating in the R&S Plan.

RUS NO. 18030-001
Plan No. 001
E.I.N. 610337665

National Rural Electric Cooperative Association Adoption Agreement Retirement Security Plan

Use this Adoption Agreement only in conjunction with the Specifications of the Retirement Security Plan. The Participating System is bound by all terms and conditions included herein, which are construed in accordance with the Specifications of the Retirement Security Plan and any amendments thereto.

The Shelby Energy Cooperative (hereinafter referred to as the "Participating System") hereby adopts for its Employees the Retirement Security Plan ("Plan") and the Trust under which it is administered, sponsored by the National Rural Electric Cooperative Association ("NRECA"), effective the first day of January, 1948, and amended effective the first day of January, 2015.

1. Eligibility Requirements

An Employee shall become a Participant in the Plan on the first day of the month coincident with or next following:

ELECT ONE

- a. The date on which the Employee completes ___ one/ ___ three/ ___ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service, with a Participating System or a related employer as defined in Paragraph 5.06 of the Specifications. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- b. The date on which the Employee completes one Year of Eligibility Service.
- c. The date on which the Employee (i) completes ___ one/ ___ three/ ___ six Full Month(s) of Employment or, if earlier, one Year of Eligibility Service with a Participating System or a related employer, as defined in Paragraph 5.06 of the Specifications, and (ii) attains age 21. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- d. The date on which the Employee completes a Year of Eligibility Service and attains age 21.

Note: An Employee completes the Full Month of Employment requirement when he or she works 84 hours in each month during a one, three or six calendar month(s) period, as elected, which do not need to be consecutive. If an Employee does not complete 84 hours of service in each month of the eligibility period, but does work 1,000 hours during the first 12 months of employment (or subsequent Calendar Year), the Employee is considered to have met the eligibility requirements of the Participating System.

A Year of Eligibility Service is defined as either an Employee's first 12 months of employment starting with date of hire, or a subsequent Calendar Year in which an Employee is credited with 1,000 hours of service.

An Employee who was a Participant upon termination of employment and who is reemployed shall again become a Participant on the date of reemployment into a class of Employees eligible for the Plan; or, for an Employee who was a Participant under the Plan adopted by another Participating System, the date the Employee satisfies the current eligibility requirements, if his or her age and/or prior employment service does not satisfy these requirements.

2. Eligible Class of Employees

The provisions of the Plan and the Adoption Agreement are applicable to the following class of Employees of the Participating System.

ELECT ONE

- a. All Employees of the Participating System.
- b. Employees of the Participating System covered under an agreement that is the subject of good faith bargaining between the Participating System and _____ Union, dated _____, which makes the Plan and any amendments thereto available to such Employees.
- c. Employees of the Participating System not covered by a collective bargaining agreement.
- d. Other

- Employees of Shelby Energy Cooperative, Inc. hired before September 2, 2009,
- Employees of Shelby Energy Cooperative, Inc. transferred from another Participating System before January 1, 2015 and have previously participated in the RS Plan.

An Employee who transfers from the class of Employees specified above to another class of Employees within the Participating System shall, as of the date of transfer, become subject to the provisions of the Adoption Agreement applicable to such other class. The benefits attributable to Years of Benefit Service completed prior to the transfer shall be equal to the Participant's accrued benefit under the Plan, if any, determined as if the Participant had terminated employment on the date immediately prior to the effective date of the transfer and adjusted in the manner described under Section 7.a.ii of this Adoption Agreement.

3. Excluded Class of Employees

Employees of the Participating System described in the following classification(s) shall not be eligible to participate in the Plan:

DESCRIBE:

- a. Part-time, Temporary, Seasonal Employees who have not completed a Year of Eligibility Service.
- b. Part-time, Temporary, Seasonal Employees who have not completed a Year of Eligibility Service and attained age 21.

Note: Options (a) and (b) are not available if you have elected option (b) and (d) under Section (1) (Eligibility Requirements). A Year of Eligibility Service is defined as either an Employee's first 12 months of employment starting with date of hire, or a subsequent Calendar Year, in which an Employee is credited with 1,000 hours of service.

- c. Other job classifications. The excluded classifications should be definitely determinable and should not be based on age or length of employment (except under certain circumstances or as provided in (a) above). Enter the specific job classification below:

- Employees of Shelby Energy Cooperative who transfer employment from another system participating in the RS Plan on or after January 1, 2015.

- All other Employees

d. Highly Compensated Employees are excluded from participation in the Plan.

4. Years of Eligibility Service Relating to Mergers, Consolidations or Acquisitions

ELECT "a" or "b"

- a. For purposes of Paragraph 5.06(e) of the Plan, an Employee (elect one) Shall Shall Not receive credit for any period the Employee is employed by any entity merged, consolidated or liquidated into a System or any entity, substantially all of the assets of which have been acquired by a System, or which is otherwise considered a predecessor employer under Section 414(a) of the Code. Notwithstanding the foregoing election, service credited under Paragraph 5.06(e) of the Plan shall be credited to the extent required under Paragraph 5.06(e) of the Plan prior to its amendment effective October 1, 1999.
- b. Paragraph 5.06(e) is not applicable.

5. Normal Retirement Date

Normal Retirement Date under the Plan shall be the following:

Note: Any change to the Normal Retirement Date elected by a Participating System shall apply only to individuals who were employees on or after the effective date of the Adoption Agreement making the change. In any case where a Participant is transferred from another Participating System after the change in Normal Retirement Date, the Normal Retirement Date elected hereunder shall apply solely with respect to the benefit earned for Years of Benefit Service subsequent to the date of transfer. In any case where a Participant is transferred from another Participating System before the change in Normal Retirement Date, the Normal Retirement Date definition hereunder shall apply with respect to all Years of Benefit Service under the Plan.

ELECT ONE

- a. Age 65 Plan—The first day of the month coincident with or next following a Participant's attainment of age 65.
- b. Age 62 Plan—The first day of the month coincident with or next following a Participant's attainment of age 62.
- c. Age 60 Plan—The first day of the month coincident with or next following a Participant's attainment of age 60.
- d. 30-Year Plan—The first day of the month coincident with or any day thereafter following a Participant's attainment of the earlier of 30 Years of Benefit Service or age 62.

The retirement benefit payable to any Participant, under an age-based plan, whose retirement is postponed beyond his or her Normal Retirement Date pursuant to Paragraph 7.04 shall be computed as of the Participant's actual retirement date. The retirement benefit payable to any Participant under the 30-Year Plan shall be computed as of the following date:

ELECT ONE

- i. The last day of the month in which the Participant completes 30 Years of Benefit Service under this Plan.
- ii. The first day of the month in which the Participant's actual retirement date occurs.

6. Salary Definition

ELECT ONE

- a. The definition of "Base Salary" as determined under Subparagraph 2.26b (Base Salary in effect on November 15 of the prior year) shall apply in determining benefits under the Plan.
- b. The definition of "Full Salary" as determined under Subparagraph 2.26a shall apply in determining benefits under the Plan.
- Full Salary shall be applied only prospectively.
- Full Salary shall be applied both retrospectively and prospectively.

Note of caution as you elect a compensation definition:

If you elect to calculate benefits using "Base Salary" and your nondiscrimination tests result in benefits that discriminate in favor of Highly Compensated Employees, then your plan must be amended retroactively to correct the discrimination.

The retroactive amendment must:

- a. *determine benefits using a Full Salary compensation definition*
or
- b. *adopt other options to correct the discrimination.*

A corrective amendment will increase the cost of the plan and any such cost will be added to your contributions.

Note: Any change to the definition of Salary by a Participating System shall apply only to individuals who were Employees on or after the effective date of the Adoption Agreement making the change. For Participants who transfer from another Participating System after the change in Salary definition, the Salary definition hereunder shall apply solely with respect to the benefit earned for Years of Benefit Service subsequent to the date of transfer unless the Participating System elects to have the formula elected hereunder apply with respect to Years of Benefit Service completed before and after the transfer. When a Participant transfers from another Participating System before the change in Salary definition, the Salary definition hereunder shall apply with respect to all Years of Benefit Service under the Plan.

7. Normal Retirement Benefits

The retirement benefit payable to a Participant who retires on that person's Normal Retirement Date, computed on a Joint and Spouse Annuity basis, shall be equal to the following amount:

ELECT ONE

- a. GRADUATED BENEFIT: The sum of the following amounts:
- i. 1.7 % of the Participant's Final Average Effective Salary multiplied by Years of Benefit Service subsequent to the effective date of this Agreement; and
- ii. The benefit derived from the benefit formula in effect prior to the effective date of this Agreement, determined as if the Participant had terminated employment with the Employer on the date immediately prior to the effective date of the change in benefit formula (or the date the Participant actually terminated employment with the Employer, if earlier) under Section 12.03 of the Plan.

- b. UNIFORM BENEFIT: _____ % of the Participant's Final Average Effective Salary multiplied by Years of Benefit Service, but not less than the Participant's "frozen accrued benefit," as determined and adjusted in the manner described under 7.a.ii. above.

TIERED BENEFIT:

- i. ___% of the Participant's Final Average Effective Salary for each of the Participant's Years of Benefit Service subsequent to _____, plus
- ii. ___% of the Participant's Final Average Effective Salary for each of the Participant's Years of Benefit Service on or after _____ and prior to _____, plus
- iii. ___% of the Participant's Final Average Effective Salary for each of the Participant's Years of Benefit Service on or after _____ and prior to _____, plus
- iv. ___% of the Participant's Final Average Effective Salary for each of the Participant's Years of Benefit Service on or after _____ and prior to _____, plus
- v. ___% of the Participant's Final Average Effective Salary for each of the Participant's Years of Benefit Service on or after _____ and prior to _____.

The benefit under this Tiered Benefit section shall not be less than the Participant's "frozen accrued benefit," as determined and adjusted in the manner described under 7.a.ii above.

A. Years of Benefit Service

For the purpose of calculating the Uniform or Tiered Benefit, a Participant's Years of Benefit Service shall include:

- i. Only years during which the Employee was a Participant of this Participating System.
- ii. The date on which the Employee is hired.
- iii. Years during which the Employee is a Participant plus all years of employment subsequent to the selection below:
- a. From the date on which the Employee completed ___one/___three/___six Full Month(s) of Employment.
- b. From the date on which the Employee completed one Year of Eligibility Service.
- c. From the date on which the Employee (i) completed ___one/___three/___six Full Month(s) of Employment and (ii) attains age 21.
- d. From the date on which the Employee completed a Year of Eligibility Service and attains age 21.

B. Transfers (for Uniform or Tiered Benefit purposes)

When an Employee transfers from one Participating System to another (pursuant to 12.03.d of the Specifications), the Employee's retirement benefit for Years of Benefit Service with previous System will also be transferred:

ELECT ONE

- i. Shall be computed, with respect to each Participant who transferred prior to _____, or on the effective date of this amendment, under the formula elected hereunder, but the Participant's benefit shall never be less than the benefit determined under the formula elected by the System from which the Participant is transferred.

The benefits attributable to Years of Benefit Service completed prior to the transfer shall be equal to the Participant's accrued benefit under the Plan, if any, determined as if the Participant had terminated employment on the date immediately prior to the effective date of the transfer and adjusted in the manner described under Section 7.a.ii of this Adoption Agreement.

- ii. Shall be limited to the benefit provided under the formula elected by the System from which the Participant is transferred and calculated with reference to the Participant's Final Average Effective Salary (as of the Participant's retirement or other termination of employment), determined under the Adoption Agreement of such System as in effect on the date the Participant ceased to be employed by such System.

8. Participant Contributions

Each Participant shall contribute annually 0% of Effective Salary.

9. Cost-of-Living Adjustment

Benefits payable under the Plan:

ELECT ONE

- a. Shall not be adjusted for increases in the cost of living.
- b. Shall be adjusted for increases in the cost of living in accordance with Paragraph 12.01 of the Plan after such benefits are in pay status.

Note: Any change to a Participating System's election that constitutes an increase hereunder shall apply only to individuals who were Employees on or after the effective date of the Adoption Agreement making the change. In any case where a Participant is transferred from another Participating System after the election of the cost-of-living adjustment, the cost-of-living adjustment shall apply solely with respect to the benefit earned for Years of Benefit Service subsequent to the date of transfer unless the Participating System elects to have the formula elected hereunder apply with respect to Years of Benefit Service completed before and after the transfer. In any case where a Participant is transferred from another Participating System before the election of the cost-of-living adjustment, the cost-of-living adjustment shall apply with respect to all Years of Benefit Service under the Plan.

10. Optional Death Benefit

- a. No
- b. The Participating System hereby adopts for its Employees this optional benefit to the Retirement Security Plan. This option is adopted effective _____
- c. The Participating System hereby eliminates for its Employees this optional benefit to the Retirement Security Plan that was effective _____. This option is revoked effective _____

Note: If elected by a Participating System, the Optional 100% Death Benefit provides a Participant's beneficiary with the option to elect a single cash payment equal to the single cash payment a Participant could have received if he or she had terminated employment on the date of his or her death and elected such a payment. The Participating System acknowledges that there is an additional cost for the 100% Optional Death Benefit and that the additional cost will be charged for a period of not less than five years from the adoption of the benefit, even if the benefit is eliminated by the System.

11. Limitations of Benefits

Note: Complete this section only if you maintain, in addition to this Plan, one or more qualified defined benefit plans.

If one or more other defined benefit plans are or were maintained, the sum of the annual benefits for any Participant for any limitation year cannot exceed the maximum permissible amount. (For definitions of annual benefit and maximum permissible amount, refer to Paragraphs 14.05.d and 14.05.c, respectively.) To meet this limitation:

ELECT ONE

a. The rate of accrual under this Plan will be reduced to the extent necessary so that the sum of the annual benefits for all defined benefit plans will not exceed the maximum permissible amount.

b. _____
[Specify other method of reduction]

For the purpose of determining Annual Additions, the limitation year shall be the Calendar Year unless a different 12-consecutive-month period is elected in 11.c.

c. _____
[Specify period if other than Calendar Year]

12. Top-Heavy Adjustment

Note: Complete this section only if your Plan is determined to be top-heavy.

If the Plan must be amended to satisfy the top-heavy requirements due to the required aggregation of multiple plans, under Section 416 of the Code, appropriate language must be specified below to satisfy Section 416 of the Code.

[Specify appropriate language and Code sections]

13. Hold Harmless and Indemnification Agreement

Note: This paragraph applies only if the Participating System participated in another plan qualified under Section 401(a) of the Code (the "Prior Plan") and assets and liabilities of the Prior Plan are transferred to the Plan pursuant to the merger of the Prior Plan and the Plan.

Upon the effective date of the merger, the Participating System agrees to hold harmless and to indemnify NRECA, its officers and directors, the Retirement Security Pension Plan and the I&FS Committee from any and all liability, fines, penalties, loss, damage or expense, including all costs to correct any disqualifying defect or practice, imposed or arising under the Internal Revenue Code of 1986 and from any and all liability, fines, penalties, loss, damage or expense imposed or claim arising under the Employee Retirement Income Security Act of 1974 with respect to the Participating System's participation in the Prior Plan. This Hold Harmless and Indemnification Agreement shall continue in full force and effect without regard to changes or modifications by the Participating System to its Adoption Agreement in the Retirement Security Plan and without regard to the Participating System's termination of participation in the Retirement Security Plan in the future. This Agreement shall inure to the benefit of the Retirement Security Plan, the I&FS Committee and NRECA and its officers, directors and employees and their respective heirs, estates and assigns. This Adoption Agreement incorporates the Merger Agreement between the Retirement Security Plan and the Participating System, effective the date of this Adoption Agreement.

THIS PAGE INTENTIONALLY LEFT BLANK

14. Signatures

IN WITNESS WHEREOF, the Participating System, by its duly authorized officers, and with its seal affixed, has caused this Agreement to be executed as of the date below.

SEAL of the Participating System

Check this box if the Participating System does not have a corporate seal.

Shelby Energy Cooperative
(Name of Participating System)

620 Old Finchville Road, Shelbyville, KY, 40065
(Address of Participating System)

502-633-4420
(Telephone of Participating System)

By: Debra J. Martin
(Signature of Authorized Officer)

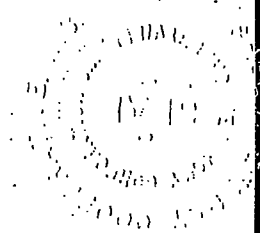
President + CEO
(Title of Officer)

Date: 11/20/14

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

By: Carol R. Buche

Date: 5/5/15



**RESOLUTION
AUTHORIZING THE AMENDMENT OF THE
NRECA 401(k) PENSION PLAN
Adoption Agreement "A"
and the
RETIREMENT SECURITY PLAN
18030-001, 18030-002, and 18030-003**

WHEREAS, Shelby Energy Cooperative is participating in the NRECA sponsored is participating in the NRECA sponsored defined contribution plan, the 401(k) Pension Plan (the "401(k) Plan"), and the defined benefit plan, the Retirement Security Plan (the "RS Plan"), and;

WHEREAS, The Board of Directors of Shelby Energy Cooperative ("the Board") now desires to amend this plan pursuant to Section 18.02 of the RS Plan and Section 18.2 of the 401(k) Plan documents, and does hereby authorize the amendment effective January 1, 2015, by executing the appropriate Adoption Agreement;

BE IT RESOLVED, that the amendment to the RS and 401(k) Plan is as follows:

18030-001 RS and 401(k) Plans:

- Eligible Employees are Employees hired or re-hired before September 2, 2009 and Employees who transfer employment from another system before January 1, 2015 and have previously participated in the RS Plan.
- Excluded Class of Employees. Effective January 1, 2015 an additional classification shall be ineligible to participate in the plan: Employees of Shelby Energy Cooperative who transfer employment from another system on or after January 1, 2015 and have participated in the RS Plan.

18030-001 RS Plan

- The RS Plan shall also exclude Highly Compensated Employees

18030-002 401(k) Plan

- Eligible Employees are:
 - Employees hired or rehired on or after September 2, 2009 who are covered by a Collective Bargaining Agreement.
 - Employees who transfer from another cooperative with RS Plan participation on or after January 1, 2015, and who are covered by a Collective Bargaining Agreement.

18030-003 401(k) Plan

- Eligible Employees are:
 - Non-union Employees hired or rehired on or after September 2, 2009.
 - Non-Union Employees who transfer from another cooperative with RS Plan participation on or after January 1, 2015.

BE IT FURTHER RESOLVED, that the Board recognizes that, in the event of an audit, the IRS or other regulatory authority may take the position that this job classification may have the effect of improperly excluding employees who have already met the age and service requirements and deem this classification to be discriminatory. The correction, due to an audit, might entail additional contributions, earnings and a penalty fee for which the Co-op will retain liability.

BE IT FURTHER RESOLVED, that the Board recognizes that certain nondiscrimination tests will be required to be performed with respect to this plan amendment. The Board further recognizes that any corrective action necessitated as a result of annual nondiscrimination testing would likely entail additional contributions for which the Co-op agrees to retain liability.

BE IT FURTHER RESOLVED, that the Board is aware that the amendment may cause certain employees to experience a reduction in benefits and accepts the responsibility for taking such action.

BE IT FURTHER RESOLVED, that employees of Shelby Energy Cooperative who will experience a reduction in benefits due to this amendment will receive the proper notification under §204(h) of the Employee Retirement Income Security Act no later than **30** days prior to the effective date of the new plan provision.

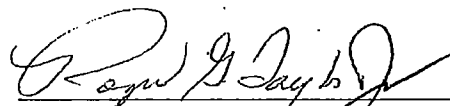
BE IT FURTHER RESOLVED, that the Board does hereby authorize and direct the General Manager to execute all necessary documents and to take any and all further actions necessary to carry out the intentions of the Board as indicated in this resolution.

CERTIFICATE OF SECRETARY

I, Roger Taylor, certify that I am Secretary of the Shelby Energy Cooperative Board of Directors and that the above is a true excerpt from the minutes of a regular board meeting of the Board of Directors of Shelby Energy Cooperative held on the 20th day of November 2014 at which a quorum was present and that the above portion of the minutes has not been modified nor rescinded.

IN WITNESS WHEREOF, I have set my hand and affixed the seal of Shelby Energy Cooperative this 20 day of November, 2014.

(SEAL)


Roger Taylor, Secretary-Treasurer

RUS NO. 18030-001
Plan No. 002
E.I.N. 610337665

National Rural Electric Cooperative Association
Adoption Agreement "A"
401(k) Pension Plan
For Use Only by Rural Cooperatives

Note: If your Participating System is not a rural electric cooperative, you must use Adoption Agreement form "B". Use this Adoption Agreement when amending or adopting only the Specifications of the 401(k) Pension Plan (The Plan).

The SHELBY ENERGY COOPERATIVE, INC. (hereinafter referred to as the "Participating System") hereby adopts for its Employees the 401(k) Pension Plan ("Plan") and the Trust under which it is administered, sponsored by the National Rural Electric Cooperative Association ("NRECA"), effective the first day of January, 1986, and as amended effective the first day of December, 2016. The Participating System adopts the following elective provisions with respect to the Plan:

1. Eligibility Requirements

Note: If your plan has both employer and employee contributions, complete both Section (A) and Section (B).

Section A. Employer Contributions

An Employee shall become a Participant in the Plan on the first day of the month coincident with or next following:

ELECT ONE

- a. The date on which the Employee completes ___ one/ ___ three/ ___ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- b. The date on which the Employee completes a Year of Eligibility Service.
- c. The date on which the Employee (i) completes ___ one/ ___ three/ ___ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service, and (ii) attains age 21. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- d. The date on which the Employee completes a Year of Eligibility Service and attains age 21.
- e. No Employer Contributions.

Note: An Employee completes the Full Month of Employment requirement when he or she works 84 hours in each month during a one, three or six calendar month(s) period, as elected, which do not need to be consecutive. If an Employee does not complete 84 hours of service in each month of the eligibility period, but does work 1,000 hours during the first 12 months of employment (or subsequent Calendar Year), the Employee is considered to have met the eligibility requirements of the Participating System

Section B. Employee Contributions

An Employee shall become a Participant in the Plan on the first day of the month coincident with or next following:

ELECT ONE

- a. The date on which the Employee completes X one/___ three /___ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- b. The date on which the Employee completes a Year of Eligibility Service.
- c. The date on which the Employee (i) completes ___ one/___ three /___ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service, and (ii) attains age 21. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- d. The date on which the Employee completes a Year of Eligibility Service and attains age 21.

Note: An Employee completes the Full Month of Employment requirement when he or she works 84 hours in each month during a one, three or six calendar month(s) period, as elected, which do not need to be consecutive. If an Employee does not complete 84 hours of service in each month of the eligibility period, but does work 1,000 hours during the first 12 months of employment (or subsequent Calendar Year), the Employee is considered to have met the eligibility requirements of the Participating System.

An Employee who was a Participant upon termination of employment and who is reemployed shall again become a Participant on the date of reemployment into a class of Employees eligible for the Plan; or for an Employee who was a Participant under the Plan adopted by another Participating System, the date the Employee satisfies the current eligibility requirements under the Plan, if his or her age and/or prior employment service do not satisfy these requirements.

2. Eligible Class of Employees

The provisions of the Plan and the Adoption Agreement are applicable to the following class of Employees of the Participating System.

ELECT (as applicable)

- a. All Employees of the Participating System.
- b. Employees of the Participating System covered by an agreement which is the subject of good faith bargaining between the Participating System and ___ Union dated ___ which makes the Plan and any amendments thereto available to such Employees.
- c. Employees of the Participating System not covered by a collective bargaining agreement.
- d. Other:
- Employees of Shelby Energy Cooperative, Inc. hired before September 2, 2009,
 - Employees of Shelby Energy Cooperative, Inc. transferred from another Participating System before January 1, 2015 and have previously participated in the RS Plan.

An Employee who transfers from the Class of Employees specified above to another Class of Employees within the Participating System shall, as of the date of transfer, become subject to the provisions of the Adoption Agreement applicable to such other class.

3. Excluded Class of Employees

Employees of the Participating System described in the following classification(s) shall not be eligible to participate in the Plan:

SELECT (as applicable):

- a. Part-time, Temporary/Seasonal Employees who have not completed a Year of Eligibility Service.
- b. Part-time, Temporary/Seasonal Employees who have not completed a Year of Eligibility Service and attained age 21.

Note: Options (a) and (b) are not available if you have elected option (b) or (d) under Section (1)(A) (Eligibility Requirements). A Year of Eligibility Service is defined as either an Employee's first 12 months of employment starting with date of hire, or a subsequent Calendar Year, in which an Employee is credited with 1,000 hours of service.

- c. Other job classifications. The excluded classifications should be definitely determinable and should not be based on age or length of service (except under circumstances or as provided in (a) above). Enter the specific job classification below.
- Employees of Shelby Energy Cooperative, Inc. who transfer employment from another system participating in the RS Plan on or after January 1, 2015.
 - All other Employees are ineligible to participate in this Plan
- d. Highly Compensated Employees are excluded from receiving employer contributions.

4. Years of Eligibility Service Relating to Mergers, Consolidations or Acquisitions

ELECT "a" or "b"

- a. For purposes of Paragraph 5.4(e) of the Plan, an Employee (elect one) Shall Shall Not receive credit for any period the Employee is employed by any entity merged, consolidated or liquidated into a System or any entity, substantially all of the assets of which have been acquired by a System, or which is otherwise considered a predecessor employer under Section 414(a) of the Code. Notwithstanding the foregoing election, service credited under Paragraph 5.4(e) of the Plan shall be credited to the extent required under Paragraph 5.4(e) of the Plan prior to its amendment effective January 1, 2000.
- b. Paragraph 5.4(e) is not applicable.

5. Normal Retirement Date

Normal Retirement Date under the Plan shall be the following:

ELECT ONE

- a. Age 65 Plan—The first day of the month coincident with or next following a Participant's attainment of age 65.
- b. Age 62 Plan—The first day of the month coincident with or next following a Participant's attainment of age 62.

- c. Age 60 Plan—The first day of the month coincident with or next following a Participant's attainment of age 60.
- d. 30-Year Plan—The first day of the month coincident with or next following the earlier of Participant's attainment of age 62 or the completion of 30 years of service. (Must complete i, ii, iii, iv, or v below.)

Choose when contributions will be discontinued under the 30-Year Plan (if selecting option 5.d. above):

ELECT ONE

- i. All Employer and all Employee Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this Plan.
- ii. All Employer and all Employee Contributions shall be discontinued on the first day of the month in which a Participant's actual retirement date occurs.
- iii. All Employee Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this plan.
- iv. All Employee Contributions shall be discontinued on the first day of the month in which a Participant's actual retirement date occurs.
- v. All Employer Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this Plan. (Under this option, all Employee Contributions may continue until the first day of the month in which a Participant's actual retirement date occurs.)

Note: Employer and Employee Contributions for a Participant who postpones retirement beyond his or her Normal Retirement Date shall not be discontinued because of attainment of any age.

6. Compensation

The Compensation on which Employer Contributions and Employee Contributions to this Plan is based shall be the Participant's current Full Salary or current Base Salary as limited under Paragraph 2.8 of the Specifications. "Full Salary" is a Participant's current wages from a Participating System subject to federal income tax withholding plus any amount deferred under a qualified salary reduction arrangement under Sections 125 and 401(k) of the Code and under Section 457(b) of the Code and including elective amounts that are not includible in the Participant's gross income by reason of Section 132(f) of the Code, but excluding reimbursements or other expense allowances; fringe benefits; moving expenses; welfare benefits; pension, deferred compensation or retirement allowances; or any amount deferred under a nonqualified, defined benefit deferred compensation arrangement. "Base Salary" is the Participant's Full Salary, but excluding any extra or overtime compensation and bonuses received in the Calendar Year. The definition of Compensation for contributions to this Plan shall be Compensation as elected by the Participating System below. Under either definition, only amounts that are actually paid to the Participant during periods while eligible to participate within the Calendar Year shall be taken into account.

Note of caution as you elect a compensation definition:

If you elect to determine employer base contributions using "Base Salary" and your nondiscrimination tests result in benefits that discriminate in favor of Highly Compensated Employees, then your plan must be amended retroactively to correct the discrimination. The retroactive amendment must:

- a. *Increase contributions for some or all Non-Highly Compensated Employees*
- b. *Modify eligibility provisions to permit ineligible Employees to participate in the plan and to grant accruals to these Employees*

and/or

- c. determine benefits on the basis of Full Salary

A corrective amendment will increase the cost of the plan and any such cost will be added to your contribution.

ELECT ONE COMPENSATION DEFINITION FOR EACH TYPE (as applicable):

- a. Employer Contributions:

- Full Salary
 Base Salary
 No Employer Contributions

- b. Pre-tax Employee Contributions and/or Roth Contributions:

- Full Salary
 Base Salary

- c. After-tax Voluntary Employee Contributions (if any):

- Full Salary
 Base Salary
 No Voluntary Employee Contributions

7. Contributions

The sum of Employer Contributions and Employee Contributions, in whatever form as elected below, shall not exceed the limitations provided in Sections 7 and 8 of the Plan. A Participant may elect to make pre-tax and/or Roth Employee Elective Contributions (including Required Employee Contributions) up to the limits prescribed by law. (If you have adopted the Safe Harbor Plan provision, you must have elected Full Salary in Section 6, above).

- a. Safe Harbor Provision.

- The Participating System has adopted the Safe Harbor provision.

ELECT ONE (if Safe Harbor is elected above):

- i. Employer Base Contribution Formula: _____% (at least 3%)

- ii. Basic Employer Matching Contribution Formula.

(1) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to 100% of Employee Elective Contributions of 0% to 3% of the Participant's Compensation; and

(2) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to 50% of Employee Elective Contributions in excess of 3% and no greater than 5% of the Participant's Compensation.

- iii. Enhanced Employer Matching Contribution Formula.

(1) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to _____% of Employee Elective Contributions of 0% to _____% (cannot exceed 6%) of the Participant's Compensation; *and if applicable*

(2) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to ____% of Employee Elective Contributions of ____% to ____% (cannot exceed 6 % total of (1) and (2)) of the Participant's Compensation.

Note: The formula in option (iii) must satisfy all of the following:

- (1) *The rate of Employer Matching Contributions may not increase as the rate of Elective Contributions increases;*
- (2) *It must provide for an aggregate amount of Employer Matching Contributions at any rate of Elective Contributions which is at least equal to the aggregate amount of Employer Matching Contributions required under paragraph (ii) above at each such rate of Elective Contributions;*
- (3) *Employer Matching Contributions may not be made with respect to Elective Contributions in excess of 6% of Compensation;*
- (4) *The Employer Matching Contribution with respect to any Highly Compensated Employee at any rate of Elective Contributions must not be greater than that with respect to an Employee who is not a Highly Compensated Employee.*

b. Employer Base Contribution not conditioned by Employee Contributions

- The Participating System shall contribute to each Participant's account an Employer Contribution equal to __% of the Participant's Compensation.

c. Employer Matching Contribution

- (i) The Participating System shall contribute to each Participant's account an Employer Base Contribution equal to 2% of the Participant's Compensation.

A Participant shall be required to contribute an Employee Elective Contribution equal to 1% of his or her Compensation in order to receive the Employer Base Contribution.

- (ii) The Participating System shall contribute to each Participant's account an Employer Contribution equal to ____% (up to 500%) of Employee Elective Contributions of ____% to ____% of the Participant's Compensation. (This may or may not be in addition to the election in (i) above).

- (iii) In addition to the Employer Matching Contribution specified in (i) and (ii) above, the Participating System shall further contribute to each Participant's account an Employer Contribution equal to ____% (up to 500%) of Employee Elective Contributions of ____% to ____% of the Participant's Compensation above the Employee Elective Contributions in (ii).

- (iv) The Participating System shall contribute to each Participant's account an Employer Contribution equal to ____% (up to 500%) of Employee Elective Contributions of ____% to ____% of the Participant's Compensation, in an amount:
- not more than \$ _____
- not less than \$ _____
- (This may or may not be in addition to an election in i, ii, or iii, above).

d. Other – See Addendum.

e. Enhanced Employer Contribution Formula

- The Participating System shall contribute to each participant's account and Employer Contribution equal to a percentage of Employee Elective Contributions up to ____ of the Participant's Compensation. (This may or may not be in addition to the election in (c) above). The formula is as follows: _____

f. There shall be no Employer Base Contribution or Employer Matching Contribution.

g. Roth Elective Contribution.

Roth Elective Contributions are adopted by the Participating System.

h. Voluntary Employee Contribution (elect one):

(i) Voluntary Employee Contribution: A Participant may elect to make after-tax Voluntary Employee Contributions ("VEC") to his or her account, subject to the limitations and conditions provided in Sections 6 and 8 of the Plan. Participants may make VEC only without making any Elective Employee Contributions, but shall not be eligible to receive any Employer Base and/or Matching Contributions specified above.

(ii) There shall be no Voluntary Employee Contributions.

8. Participant Loans

ELECT "a" or "b"

a. Participant loans are allowed, subject to the terms and conditions of the loan provisions in Section 15 of the Plan. A Participant may have a maximum of (elect only one):

one (1) loan, two (2) loans, three (3) loans, four (4) loans.

b. Participant loans are not allowed in this Plan.

9. In-Service Distributions

ELECT "a," and/or "b" or "c"

a. In-service Distribution Following Normal Retirement Date ("NRD") and age 59½ — A one-time distribution upon the attainment of the later of age 59½ or a Participant's NRD shall be available to a Participant prior to retirement or other termination of employment.

b. Hardship Distribution — Withdrawal upon financial hardship (as defined in Paragraph 14.17 of the Plan) shall be available to a Participant prior to actual retirement or other termination of employment.

c. There shall be no in-service distributions.

10. Contributions During Initial Disability Period

If the Participant is receiving Compensation from the Participating System, and making any Required Employee Contributions, the Participating System shall continue contributions on behalf of a disabled Participant, as provided in Paragraph 6.8 of the Specifications, for the period specified below only from the date of disability. In addition, a Participant who is receiving Compensation from the Participating System may continue to make Employee Elective Contributions and Required Employee Contributions until the Participant begins to receive payments due to disability, notwithstanding the election made by the Participating System below.

Note: The number of weeks in this election must not be greater than the Participating System's Long-Term Disability elimination period.

ELECT ONE

- a. For 13 weeks
- b. For 26 weeks
- c. For _____ weeks (from 1 to 25)
- d. No Employer Contributions

11. Investment of Contributions

The Participant shall designate the Investment Fund or Funds in which Employee Contributions and Employer Contributions allocated to the Participant shall be invested. Employee Contributions and Employer Contributions, if any, shall be invested in the same Investment Fund or Funds and in the same proportions. Participants shall be permitted to invest the contributions on a daily basis only by telephone or internet notice to the I&FS Committee or its authorized agent in accordance with procedures established by the I&FS Committee. The Investment Funds are described in the Participant Fees Annual Disclosure Statement provided to Participants upon enrollment and once a year thereafter.

SELF-DIRECTED BROKERAGE ACCOUNT

The Self-Directed Brokerage Account is an additional investment option in the 401(k) Pension Plan, specifically acting as a discount brokerage account within the Plan. All investments are made upon the direction of the Participant at the Participant's risk. Securities purchased through the Self-Directed Brokerage Account, including mutual funds, are not bank deposits and are not insured by the FDIC or guaranteed by the Self-Directed Brokerage Account Trustee. Upon adopting the Self-Directed Brokerage Account, a Participant must be permitted to invest contributions on a daily basis by telephone or internet notice to the I&FS Committee or its authorized agent in accordance with procedures established by the I&FS Committee.

12. Non-Discrimination Testing Elections

A. Top Paid Group

Highly Compensated Employees are defined in Paragraph 2.14 of the Plan. If your System has multiple Highly Compensated Employees, you may limit the number of employees considered to be Highly Compensated Employees to those employees in the top paid group. This group consists of the top 20% of the System's and its Affiliate's Employees, when ranked on the basis of compensation for the preceding Calendar Year.

Elect Top Paid Group

B. Prior/Current Year Election

401(k) and 401(m) plan testing may be performed using either prior year or current year data. A prior year election may be changed to a current year election for any Plan Year. However, once elected, a current year election **must** remain in effect for five Calendar Years (except under certain circumstances).

ELECT ONE

- a. Prior Year
- b. Current Year

13. Top-Heavy Adjustment

Note: Complete this section only if your Plan is determined to be top-heavy.

If the Plan must be amended to satisfy the top-heavy requirements due to the required aggregation of multiple plans under Section 416 of the Code, appropriate language must be specified below to satisfy Section 416 of the Code.

[Specify other appropriate language and Code sections.]

14. Limitations on Annual Additions

Note: Complete this section only if you maintain one or more qualified defined contribution plans in addition to this Plan.

If one or more other defined contribution plans are maintained, Annual Additions that may be credited to any Participant's account under this Plan for any Limitation Year shall be limited as follows:

ELECT ONE

a. In accordance with Section 11 of the Specifications.

b. _____
[Specify other method of reduction.]

For the purpose of determining Annual Additions, the limitation year shall be the Calendar Year unless a different 12-consecutive-month period is elected in 11.c.

c. _____
[Specify period if other than Calendar Year.]

15. Hold Harmless and Indemnification Agreement

Note: This section applies only if the Participating System participated in another plan qualified under Section 401(a) of the Code (the "Prior Plan"), and assets and liabilities of the Prior Plan are transferred to the Plan pursuant to the merger of the Prior Plan and the Plan.

Upon the effective date of the merger, the Participating System agrees to hold harmless and to indemnify NRECA, its officers and directors, the 401(k) Pension Plan and the I&FS Committee from any and all liability, fines, penalties, loss, damage or expense, including all costs to correct any disqualifying defect or practice, imposed or arising under the Internal Revenue Code of 1986 and from any and all liability, fines, penalties, loss, damage or expense imposed or claim arising under the Employee Retirement Income Security Act of 1974 with respect to the Participating System's participation in the Prior Plan. This Hold Harmless and Indemnification Agreement shall continue in full force and effect without regard to changes or modifications by the Participating System to its Adoption Agreement in the 401(k) Pension Plan and without regard to the Participating System's termination of participation in the 401(k) Pension Plan in the future. This Agreement shall inure to the benefit of the 401(k) Pension Plan, the I&FS Committee and NRECA and its officers, directors and employees and their respective heirs, estates and assigns. This Adoption Agreement incorporates the Merger Agreement between the 401(k) Pension Plan and the Participating System, effective the date of this Adoption Agreement

THIS PAGE INTENTIONALLY LEFT BLANK

16. Signatures

IN WITNESS WHEREOF, the Participating System, by its duly authorized officers, and with its seal affixed, has caused this Agreement to be executed as of the date below.

SEAL of the Participating System

Check this box if the Participating System does not have a corporate seal.

SHELBY ENERGY COOPERATIVE, INC.

(Name of Participating System)

620 Old Finchville Road, Shelbyville, KY, 40065

(Address of Participating System)

502-633-4420

(Telephone of Participating System)

By: _____

(Signature of Authorized Officer)

(Title of Officer)

Date: _____

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

By: _____

Date: _____

RUS NO. 18030-002
Plan No. 002
E.I.N. 610337665

National Rural Electric Cooperative Association
Adoption Agreement "A"
401(k) Pension Plan
For Use Only by Rural Cooperatives

Note: If your Participating System is not a rural electric cooperative, you must use Adoption Agreement form "B". Use this Adoption Agreement when amending or adopting only the Specifications of the 401(k) Pension Plan (The Plan).

The SHELBY ENERGY COOPERATIVE, INC. (hereinafter referred to as the "Participating System") hereby adopts for its Employees the 401(k) Pension Plan ("Plan") and the Trust under which it is administered, sponsored by the National Rural Electric Cooperative Association ("NRECA"), effective the first day of January, 1986, and as amended effective the first day of December, 2016. The Participating System adopts the following elective provisions with respect to the Plan:

1. Eligibility Requirements

Note: If your plan has both employer and employee contributions, complete both Section (A) and Section (B).

Section A. Employer Contributions

An Employee shall become a Participant in the Plan on the first day of the month coincident with or next following:

ELECT ONE

- a. The date on which the Employee completes one/ three/ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- b. The date on which the Employee completes a Year of Eligibility Service.
- c. The date on which the Employee (i) completes one/ three/ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service, and (ii) attains age 21. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- d. The date on which the Employee completes a Year of Eligibility Service and attains age 21.
- e. No Employer Contributions.

Note: An Employee completes the Full Month of Employment requirement when he or she works 84 hours in each month during a one, three or six calendar month(s) period, as elected, which do not need to be consecutive. If an Employee does not complete 84 hours of service in each month of the eligibility period, but does work 1,000 hours during the first 12 months of employment (or subsequent Calendar Year), the Employee is considered to have met the eligibility requirements of the Participating System

Section B. Employee Contributions

An Employee shall become a Participant in the Plan on the first day of the month coincident with or next following:

ELECT ONE

- a. The date on which the Employee completes X one/ three / six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- b. The date on which the Employee completes a Year of Eligibility Service.
- c. The date on which the Employee (i) completes one/ three / six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service, and (ii) attains age 21. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- d. The date on which the Employee completes a Year of Eligibility Service and attains age 21.

Note: An Employee completes the Full Month of Employment requirement when he or she works 84 hours in each month during a one, three or six calendar month(s) period, as elected, which do not need to be consecutive. If an Employee does not complete 84 hours of service in each month of the eligibility period, but does work 1,000 hours during the first 12 months of employment (or subsequent Calendar Year), the Employee is considered to have met the eligibility requirements of the Participating System.

An Employee who was a Participant upon termination of employment and who is reemployed shall again become a Participant on the date of reemployment into a class of Employees eligible for the Plan; or for an Employee who was a Participant under the Plan adopted by another Participating System, the date the Employee satisfies the current eligibility requirements under the Plan, if his or her age and/or prior employment service do not satisfy these requirements.

2. Eligible Class of Employees

The provisions of the Plan and the Adoption Agreement are applicable to the following class of Employees of the Participating System.

ELECT (as applicable)

- a. All Employees of the Participating System.
- b. Employees of the Participating System covered by an agreement which is the subject of good faith bargaining between the Participating System and IBEW Local 2100 Union dated 09/02/2012 which makes the Plan and any amendments thereto available to such Employees.
- c. Employees of the Participating System not covered by a collective bargaining agreement.
- d. Other:
- Employees hired or rehired on or after September 2, 2009, who are covered by a collective bargaining agreement.
 - Employees who transfer from another cooperative with RS Plan participation on or after January 1, 2015, and who are covered by a collective bargaining agreement.

An Employee who transfers from the Class of Employees specified above to another Class of Employees within the Participating System shall, as of the date of transfer, become subject to the provisions of the Adoption Agreement applicable to such other class.

3. Excluded Class of Employees

Employees of the Participating System described in the following classification(s) shall not be eligible to participate in the Plan:

SELECT (as applicable):

- a. Part-time, Temporary/Seasonal Employees who have not completed a Year of Eligibility Service.
- b. Part-time, Temporary/Seasonal Employees who have not completed a Year of Eligibility Service and attained age 21.

Note: Options (a) and (b) are not available if you have elected option (b) or (d) under Section (1)(A) (Eligibility Requirements). A Year of Eligibility Service is defined as either an Employee's first 12 months of employment starting with date of hire, or a subsequent Calendar Year, in which an Employee is credited with 1,000 hours of service.

- c. Other job classifications. The excluded classifications should be definitely determinable and should not be based on age or length of service (except under circumstances or as provided in (a) above). Enter the specific job classification below.
- All other Employees are not eligible to participate in this plan
- d. Highly Compensated Employees are excluded from receiving employer contributions.

4. Years of Eligibility Service Relating to Mergers, Consolidations or Acquisitions

ELECT "a" or "b"

- a. For purposes of Paragraph 5.4(e) of the Plan, an Employee (elect one) Shall Shall Not receive credit for any period the Employee is employed by any entity merged, consolidated or liquidated into a System or any entity, substantially all of the assets of which have been acquired by a System, or which is otherwise considered a predecessor employer under Section 414(a) of the Code. Notwithstanding the foregoing election, service credited under Paragraph 5.4(e) of the Plan shall be credited to the extent required under Paragraph 5.4(e) of the Plan prior to its amendment effective January 1, 2000.
- b. Paragraph 5.4(e) is not applicable.

5. Normal Retirement Date

Normal Retirement Date under the Plan shall be the following:

ELECT ONE

- a. Age 65 Plan—The first day of the month coincident with or next following a Participant's attainment of age 65.
- b. Age 62 Plan—The first day of the month coincident with or next following a Participant's attainment of age 62.
- c. Age 60 Plan—The first day of the month coincident with or next following a Participant's attainment of age 60.

- d. 30-Year Plan—The first day of the month coincident with or next following the earlier of Participant's attainment of age 62 or the completion of 30 years of service. (Must complete i, ii, iii, iv, or v below.)

Choose when contributions will be discontinued under the 30-Year Plan (if selecting option 5.d. above):

ELECT ONE

- i. All Employer and all Employee Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this Plan.
- ii. All Employer and all Employee Contributions shall be discontinued on the first day of the month in which a Participant's actual retirement date occurs.
- iii. All Employee Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this plan.
- iv. All Employee Contributions shall be discontinued on the first day of the month in which a Participant's actual retirement date occurs.
- v. All Employer Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this Plan. (Under this option, all Employee Contributions may continue until the first day of the month in which a Participant's actual retirement date occurs.)

Note: Employer and Employee Contributions for a Participant who postpones retirement beyond his or her Normal Retirement Date shall not be discontinued because of attainment of any age.

6. Compensation

The Compensation on which Employer Contributions and Employee Contributions to this Plan is based shall be the Participant's current Full Salary or current Base Salary as limited under Paragraph 2.8 of the Specifications. "Full Salary" is a Participant's current wages from a Participating System subject to federal income tax withholding plus any amount deferred under a qualified salary reduction arrangement under Sections 125 and 401(k) of the Code and under Section 457(b) of the Code and including elective amounts that are not includible in the Participant's gross income by reason of Section 132(f) of the Code, but excluding reimbursements or other expense allowances; fringe benefits; moving expenses; welfare benefits; pension, deferred compensation or retirement allowances; or any amount deferred under a nonqualified, defined benefit deferred compensation arrangement. "Base Salary" is the Participant's Full Salary, but excluding any extra or overtime compensation and bonuses received in the Calendar Year. The definition of Compensation for contributions to this Plan shall be Compensation as elected by the Participating System below. Under either definition, only amounts that are actually paid to the Participant during periods while eligible to participate within the Calendar Year shall be taken into account.

Note of caution as you elect a compensation definition:

If you elect to determine employer base contributions using "Base Salary" and your nondiscrimination tests result in benefits that discriminate in favor of Highly Compensated Employees, then your plan must be amended retroactively to correct the discrimination. The retroactive amendment must:

- a. *Increase contributions for some or all Non-Highly Compensated Employees*
- b. *Modify eligibility provisions to permit ineligible Employees to participate in the plan and to grant accruals to these Employees and/or*
- c. *determine benefits on the basis of Full Salary*

A corrective amendment will increase the cost of the plan and any such cost will be added to your contribution.

ELECT ONE COMPENSATION DEFINITION FOR EACH TYPE (as applicable):

a. Employer Contributions:

- Full Salary
 Base Salary
 No Employer Contributions

b. Pre-tax Employee Contributions and/or Roth Contributions:

- Full Salary
 Base Salary

c. After-tax Voluntary Employee Contributions (if any):

- Full Salary
 Base Salary
 No Voluntary Employee Contributions

7. Contributions

The sum of Employer Contributions and Employee Contributions, in whatever form as elected below, shall not exceed the limitations provided in Sections 7 and 8 of the Plan. A Participant may elect to make pre-tax and/or Roth Employee Elective Contributions (including Required Employee Contributions) up to the limits prescribed by law. (If you have adopted the Safe Harbor Plan provision, you must have elected Full Salary in Section 6, above).

a. Safe Harbor Provision.

- The Participating System has adopted the Safe Harbor provision.

ELECT ONE (if Safe Harbor is elected above):

- i. Employer Base Contribution Formula: _____% (at least 3%)
ii. Basic Employer Matching Contribution Formula.

(1) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to 100% of Employee Elective Contributions of 0% to 3% of the Participant's Compensation; and

(2) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to 50% of Employee Elective Contributions in excess of 3% and no greater than 5% of the Participant's Compensation.

- iii. Enhanced Employer Matching Contribution Formula.

(1) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to _____% of Employee Elective Contributions of 0% to _____% (cannot exceed 6%) of the Participant's Compensation; *and if applicable*

(2) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to _____% of Employee Elective Contributions of _____% to _____% (cannot exceed 6 % total of (1) and (2)) of the Participant's Compensation.

Note: The formula in option (iii) must satisfy all of the following:

- (1) *The rate of Employer Matching Contributions may not increase as the rate of Elective Contributions increases;*
- (2) *It must provide for an aggregate amount of Employer Matching Contributions at any rate of Elective Contributions which is at least equal to the aggregate amount of Employer Matching Contributions required under paragraph (ii) above at each such rate of Elective Contributions;*
- (3) *Employer Matching Contributions may not be made with respect to Elective Contributions in excess of 6% of Compensation;*
- (4) *The Employer Matching Contribution with respect to any Highly Compensated Employee at any rate of Elective Contributions must not be greater than that with respect to an Employee who is not a Highly Compensated Employee.*

b. Employer Base Contribution not conditioned by Employee Contributions

- The Participating System shall contribute to each Participant's account an Employer Contribution equal to ___% of the Participant's Compensation.

c. Employer Matching Contribution

- (i) The Participating System shall contribute to each Participant's account an Employer Base Contribution equal to 2% of the Participant's Compensation.

A Participant shall be required to contribute an Employee Elective Contribution equal to 1% of his or her Compensation in order to receive the Employer Base Contribution.

- (ii) The Participating System shall contribute to each Participant's account an Employer Contribution equal to 100% (up to 500%) of Employee Elective Contributions of 1% to 8% of the Participant's Compensation. (This may or may not be in addition to the election in (i) above).

- (iii) In addition to the Employer Matching Contribution specified in (i) and (ii) above, the Participating System shall further contribute to each Participant's account an Employer Contribution equal to _____% (up to 500%) of Employee Elective Contributions of _____% to _____% of the Participant's Compensation above the Employee Elective Contributions in (ii).

- (iv) The Participating System shall contribute to each Participant's account an Employer Contribution equal to _____% (up to 500%) of Employee Elective Contributions of _____% to _____% of the Participant's Compensation, in an amount:
- not more than \$ _____
- not less than \$ _____
- (This may or may not be in addition to an election in i, ii, or iii, above).

d. Other – See Addendum.

e. Enhanced Employer Contribution Formula

- The Participating System shall contribute to each participant's account and Employer Contribution equal to a percentage of Employee Elective Contributions up to ___ of the Participant's Compensation. (This may or may not be in addition to the election in (c) above). The formula is as follows: _____

f. There shall be no Employer Base Contribution or Employer Matching Contribution.

g. Roth Elective Contribution.

Roth Elective Contributions are adopted by the Participating System.

h. Voluntary Employee Contribution (elect one):

(i) Voluntary Employee Contribution: A Participant may elect to make after-tax Voluntary Employee Contributions ("VEC") to his or her account, subject to the limitations and conditions provided in Sections 6 and 8 of the Plan. Participants may make VEC only without making any Elective Employee Contributions, but shall not be eligible to receive any Employer Base and/or Matching Contributions specified above.

(ii) There shall be no Voluntary Employee Contributions.

8. Participant Loans

ELECT "a" or "b"

a. Participant loans are allowed, subject to the terms and conditions of the loan provisions in Section 15 of the Plan. A Participant may have a maximum of (elect only one):

one (1) loan, two (2) loans, three (3) loans, four (4) loans.

b. Participant loans are not allowed in this Plan.

9. In-Service Distributions

ELECT "a," and/or "b" or "c"

a. In-service Distribution Following Normal Retirement Date ("NRD") and age 59½ — A one-time distribution upon the attainment of the later of age 59½ or a Participant's NRD shall be available to a Participant prior to retirement or other termination of employment.

b. Hardship Distribution — Withdrawal upon financial hardship (as defined in Paragraph 14.17 of the Plan) shall be available to a Participant prior to actual retirement or other termination of employment.

c. There shall be no in-service distributions.

10. Contributions During Initial Disability Period

If the Participant is receiving Compensation from the Participating System, and making any Required Employee Contributions, the Participating System shall continue contributions on behalf of a disabled Participant, as provided in Paragraph 6.8 of the Specifications, for the period specified below only from the date of disability. In addition, a Participant who is receiving Compensation from the Participating System may continue to make Employee Elective Contributions and Required Employee Contributions until the Participant begins to receive payments due to disability, notwithstanding the election made by the Participating System below.

Note: The number of weeks in this election must not be greater than the Participating System's Long-Term Disability elimination period.

ELECT ONE

- a. For 13 weeks
- b. For 26 weeks
- c. For _____ weeks (from 1 to 25)
- d. No Employer Contributions

11. Investment of Contributions

The Participant shall designate the Investment Fund or Funds in which Employee Contributions and Employer Contributions allocated to the Participant shall be invested. Employee Contributions and Employer Contributions, if any, shall be invested in the same Investment Fund or Funds and in the same proportions. Participants shall be permitted to invest the contributions on a daily basis only by telephone or internet notice to the I&FS Committee or its authorized agent in accordance with procedures established by the I&FS Committee. The Investment Funds are described in the Participant Fees Annual Disclosure Statement provided to Participants upon enrollment and once a year thereafter.

SELF-DIRECTED BROKERAGE ACCOUNT

The Self-Directed Brokerage Account is an additional investment option in the 401(k) Pension Plan, specifically acting as a discount brokerage account within the Plan. All investments are made upon the direction of the Participant at the Participant's risk. Securities purchased through the Self-Directed Brokerage Account, including mutual funds, are not bank deposits and are not insured by the FDIC or guaranteed by the Self-Directed Brokerage Account Trustee. Upon adopting the Self-Directed Brokerage Account, a Participant must be permitted to invest contributions on a daily basis by telephone or internet notice to the I&FS Committee or its authorized agent in accordance with procedures established by the I&FS Committee.

12. Non-Discrimination Testing Elections

A. Top Paid Group

Highly Compensated Employees are defined in Paragraph 2.14 of the Plan. If your System has multiple Highly Compensated Employees, you may limit the number of employees considered to be Highly Compensated Employees to those employees in the top paid group. This group consists of the top 20% of the System's and its Affiliate's Employees, when ranked on the basis of compensation for the preceding Calendar Year.

Elect Top Paid Group

B. Prior/Current Year Election

401(k) and 401(m) plan testing may be performed using either prior year or current year data. A prior year election may be changed to a current year election for any Plan Year. However, once elected, a current year election **must** remain in effect for five Calendar Years (except under certain circumstances).

ELECT ONE

- a. Prior Year
- b. Current Year

13. Top-Heavy Adjustment

Note: Complete this section only if your Plan is determined to be top-heavy.

If the Plan must be amended to satisfy the top-heavy requirements due to the required aggregation of multiple plans under Section 416 of the Code, appropriate language must be specified below to satisfy Section 416 of the Code.

[Specify other appropriate language and Code sections.]

14. Limitations on Annual Additions

Note: Complete this section only if you maintain one or more qualified defined contribution plans in addition to this Plan.

If one or more other defined contribution plans are maintained, Annual Additions that may be credited to any Participant's account under this Plan for any Limitation Year shall be limited as follows:

ELECT ONE

a. In accordance with Section 11 of the Specifications.

b. _____
[Specify other method of reduction.]

For the purpose of determining Annual Additions, the limitation year shall be the Calendar Year unless a different 12-consecutive-month period is elected in 11.c.

c. _____
[Specify period if other than Calendar Year.]

15. Hold Harmless and Indemnification Agreement

Note: This section applies only if the Participating System participated in another plan qualified under Section 401(a) of the Code (the "Prior Plan"), and assets and liabilities of the Prior Plan are transferred to the Plan pursuant to the merger of the Prior Plan and the Plan.

Upon the effective date of the merger, the Participating System agrees to hold harmless and to indemnify NRECA, its officers and directors, the 401(k) Pension Plan and the I&FS Committee from any and all liability, fines, penalties, loss, damage or expense, including all costs to correct any disqualifying defect or practice, imposed or arising under the Internal Revenue Code of 1986 and from any and all liability, fines, penalties, loss, damage or expense imposed or claim arising under the Employee Retirement Income Security Act of 1974 with respect to the Participating System's participation in the Prior Plan. This Hold Harmless and Indemnification Agreement shall continue in full force and effect without regard to changes or modifications by the Participating System to its Adoption Agreement in the 401(k) Pension Plan and without regard to the Participating System's termination of participation in the 401(k) Pension Plan in the future. This Agreement shall inure to the benefit of the 401(k) Pension Plan, the I&FS Committee and NRECA and its officers, directors and employees and their respective heirs, estates and assigns. This Adoption Agreement incorporates the Merger Agreement between the 401(k) Pension Plan and the Participating System, effective the date of this Adoption Agreement

THIS PAGE INTENTIONALLY LEFT BLANK

16. Signatures

IN WITNESS WHEREOF, the Participating System, by its duly authorized officers, and with its seal affixed, has caused this Agreement to be executed as of the date below.

SEAL of the Participating System

Check this box if the Participating System does not have a corporate seal.

SHELBY ENERGY COOPERATIVE, INC.

(Name of Participating System)

620 Old Finchville Road, Shelbyville, KY, 40065

(Address of Participating System)

502-633-4420

(Telephone of Participating System)

By: _____

(Signature of Authorized Officer)

(Title of Officer)

Date: _____

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

By: _____

Date: _____

RUS NO. 18030-003
Plan No. 002
E.I.N. 610337665

National Rural Electric Cooperative Association
Adoption Agreement "A"
401(k) Pension Plan
For Use Only by Rural Cooperatives

Note: If your Participating System is not a rural electric cooperative, you must use Adoption Agreement form "B". Use this Adoption Agreement when amending or adopting only the Specifications of the 401(k) Pension Plan (The Plan).

The SHELBY ENERGY COOPERATIVE, INC. (hereinafter referred to as the "Participating System") hereby adopts for its Employees the 401(k) Pension Plan ("Plan") and the Trust under which it is administered, sponsored by the National Rural Electric Cooperative Association ("NRECA"), effective the first day of January, 1986, and as amended effective the first day of December, 2016. The Participating System adopts the following elective provisions with respect to the Plan:

1. Eligibility Requirements

Note: If your plan has both employer and employee contributions, complete both Section (A) and Section (B).

Section A. Employer Contributions

An Employee shall become a Participant in the Plan on the first day of the month coincident with or next following:

ELECT ONE

- a. The date on which the Employee completes ___ one/ ___ three/ ___ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- b. The date on which the Employee completes a Year of Eligibility Service.
- c. The date on which the Employee (i) completes ___ one/ ___ three/ ___ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service, and (ii) attains age 21. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- d. The date on which the Employee completes a Year of Eligibility Service and attains age 21.
- e. No Employer Contributions.

Note: An Employee completes the Full Month of Employment requirement when he or she works 84 hours in each month during a one, three or six calendar month(s) period, as elected, which do not need to be consecutive. If an Employee does not complete 84 hours of service in each month of the eligibility period, but does work 1,000 hours during the first 12 months of employment (or subsequent Calendar Year), the Employee is considered to have met the eligibility requirements of the Participating System

Section B. Employee Contributions

An Employee shall become a Participant in the Plan on the first day of the month coincident with or next following:

ELECT ONE

- a. The date on which the Employee completes X one/___ three /___ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- b. The date on which the Employee completes a Year of Eligibility Service.
- c. The date on which the Employee (i) completes ___ one/___ three /___ six Full Month(s) of Employment or, if earlier, a Year of Eligibility Service, and (ii) attains age 21. A Full Month of Employment is defined as any calendar month during which an Employee works 84 hours (see note below).
- d. The date on which the Employee completes a Year of Eligibility Service and attains age 21.

Note: An Employee completes the Full Month of Employment requirement when he or she works 84 hours in each month during a one, three or six calendar month(s) period, as elected, which do not need to be consecutive. If an Employee does not complete 84 hours of service in each month of the eligibility period, but does work 1,000 hours during the first 12 months of employment (or subsequent Calendar Year), the Employee is considered to have met the eligibility requirements of the Participating System.

An Employee who was a Participant upon termination of employment and who is reemployed shall again become a Participant on the date of reemployment into a class of Employees eligible for the Plan; or for an Employee who was a Participant under the Plan adopted by another Participating System, the date the Employee satisfies the current eligibility requirements under the Plan, if his or her age and/or prior employment service do not satisfy these requirements.

2. Eligible Class of Employees

The provisions of the Plan and the Adoption Agreement are applicable to the following class of Employees of the Participating System.

ELECT (as applicable)

- a. All Employees of the Participating System.
- b. Employees of the Participating System covered by an agreement which is the subject of good faith bargaining between the Participating System and _____ Union dated _____ which makes the Plan and any amendments thereto available to such Employees.
- c. Employees of the Participating System not covered by a collective bargaining agreement.
- d. Other:
- Non-Union Employees hired or rehired on or after September 2, 2009.
 - Non-Union Employees who transfer from another cooperative with RS Plan participation on or after January 1, 2015.

An Employee who transfers from the Class of Employees specified above to another Class of Employees within the Participating System shall, as of the date of transfer, become subject to the provisions of the Adoption Agreement applicable to such other class.

3. Excluded Class of Employees

Employees of the Participating System described in the following classification(s) shall not be eligible to participate in the Plan:

SELECT (as applicable):

- a. Part-time, Temporary/Seasonal Employees who have not completed a Year of Eligibility Service.
- b. Part-time, Temporary/Seasonal Employees who have not completed a Year of Eligibility Service and attained age 21.

Note: Options (a) and (b) are not available if you have elected option (b) or (d) under Section (1)(A) (Eligibility Requirements). A Year of Eligibility Service is defined as either an Employee's first 12 months of employment starting with date of hire, or a subsequent Calendar Year, in which an Employee is credited with 1,000 hours of service.

- c. Other job classifications. The excluded classifications should be definitely determinable and should not be based on age or length of service (except under circumstances or as provided in (a) above). Enter the specific job classification below.
 - All other Employees are ineligible to participate in this Plan
- d. Highly Compensated Employees are excluded from receiving employer contributions.

4. Years of Eligibility Service Relating to Mergers, Consolidations or Acquisitions

ELECT "a" or "b"

- a. For purposes of Paragraph 5.4(e) of the Plan, an Employee (elect one) Shall Shall Not receive credit for any period the Employee is employed by any entity merged, consolidated or liquidated into a System or any entity, substantially all of the assets of which have been acquired by a System, or which is otherwise considered a predecessor employer under Section 414(a) of the Code. Notwithstanding the foregoing election, service credited under Paragraph 5.4(e) of the Plan shall be credited to the extent required under Paragraph 5.4(e) of the Plan prior to its amendment effective January 1, 2000.
- b. Paragraph 5.4(e) is not applicable.

5. Normal Retirement Date

Normal Retirement Date under the Plan shall be the following:

ELECT ONE

- a. Age 65 Plan—The first day of the month coincident with or next following a Participant's attainment of age 65.
- b. Age 62 Plan—The first day of the month coincident with or next following a Participant's attainment of age 62.

- c. Age 60 Plan—The first day of the month coincident with or next following a Participant's attainment of age 60.
- d. 30-Year Plan—The first day of the month coincident with or next following the earlier of Participant's attainment of age 62 or the completion of 30 years of service. (Must complete i, ii, iii, iv, or v below.)

Choose when contributions will be discontinued under the 30-Year Plan (if selecting option 5.d. above):

ELECT ONE

- i. All Employer and all Employee Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this Plan.
- ii. All Employer and all Employee Contributions shall be discontinued on the first day of the month in which a Participant's actual retirement date occurs.
- iii. All Employee Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this plan.
- iv. All Employee Contributions shall be discontinued on the first day of the month in which a Participant's actual retirement date occurs.
- v. All Employer Contributions shall be discontinued on the last day of the month in which the Participant completes 30 years of service under this Plan. (Under this option, all Employee Contributions may continue until the first day of the month in which a Participant's actual retirement date occurs.)

Note: Employer and Employee Contributions for a Participant who postpones retirement beyond his or her Normal Retirement Date shall not be discontinued because of attainment of any age.

6. Compensation

The Compensation on which Employer Contributions and Employee Contributions to this Plan is based shall be the Participant's current Full Salary or current Base Salary as limited under Paragraph 2.8 of the Specifications. "Full Salary" is a Participant's current wages from a Participating System subject to federal income tax withholding plus any amount deferred under a qualified salary reduction arrangement under Sections 125 and 401(k) of the Code and under Section 457(b) of the Code and including elective amounts that are not includible in the Participant's gross income by reason of Section 132(f) of the Code, but excluding reimbursements or other expense allowances; fringe benefits; moving expenses; welfare benefits; pension, deferred compensation or retirement allowances; or any amount deferred under a nonqualified, defined benefit deferred compensation arrangement. "Base Salary" is the Participant's Full Salary, but excluding any extra or overtime compensation and bonuses received in the Calendar Year. The definition of Compensation for contributions to this Plan shall be Compensation as elected by the Participating System below. Under either definition, only amounts that are actually paid to the Participant during periods while eligible to participate within the Calendar Year shall be taken into account.

Note of caution as you elect a compensation definition:

If you elect to determine employer base contributions using "Base Salary" and your nondiscrimination tests result in benefits that discriminate in favor of Highly Compensated Employees, then your plan must be amended retroactively to correct the discrimination. The retroactive amendment must:

- a. *Increase contributions for some or all Non-Highly Compensated Employees*

- b. *Modify eligibility provisions to permit ineligible Employees to participate in the plan and to grant accruals to these Employees and/or*
- c. *determine benefits on the basis of Full Salary*

A corrective amendment will increase the cost of the plan and any such cost will be added to your contribution.

ELECT ONE COMPENSATION DEFINITION FOR EACH TYPE (as applicable):

a. Employer Contributions:

- Full Salary
- Base Salary
- No Employer Contributions

b. Pre-tax Employee Contributions and/or Roth Contributions:

- Full Salary
- Base Salary

c. After-tax Voluntary Employee Contributions (if any):

- Full Salary
- Base Salary
- No Voluntary Employee Contributions

7. Contributions

The sum of Employer Contributions and Employee Contributions, in whatever form as elected below, shall not exceed the limitations provided in Sections 7 and 8 of the Plan. A Participant may elect to make pre-tax and/or Roth Employee Elective Contributions (including Required Employee Contributions) up to the limits prescribed by law. (If you have adopted the Safe Harbor Plan provision, you must have elected Full Salary in Section 6, above).

a. Safe Harbor Provision.

- The Participating System has adopted the Safe Harbor provision.

ELECT ONE (if Safe Harbor is elected above):

- i. Employer Base Contribution Formula: _____ % (at least 3%)
- ii. Basic Employer Matching Contribution Formula.

(1) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to 100% of Employee Elective Contributions of 0% to 3% of the Participant's Compensation; and

(2) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to 50% of Employee Elective Contributions in excess of 3% and no greater than 5% of the Participant's Compensation.

- iii. Enhanced Employer Matching Contribution Formula.

(1) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to ____% of Employee Elective Contributions of 0% to ____% (cannot exceed 6%) of the Participant's Compensation; **and if applicable**

(2) The Participating System shall contribute to each Participant's account an Employer Matching Contribution equal to ____% of Employee Elective Contributions of ____% to ____% (cannot exceed 6% total of (1) and (2)) of the Participant's Compensation.

Note: The formula in option (iii) must satisfy all of the following:

- (1) The rate of Employer Matching Contributions may not increase as the rate of Elective Contributions increases;
- (2) It must provide for an aggregate amount of Employer Matching Contributions at any rate of Elective Contributions which is at least equal to the aggregate amount of Employer Matching Contributions required under paragraph (ii) above at each such rate of Elective Contributions;
- (3) Employer Matching Contributions may not be made with respect to Elective Contributions in excess of 6% of Compensation;
- (4) The Employer Matching Contribution with respect to any Highly Compensated Employee at any rate of Elective Contributions must not be greater than that with respect to an Employee who is not a Highly Compensated Employee.

b. Employer Base Contribution not conditioned by Employee Contributions

- The Participating System shall contribute to each Participant's account an Employer Contribution equal to ____% of the Participant's Compensation.

c. Employer Matching Contribution

- (i) The Participating System shall contribute to each Participant's account an Employer Base Contribution equal to ____% of the Participant's Compensation.

A Participant shall be required to contribute an Employee Elective Contribution equal to ____% of his or her Compensation in order to receive the Employer Base Contribution.

- (ii) The Participating System shall contribute to each Participant's account an Employer Contribution equal to ____% (up to 500%) of Employee Elective Contributions of ____% to ____% of the Participant's Compensation. (This may or may not be in addition to the election in (i) above).

- (iii) In addition to the Employer Matching Contribution specified in (i) and (ii) above, the Participating System shall further contribute to each Participant's account an Employer Contribution equal to ____% (up to 500%) of Employee Elective Contributions of ____% to ____% of the Participant's Compensation above the Employee Elective Contributions in (ii).

- (iv) The Participating System shall contribute to each Participant's account an Employer Contribution equal to ____% (up to 500%) of Employee Elective Contributions of ____% to ____% of the Participant's Compensation, in an amount:

- not more than \$ _____
 not less than \$ _____

(This may or may not be in addition to an election in i, ii, or iii, above).

d. Other – See Addendum.

e. Enhanced Employer Contribution Formula

- The Participating System shall contribute to each participant's account and Employer Contribution equal to a percentage of Employee Elective Contributions up to 5% of the Participant's Compensation. (This may or may not be in addition to the election in (c) above). The formula is as follows:

<u>Employee Elective Contribution %</u>	<u>Employer Matching Contribution %</u>
1	8
2	9
3	10
4	11
5	12

- f. There shall be no Employer Base Contribution or Employer Matching Contribution.

g. Roth Elective Contribution.

- Roth Elective Contributions are adopted by the Participating System.

h. Voluntary Employee Contribution (elect one):

- (i) Voluntary Employee Contribution: A Participant may elect to make after-tax Voluntary Employee Contributions ("VEC") to his or her account, subject to the limitations and conditions provided in Sections 6 and 8 of the Plan. Participants may make VEC only without making any Elective Employee Contributions, but shall not be eligible to receive any Employer Base and/or Matching Contributions specified above.

- (ii) There shall be no Voluntary Employee Contributions.

8. Participant Loans

ELECT "a" or "b"

- a. Participant loans are allowed, subject to the terms and conditions of the loan provisions in Section 15 of the Plan. A Participant may have a maximum of (elect only one):

one (1) loan, two (2) loans, three (3) loans, four (4) loans.

- b. Participant loans are not allowed in this Plan.

9. In-Service Distributions

ELECT "a," and/or "b" or "c"

- a. In-service Distribution Following Normal Retirement Date ("NRD") and age 59½ — A one-time distribution upon the attainment of the later of age 59½ or a Participant's NRD shall be available to a Participant prior to retirement or other termination of employment.

- b. Hardship Distribution — Withdrawal upon financial hardship (as defined in Paragraph 14.17 of the Plan) shall be available to a Participant prior to actual retirement or other termination of employment.

- c. There shall be no in-service distributions.

10. Contributions During Initial Disability Period

If the Participant is receiving Compensation from the Participating System, and making any Required Employee Contributions, the Participating System shall continue contributions on behalf of a disabled Participant, as provided in Paragraph 6.8 of the Specifications, for the period specified below only from the date of disability. In addition, a Participant who is receiving Compensation from the Participating System may continue to make Employee Elective Contributions and Required Employee Contributions until the Participant begins to receive payments due to disability, notwithstanding the election made by the Participating System below.

Note: The number of weeks in this election must not be greater than the Participating System's Long-Term Disability elimination period.

ELECT ONE

- a. For 13 weeks
- b. For 26 weeks
- c. For ____ weeks (from 1 to 25)
- d. No Employer Contributions

11. Investment of Contributions

The Participant shall designate the Investment Fund or Funds in which Employee Contributions and Employer Contributions allocated to the Participant shall be invested. Employee Contributions and Employer Contributions, if any, shall be invested in the same Investment Fund or Funds and in the same proportions. Participants shall be permitted to invest the contributions on a daily basis only by telephone or internet notice to the I&FS Committee or its authorized agent in accordance with procedures established by the I&FS Committee. The Investment Funds are described in the Participant Fees Annual Disclosure Statement provided to Participants upon enrollment and once a year thereafter.

SELF-DIRECTED BROKERAGE ACCOUNT

The Self-Directed Brokerage Account is an additional investment option in the 401(k) Pension Plan, specifically acting as a discount brokerage account within the Plan. All investments are made upon the direction of the Participant at the Participant's risk. Securities purchased through the Self-Directed Brokerage Account, including mutual funds, are not bank deposits and are not insured by the FDIC or guaranteed by the Self-Directed Brokerage Account Trustee. Upon adopting the Self-Directed Brokerage Account, a Participant must be permitted to invest contributions on a daily basis by telephone or internet notice to the I&FS Committee or its authorized agent in accordance with procedures established by the I&FS Committee.

12. Non-Discrimination Testing Elections

A. Top Paid Group

Highly Compensated Employees are defined in Paragraph 2.14 of the Plan. If your System has multiple Highly Compensated Employees, you may limit the number of employees considered to be Highly Compensated Employees to those employees in the top paid group. This group consists of the top 20% of the System's and its Affiliate's Employees, when ranked on the basis of compensation for the preceding Calendar Year.

Elect Top Paid Group

B. Prior/Current Year Election

401(k) and 401(m) plan testing may be performed using either prior year or current year data. A prior year election may be changed to a current year election for any Plan Year. However, once elected, a current year election **must** remain in effect for five Calendar Years (except under certain circumstances).

ELECT ONE

- a. Prior Year
- b. Current Year

13. Top-Heavy Adjustment

Note: Complete this section only if your Plan is determined to be top-heavy.

If the Plan must be amended to satisfy the top-heavy requirements due to the required aggregation of multiple plans under Section 416 of the Code, appropriate language must be specified below to satisfy Section 416 of the Code.

[Specify other appropriate language and Code sections.]

14. Limitations on Annual Additions

Note: Complete this section only if you maintain one or more qualified defined contribution plans in addition to this Plan.

If one or more other defined contribution plans are maintained, Annual Additions that may be credited to any Participant's account under this Plan for any Limitation Year shall be limited as follows:

ELECT ONE

- a. In accordance with Section 11 of the Specifications.
- b. _____
[Specify other method of reduction.]

For the purpose of determining Annual Additions, the limitation year shall be the Calendar Year unless a different 12-consecutive-month period is elected in 11.c.

- c. _____
[Specify period if other than Calendar Year.]

15. Hold Harmless and Indemnification Agreement

Note: This section applies only if the Participating System participated in another plan qualified under Section 401(a) of the Code (the "Prior Plan"), and assets and liabilities of the Prior Plan are transferred to the Plan pursuant to the merger of the Prior Plan and the Plan.

Upon the effective date of the merger, the Participating System agrees to hold harmless and to indemnify NRECA, its officers and directors, the 401(k) Pension Plan and the I&FS Committee from any and all liability, fines, penalties, loss, damage or expense, including all costs to correct any disqualifying defect or practice, imposed or arising under the Internal Revenue Code of 1986 and from any and all liability, fines, penalties, loss, damage or expense imposed or claim arising under the Employee Retirement Income Security Act of 1974 with respect to the Participating System's participation in the Prior Plan. This Hold Harmless and Indemnification Agreement shall continue in full force and effect without regard to changes or modifications by the Participating System to its Adoption Agreement in the 401(k) Pension Plan and without regard to the Participating System's termination of participation in the 401(k) Pension Plan in the future. This Agreement shall inure to the benefit of the 401(k) Pension Plan, the I&FS Committee and NRECA and its officers, directors and employees and their respective heirs, estates and assigns. This Adoption Agreement incorporates

the Merger Agreement between the 401(k) Pension Plan and the Participating System, effective the date of this Adoption Agreement

THIS PAGE INTENTIONALLY LEFT BLANK

16. Signatures

IN WITNESS WHEREOF, the Participating System, by its duly authorized officers, and with its seal affixed, has caused this Agreement to be executed as of the date below.

SEAL of the Participating System

Check this box if the Participating System does not have a corporate seal.

SHELBY ENERGY COOPERATIVE, INC.
(Name of Participating System)

620 Old Finchville Road, Shelbyville, KY, 40065
(Address of Participating System)

502-633-4420
(Telephone of Participating System)

By: _____
(Signature of Authorized Officer)

(Title of Officer)

Date: _____

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

By: _____

Date: _____

ADMINISTRATIVE SERVICES AGREEMENT

THIS AGREEMENT is made and entered into this 31st day of July, 2009, by and between the National Rural Electric Cooperative Association ("NRECA"), a Virginia Corporation, and Shelby Energy Cooperative, Inc. (the "Cooperative").

WHEREAS, the Cooperative sponsors the

Check all applicable plans:

- Executive Compensation Plan For Employees of Tax Exempt employers**
- Executive compensation Plan for Directors of Tax Exempt Employers**
- Top Hat Plan for Employees of Taxable Employers**
- Top Hat Plan for Directors of Taxable Employers**
- Incentive 457(f) Deferred Compensation Plan**
- Global Executive Compensation Plan for Employees**
- Global Executive Compensation Plan for Directors**
- Governmental Deferred Compensation Plan**
- Pension Restoration Plan For Tax Exempt Employers**
- Pension Restoration Plan for Taxable Employers**
- Global Pension Restoration Plan**

(the "Plan or plans"), which are intended to be unfunded and unsecured plan(s) primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees of the Cooperative, except where other employees are permitted by regulation to participate.

WHEREAS, the Cooperative desires to enter into an agreement with NRECA, pursuant to which NRECA will furnish certain administrative services

NOW, THEREFORE, for valuable consideration and in order to put into effect the desire of the parties hereto, it is mutually understood and agreed as follows:

SECTION 1 - TERM AND RELATIONSHIP OF PARTIES

- 1.1 **Effective Date and Term.** The effective date of this Agreement is January 1, 2009 ("Effective Date"). The initial term shall be the calendar year or a portion thereof, commencing on the Effective Date. Thereafter, this Agreement will renew automatically for successive one (1) year periods commencing on January 1 unless this Agreement is terminated in accordance with the provisions of Section 5.

1.2 Relationship of Parties. The provisions of this Agreement are not intended to create any relationship between and among the parties other than that of independent parties contracting with each other. NRECA is and shall remain an independent contractor with respect to the services provided hereunder, and shall not for any purpose be deemed an employee of the Cooperative or the Plan. NRECA does not assume any responsibility for the operation and administration of the Plan; or any act or omission or breach of duty by the Plan or the Cooperative. NRECA is not in any way to be deemed an insurer, underwriter or guarantor with respect to any benefit payable under the Plan. NRECA does not assume any financial risk or obligation with respect to claims for benefits payable by the Plan. Nothing herein shall be deemed to make NRECA a party to the Plan or to confer upon NRECA any authority or control regarding the management of the Plan. Nothing in this Agreement shall be deemed to impose upon NRECA any obligation to any employee of the Cooperative or any person who is participating in the Plan. NRECA is not a fiduciary with respect to the Plan under ERISA or any other applicable law.

The Cooperative is the Plan Administrator (as defined in ERISA Section 3(16)(A)) and Named Fiduciary (as defined in ERISA Section 402(a)(1)) of the Plan for purposes of ERISA. The Cooperative has the sole authority and responsibility for the Plan and its operations, including authority and responsibility to interpret and construe the terms of the Plan, to adopt, amend and rescind rules, regulations and procedures pertaining to its duties under the Plan and to the administration of the Plan and to make all other determinations deemed necessary or advisable for the discharge of its duties or the administration of the plan. The discretionary authority of the Cooperative is final, absolute, conclusive and exclusive.

If this Administrative Services Agreement pertains to the Pension Restoration Plan, NRECA shall have the exclusive authority to make all determinations of the methodology used in calculating benefits under the RS Plan and the Pension Restoration Plan, including the determination of the amount of the RS Plan credit and the determination of the timing of its application.

SECTION 2 – SERVICES PERFORMED BY NRECA

2.1 Engagement of NRECA. The Cooperative hereby engages NRECA to perform for and on behalf of the Plan, as described on Attachment A to this Administrative Services Agreement. NRECA agrees to perform such services under and subject to, and in compliance with, the provisions of this Agreement.

2.2 Sample Materials. From time to time, as determined by NRECA in its sole discretion, NRECA will make available sample materials to the Cooperative, including but not limited to sample administrative forms, sample plan document, sample administrative guide and sample board resolution. Such sample materials are made available to the Cooperative for its convenience, and are not intended to constitute legal advice.

2.3 Record-keeping. NRECA shall, in its performance of the duties in Attachment A maintain the usual and customary books, records and documents, including records in electronic form, that relate to the Plan, its Participants and the services performed under this Agreement. **NRECA is not responsible for monitoring, or notifying cooperatives of dates or event that may have tax consequences for any individual participant.**

2.4 Administrative and Support Personnel. NRECA shall provide sufficient and qualified administrative and support personnel during its normal business hours to enable NRECA to perform all the services required by this Agreement.

SECTION 3 - RESPONSIBILITIES OF COOPERATIVE

3.1 Plan and Participant Information

(a) The Cooperative shall furnish to NRECA on a timely basis all information necessary for NRECA to perform its services hereunder, including, but not limited to, Participant elections, Participant election changes and Participant changes of address. Such information shall be provided to NRECA in the time and manner set forth in the sample Plan document. NRECA shall not have any responsibility for benefits paid in error due to information provided by the Cooperative. NRECA shall not have any obligation to credit the Plan for any administrative fees incurred or paid to NRECA as a consequence of incorrect or inaccurate information provided by the Cooperative. NRECA shall assume all such information is complete and accurate and is under no duty to question the completeness or accuracy of such information. The provisions of this section do not apply to any requirements that may be necessary of any registered investment company, or other institution in which accounts may be established for any purpose under this plan.

(b) The Cooperative agrees to provide to NRECA written notice of all material modifications to the Plan at least thirty (30) days prior to the effective date of such modifications. NRECA shall determine within thirty (30) days of receipt of such notice whether it can continue to provide the services under this Agreement. If NRECA cannot do so, NRECA reserves the right to terminate this Agreement. If NRECA can do so, NRECA and the Cooperative reserve the right to amend this Agreement pursuant to Section 5.1 to the extent changes to the Agreement are necessary.

3.2 Sole Responsibility. Without limiting the Cooperative's responsibilities to those described herein, it shall be the Cooperative's sole responsibility and duty to amend the Plan as necessary to ensure ongoing compliance with applicable law; file any tax or governmental returns relating to the Plan; determine if and when a valid election change has occurred; **notify participants of the occurrence of taxable income; notify participants of rights and responsibilities under the terms of the plan;** execute and return required Plan and claims documentation; and take all other steps to maintain and operate the Plan in compliance with applicable provisions of the Plan, ERISA, the Code and other federal and state laws.

3.3 Indemnification

(a) NRECA shall indemnify the Cooperative and hold it harmless from and against all loss, liability, damage, expense, reasonable attorney's fees or other obligations resulting from or arising out of the gross negligence or willful misconduct of any employee, officer, director, agent, representative or subcontractor of NRECA .

(b) The Cooperative shall indemnify NRECA and hold it harmless from and against all loss, liability, damage, expense, reasonable attorney's fees or other obligations resulting from, or arising out of, any act or omission of the Cooperative or the Plan in connection with any claim, demand or lawsuit by Participants and beneficiaries against NRECA relating to benefit payments or services performed hereunder. In addition, the Cooperative shall indemnify NRECA and hold it harmless from and against any and all liability, expense, demand or other obligation resulting from or out of any premium charge, tax or similar assessment (federal or state) for which the Plan or Cooperative is liable. The Cooperative shall indemnify NRECA and hold it harmless from and against all loss, liability, damage, expense, reasonable attorney's fees or other obligations resulting from or arising out of the gross negligence or willful misconduct of any employee, officer, director, agent, representative or subcontractor of the Cooperative.

SECTION 4 – PAYMENT FOR SERVICES

4.1 Fees for Administration. For the certain other administrative services provided by NRECA on behalf of the Plan, the Cooperative agrees to pay NRECA an administrative fee **as indicated on Attachment A.**

4.2 Billing and Payment of Charges. An annual invoice will be made available to the Cooperative. The Cooperative shall remit fee payments upon receipt of such invoice. Failure to pay fees when due may be cause for NRECA, in its sole discretion, to terminate this Agreement according to the provisions of Section 5.

4.3 Modification of Fee Amounts. NRECA may, in its sole discretion, increase the amount of the fee specified in Section 4.1 by providing at least sixty (60) days' written or electronic notice to the Cooperative.

SECTION 5 - AMENDMENT AND TERMINATION

5.1 Amendment of Agreement. The parties may amend this Agreement at any time so long as such amendment is mutually agreed upon, in writing and signed by the parties.

5.2 Termination of Agreement

(a) Automatic – This Agreement shall automatically terminate as of the earliest of the following: (i) the effective date of any legislation that makes the Plan and/or this Agreement illegal; (ii) the date the Cooperative becomes insolvent, or bankrupt, or subject to liquidation, receivership or conservatorship; or (iii) the termination date of the Plan, subject to any agreement between the Cooperative and NRECA regarding the processing of post-termination benefit payments.

(b) Optional – This Agreement may be terminated as of the earliest of the following: (i) by NRECA upon failure of the Cooperative to pay the fees set forth in Section 4 within thirty (30) days after they become due; (ii) by NRECA upon the failure of the Cooperative to perform its obligations under this Agreement; (iii) by the Cooperative upon the failure of NRECA to perform its obligations under this Agreement; or (iv) by either the Cooperative or NRECA as of the end of the term of this Agreement, by giving the other party at least thirty (30) days written notice. In the event of default under (i), (ii) or (iii) above, either party has fifteen (15) days from receipt of the notice of termination to cure or remedy the default.

(c) Limited Continuation After Termination – If the Plan is terminated or if this Agreement is terminated while the Plan continues to be in effect, and if the Cooperative desires the limited continuation of NRECA's administrative services, then the Cooperative and NRECA must mutually agree in writing that this Agreement shall continue for sixty (60) days for the purpose of payment of any Plan benefit or expense incurred prior to the date of Plan termination or Agreement termination, as applicable. If this Agreement is continued in accordance with this subsection (c), the Cooperative shall continue to pay the fee set forth in Section 4.1 of this Agreement.

SECTION 6 – MISCELLANEOUS

6.1 Severability. The invalidity or unenforceability of any terms or provisions of this Agreement shall in no way affect the validity or enforceability of any other terms or provisions, provided that the basic purposes of this Agreement are achieved through the remaining valid and enforceable provisions.

6.2 Compliance and Non-Waiver. Neither the Cooperative's failure nor NRECA's failure to insist upon strict performance of any provision of this Agreement will modify such provision, render it unenforceable or waive any subsequent breach of the same or any other provision. No waiver or modification of any of the terms or provisions of this Agreement shall be valid unless in each instance the waiver or modification is accomplished pursuant to the amendment provisions of Section 5.1 of this Agreement. The failure to exercise any right under this Agreement shall not operate as a waiver of that right.

6.3 Assignment. This Agreement shall be binding upon, and inure to the benefit of, the parties to it, their respective successors and assigns, but may not be assigned by any party without the other party's written consent. Notwithstanding the foregoing, NRECA may delegate performance of all or a portion of its duties to a NRECA affiliate, provided that NRECA remains the guarantor of and primarily liable for all obligations for services under this Agreement.

6.4 Circumstances Beyond Control of Parties. If any state laws, court cases or the regulations of any governmental agency, or other circumstances beyond the control of the parties, prevents a party from meeting its obligations under this Agreement, the failure to meet these obligations shall not be considered a breach. Rather, the parties agree in this event to attempt to renegotiate the terms of this Agreement so that each party's obligations can be fulfilled and are in compliance with applicable law or regulations.

NRECA shall not be deemed in default of this Agreement, nor held responsible for any cessation, interruption or delay in the performance of its obligations hereunder, due to causes beyond its reasonable control, including but not limited to acts of terrorism, natural disaster, civil disturbance, war or armed conflict or the inability to obtain sufficient material or services required in the conduct of its business, including Internet access or any change in or the adoption of any law, judgment or decree.

6.5 Notice. Any notice required to be given under the terms of this Agreement shall be in writing and sent by first class mail to the Employer at:

Attn: Theresa Atha
Benefits Administrator
Shelby Energy Cooperative, Inc.
620 Old Finchville Rd
Shelbyville, KY 40065-1714

and to NRECA at:

Attn: Director, Non Qualified Products
4301 Wilson Boulevard
Arlington, VA 22203

6.6 Entire Agreement. This Agreement shall constitute the entire Agreement relating to the subject matter hereof between the parties hereto, and shall supersede all prior agreements, written or otherwise, between the parties.

6.7 Execution by Counterparts and by Facsimile. This Agreement may be executed in counterparts, each of which will be deemed an original Agreement, but all of which taken together will be considered one Agreement. This Agreement may be executed and delivered by facsimile, and the parties agree that such facsimile execution and delivery will have the same force and effect as delivery of an original document with original signatures, and that each party may use such facsimile signatures as evidence of the execution and delivery of this Agreement by all parties to the same extent that an original signature could be used.

6.8 Governing Law. To the extent applicable, this Agreement shall be construed pursuant to ERISA. To the extent applicable, this Agreement shall be construed, enforced and governed by the laws of the Commonwealth of Virginia.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed and executed by their authorized officers.

[Shelby Energy Cooperative, Inc.]

By: Debra Martin
[Name]
[Title] President & CEO

Date: 7/31/09

National Rural Electric Cooperative Association

By: Alvin Van der Horst

Date: 12/29/2009



**National Rural Electric
Cooperative Association**
A Touchstone Energy® Cooperative

**Attachment for
NRECA-Managed Deferred Compensation Plan
Administrative Services Agreements**

This attachment for Deferred Compensation Plan Administrative Services Agreements (ASAs) specifies when annual invoiced fees are due and what services they support.

This attachment should be added to each of the ASAs under which your co-op is providing Deferred Compensation Plans.

The bulleted provisions that follow apply for the *Top Hat Plan for Taxable Employers (Employees and Directors)*, *Governmental 457(b) Plan for Governmental Employers*, *Global Deferred Compensation Plan for Tax-Exempt or Taxable Employers* or the *Executive Compensation Plan for Tax-Exempt Employers (Employees and Directors)*.

- The annual invoiced fee (enclosed) is due as of July 1 of the year in which the plan is in effect and shall continue to be due in each subsequent year for so long as the plan is in effect.
- In accordance with the provisions of the attached ASA, the following services are provided by NRECA to the adopting employer for the specified annual fee:
 - Web Site access to current plan materials
 - Sample plan documents, sample resolutions, election forms
 - Assistance from NRECA field staff
 - Telephone access to subject matter experts
 - Consultations regarding use and options for non-qualified deferred compensation plans

The bulleted provisions that follow apply for the *Global 457(f) Incentive Deferred Compensation Plan for Tax Exempt or Taxable Employers*.

- The annual invoiced fee (enclosed) is due as of July 1 of the year in which the plan is in effect and shall continue to be due in each subsequent year for so long as the plan is in effect.
- In accordance with the provisions of the attached ASA, the following list of services are provided by NRECA to the adopting employer for the specified annual fee:
 - Web site access to current plan materials.
 - Sample plan documents, sample resolutions, plan adoption instructions
 - Web seminars as needed
 - Assistance from NRECA field staff
 - Telephone access to subject matter experts
 - Consultations regarding use and options for non-qualified deferred compensation plans
 - Consultations with co-op's attorney and other advisors

ADMINISTRATIVE SERVICES AGREEMENT

THIS AGREEMENT is made and entered into this 23 day of November, 2015, by and between the National Rural Electric Cooperative Association (“NRECA”), a Virginia Corporation, and Shelby Energy Cooperative, Inc. (the “Cooperative”).

WHEREAS, the Cooperative sponsors the

Check all applicable plans:

- Executive Benefit Restoration Plan for Tax-Exempt Employers**
- Executive Benefit Restoration Plan for Taxable Employers**
- Executive Compensation 457(b) Plan for Employees**
- Executive Compensation 457(b) Plan for Directors**
- Global Executive Compensation Plan for Directors**
- Global Executive Compensation Plan for Employees**
- Global Pension Restoration Plan**
- Governmental Deferred Compensation 457(b) Plan**
- Pension Restoration Plan for Tax-Exempt Employers**
- Pension Restoration Plan for Taxable Employers**
- Performance Incentive 457(f) Plan**
- Top Hat Plan for Directors of Taxable Employers**
- Top Hat Plan for Employees of Taxable Employers**

(the “Plan” or “Plans”), which are intended to be unfunded and unsecured plan(s) primarily for the purpose of providing deferred compensation for a select group of management or highly compensated employees of the Cooperative, except where other employees are permitted by regulation to participate; and

WHEREAS, the Cooperative wishes to establish or has established a Plan and in so doing acts as the sponsor of the Plan, and also as the “Plan Administrator” of the Plan;

WHEREAS, the Cooperative desires to enter into an agreement with NRECA, pursuant to which NRECA will furnish certain administrative services;

NOW, THEREFORE, for valuable consideration and in order to put into effect the desire of the parties hereto, it is mutually understood and agreed as follows:

SECTION 1 – TERM AND RELATIONSHIP OF PARTIES

1.1 Effective Date and Term. The effective date of this Agreement is September 18, 2015 (“Effective Date”). The initial term shall be the calendar year or a portion thereof, commencing on the Effective Date. Thereafter, this Agreement will renew automatically for

successive one (1) year periods commencing on January 1 unless this Agreement is terminated in accordance with the provisions of Section 5.

1.2 Relationship of Parties. The provisions of this Agreement are not intended to create any relationship between and among the parties other than that of independent parties contracting with each other. NRECA is and shall remain an independent contractor with respect to the services provided hereunder, and shall not for any purpose be deemed an employee of the Cooperative or the Plan. NRECA does not assume any responsibility for the operation and administration of the Plan; nor for any act or omission or breach of duty by the Plan or the Cooperative. NRECA is not in any way to be deemed an insurer, underwriter or guarantor with respect to any benefit payable under the Plan. NRECA does not assume any financial risk or obligation with respect to claims for benefits payable by the Plan. Nothing herein shall be deemed to make NRECA a party to the Plan or to confer upon NRECA any authority or control regarding the management or administration of the Plan. Nothing in this Agreement shall be deemed to impose upon NRECA any obligation to any employee of the Cooperative or any person who is participating in the Plan. NRECA is not a fiduciary with respect to the Plan under ERISA or any other applicable law.

In addition to being the Plan Sponsor, if and only if the Plan or Plans is subject to the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), the Cooperative shall also be deemed the Plan Administrator (as defined in Section 3(16)(A) of ERISA)¹. The Cooperative has the sole authority and responsibility for the Plan and its operations, including authority and responsibility to interpret and construe the terms of the Plan, to adopt, amend and rescind rules, regulations and procedures pertaining to its duties under the Plan and to the administration of the Plan and to make all other determinations deemed necessary or advisable for the discharge of its duties or the administration of the plan. The discretionary authority of the Cooperative is final, absolute, conclusive and exclusive; provided, however, that NRECA shall have the discretion to determine ministerial calculations applicable to a Plan, such as in the case of the Pension Restoration Plan.

If this Agreement pertains to the Pension Restoration Plan, NRECA or its designee shall have the sole and exclusive authority to make all determinations of the methodology used in calculating benefits under the Retirement Security (RS) Plan and the Pension Restoration Plan, including but not limited to the determination of the amount of the RS Plan credit and the determination of the timing of its application.

SECTION 2 – SERVICES PERFORMED BY NRECA

2.1 Engagement of NRECA. The Cooperative hereby engages NRECA to perform for and on behalf of the Plan, as described on Attachment A to this Agreement. NRECA agrees to perform such services under and subject to, and in compliance with, the provisions of this

¹ Plans that (1) limit participation to "a select group of management or highly compensated employees" and (2) properly submit an electronic notice of plan adoption to the DOL become exempt from Title I of ERISA, including ERISA's coverage, participation, vesting, fiduciary, and funding standards. ERISA's reporting and disclosure requirements may still apply.

Agreement, provided, however, that under no circumstances shall NRECA be deemed a Plan Administrator, Plan Sponsor, or Plan Fiduciary.

2.2 Sample Materials. From time to time, as determined by NRECA in its sole discretion, NRECA may make available sample materials to the Cooperative, including but not limited to sample administrative forms, sample plan document, sample administrative guide and sample board resolution. Such sample materials are made available to the Cooperative for the Cooperative's convenience, and are not intended to constitute legal advice.

2.3 Record-keeping. NRECA shall, in its performance of the duties in Attachment A, maintain the usual and customary books, records and documents, including records in electronic form that relate to the Plan, its Participants and the services performed under this Agreement. **NRECA is not responsible for monitoring, providing services for, or notifying cooperatives or participating employees of dates or events that may have tax or legal consequences for the Cooperative or any individual participant, including but not limited to vesting dates, eligibility, plan amendments, tax forms, distribution dates, government filings, investment decisions, beneficiary forms, or required minimum distributions, etc.** NRECA is not responsible for maintaining any official Plan records, including but not limited to plan documents, board resolutions, tax forms, payment or distribution agreements, investment records, or beneficiary designations, etc.. The Cooperative shall maintain all official records for a Plan or Plans.

2.4 Administrative and Support Personnel. NRECA shall provide sufficient and qualified administrative and support personnel during its normal business hours to enable NRECA to perform all the services required by this Agreement.

2.5 Tax and Legal Advice. NRECA cannot provide any tax or legal advice to the Cooperative or employees participating in Plans. Under no circumstances shall services provided by NRECA or its employees be relied upon or construed as tax or legal advice. Cooperatives and participating employees should always seek their own separate legal or tax counsel before taking action.

SECTION 3 - RESPONSIBILITIES OF COOPERATIVE

3.1 Plan and Participant Information

(a) The Cooperative shall furnish to NRECA on a timely basis all information necessary for NRECA to perform its services hereunder, including, but not limited to, plan documents, board resolutions, addendums and any changes in the plans, and Participant vesting dates. Such information shall be provided to NRECA in the time and manner set forth in the sample Plan document. NRECA shall not have any responsibility for benefits paid in error due to information provided by the Cooperative. NRECA shall not have any obligation to credit the Plan for any administrative fees incurred or paid to NRECA as a consequence of incorrect or inaccurate information provided by the Cooperative. NRECA shall assume all such information is complete and accurate and is under no duty to question

the completeness or accuracy of such information. The provisions of this section do not apply to any requirements that may be necessary of any registered investment company, or other institution in which accounts may be established for any purpose under this Plan.

(b) The Cooperative agrees to provide to NRECA written notice of all material modifications to the Plan at least thirty (30) days prior to the effective date of such modifications. NRECA shall determine whether it can continue to provide the services under this Agreement. If NRECA cannot do so, NRECA reserves the right to terminate this Agreement. If NRECA can do so, NRECA and the Cooperative reserve the right to amend this Agreement pursuant to Section 5.1 to the extent changes to the Agreement are necessary.

3.2 Sole Responsibility. Without limiting the Cooperative's responsibilities to those described herein, it shall be the Cooperative's sole responsibility and duty to amend the Plan as necessary to ensure ongoing compliance with applicable law; file any tax or governmental returns relating to the Plan, including but not limited to the required notice of plan adoption filed with the DOL that exempts "Top Hat" plans from ERISA; determine if and when a valid election change has occurred; notify participants of the occurrence of taxable income; notify participants of rights and responsibilities under the terms of the plan; execute and return required Plan and claims documentation; and take all other steps to maintain and operate the Plan in compliance with applicable provisions of the Plan, ERISA (if applicable), the Internal Revenue Code of 1986, as amended (the "Code") and other federal and state laws.

3.3 Indemnification

(a) NRECA shall indemnify the Cooperative and hold it harmless from and against all loss, liability, damage, expense, reasonable attorney's fees or other obligations resulting from or arising out of the gross negligence or willful misconduct of any employee, officer, director, agent, representative or subcontractor of NRECA.

(b) The Cooperative shall indemnify NRECA and hold it harmless from and against all losses, claims, taxes, penalties, liabilities, damages, expenses, attorney's fees or other obligations resulting from, or arising out of, any act or omission of the Cooperative or the Plan in connection with any claim, demand or lawsuit by government entities, participants or beneficiaries, or plan providers or "service providers" against the Cooperative, NRECA or any of its affiliated entities (including the RS Plan), relating to the Plan(s), including but not limited to taxes, penalties, interest, benefit payments or services performed hereunder. In addition, the Cooperative shall indemnify NRECA and hold it harmless from and against any and all liability, expense, demand or other obligation resulting from or out of any premium charge, tax or similar assessment (federal or state) for which the participant, beneficiary, plan provider, Plan or Cooperative is liable. The Cooperative shall indemnify NRECA and hold it harmless from and against all loss, liability, damage, expense, reasonable attorney's fees or other obligations resulting from or arising out of the gross negligence or willful misconduct of any employee, officer, director, agent, representative or subcontractor of the Cooperative.

3.4 Limitation of Liability

NOTWITHSTANDING ANY OTHER PROVISION SET FORTH HEREIN, NRECA SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, AND/OR CONSEQUENTIAL DAMAGES, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT; PROVIDED, HOWEVER, THAT THE FOREGOING EXCULPATION OF LIABILITY SHALL NOT APPLY WITH RESPECT TO DAMAGES INCURRED AS A RESULT OF THE GROSS NEGLIGENCE OR WILFULL MISCONDUCT. THE COOPERATIVE SHALL BE LIABLE TO NRECA FOR ANY DIRECT DAMAGES ARISING OUT OF OR RELATING TO ITS SPONSORSHIP OR ADMINISTRATION OF THEIR PLAN(S). This Section shall survive the termination of this Agreement.

SECTION 4 – PAYMENT FOR SERVICES

4.1 Fees for Administration. For the certain other administrative services provided by NRECA on behalf of the Plan, the Cooperative agrees to pay NRECA an administrative fee as indicated on Attachment A.

4.2 Billing and Payment of Charges. An annual invoice will be made available to the Cooperative. The Cooperative shall remit fee payments upon receipt of such invoice. Failure to pay fees when due may be cause for NRECA, in its sole discretion, to terminate this Agreement according to the provisions of Section 5.

4.3 Modification of Fee Amounts. NRECA may, in its sole discretion, increase the amount of the fee specified in Section 4.1 by providing at least sixty (60) days' written or electronic notice to the Cooperative.

SECTION 5 - AMENDMENT AND TERMINATION

5.1 Amendment of Agreement. The parties may amend this Agreement at any time so long as such amendment is mutually agreed upon in writing and signed by the parties.

5.2 Termination of Agreement

(a) Automatic – This Agreement shall automatically terminate as of the earliest of the following: (i) the effective date of any legislation that makes the Plan and/or this Agreement illegal; (ii) the date the Cooperative becomes insolvent, or bankrupt, or subject to liquidation, receivership or conservatorship; or (iii) the termination date of the Plan, subject to any agreement between the Cooperative and NRECA regarding the processing of post-termination benefit payments.

(b) Optional – This Agreement may be terminated as of the earliest of the following: (i) by NRECA upon failure of the Cooperative to pay the fees set forth in Section 4 within thirty (30) days after they become due; (ii) by NRECA upon the failure of the Cooperative to perform its obligations under this Agreement; (iii) by the Cooperative upon

the failure of NRECA to perform its obligations under this Agreement; or (iv) by either the Cooperative or NRECA as of the end of the term of this Agreement, by giving the other party at least thirty (30) days written notice. In the event of default under (i), (ii) or (iii) above, either party has fifteen (15) days from receipt of the notice of termination to cure or remedy the default.

(c) **Limited Continuation After Termination** – If the Plan is terminated or if this Agreement is terminated while the Plan continues to be in effect, and if the Cooperative desires the limited continuation of NRECA's administrative services, then the Cooperative and NRECA must mutually agree in writing that this Agreement shall continue for sixty (60) days for the purpose of payment of any Plan benefit or expense incurred prior to the date of Plan termination or Agreement termination, as applicable. If this Agreement is continued in accordance with this subsection (c), the Cooperative shall continue to pay the fee set forth in Section 4.1 of this Agreement.

SECTION 6 – MISCELLANEOUS

6.1 **Severability**. The invalidity or unenforceability of any terms or provisions of this Agreement shall in no way affect the validity or enforceability of any other terms or provisions, provided that the basic purposes of this Agreement are achieved through the remaining valid and enforceable provisions.

6.2 **Compliance and Non-Waiver**. Neither the Cooperative's failure nor NRECA's failure to insist upon strict performance of any provision of this Agreement will modify such provision, render it unenforceable or waive any subsequent breach of the same or any other provision. No waiver or modification of any of the terms or provisions of this Agreement shall be valid unless in each instance the waiver or modification is accomplished pursuant to the amendment provisions of Section 5.1 of this Agreement. The failure to exercise any right under this Agreement shall not operate as a waiver of that right.

6.3 **Assignment**. This Agreement shall be binding upon, and inure to the benefit of, the parties to it, their respective successors and assigns, but may not be assigned by any party without the other party's written consent. Notwithstanding the foregoing, NRECA may delegate performance of all or a portion of its duties to a NRECA affiliate, provided that NRECA remains the guarantor of and primarily liable for all obligations for services under this Agreement.

6.4 **Circumstances Beyond Control of Parties**. If any state laws, court cases or the regulations of any governmental agency, or other circumstances beyond the control of the parties, prevents a party from meeting its obligations under this Agreement, the failure to meet these obligations shall not be considered a breach. Rather, the parties agree in this event to attempt to renegotiate the terms of this Agreement so that each party's obligations can be fulfilled and are in compliance with applicable law or regulations.

NRECA shall not be deemed in default of this Agreement, nor held responsible for any cessation, interruption or delay in the performance of its obligations hereunder, due to

causes beyond its reasonable control, technological impediments or dysfunction, including but not limited to acts of terrorism, natural disaster, civil disturbance, war or armed conflict or the inability to obtain sufficient material or services required in the conduct of its business, including Internet access or any change in or the adoption of any law, judgment or decree.

6.5 Notice. Any notice required to be given under the terms of this Agreement shall be in writing and sent by first class mail to the Employer at:

Attn: Human Resources
Shelby Energy Cooperative
620 Old Finchville Rd
Shelbyville, KY 40065

and to NRECA at:

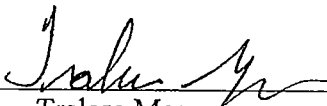
Attn: Deferred Compensation Products
NRECA
I&FS
4301 Wilson Boulevard
IFS 7-355
Arlington, VA 22203

6.6 Entire Agreement. This Agreement, along with Attachment A, shall constitute the entire Agreement relating to the subject matter hereof between the parties hereto, and shall supersede all prior agreements, written or otherwise, between the parties.

6.7 Execution by Counterparts and by Facsimile. This Agreement may be executed in counterparts, each of which will be deemed an original Agreement, but all of which taken together will be considered one Agreement. This Agreement may be executed and delivered by facsimile, and the parties agree that such facsimile execution and delivery will have the same force and effect as delivery of an original document with original signatures, and that each party may use such facsimile signatures as evidence of the execution and delivery of this Agreement by all parties to the same extent that an original signature could be used.

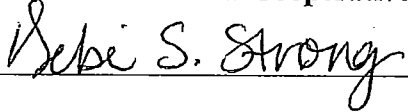
6.8 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia and, if applicable, the federal laws of the United States of America. The parties hereby consent and submit to the jurisdiction and forum of the state and federal courts in the Commonwealth of Virginia in all questions and controversies arising out of this Agreement.

IN WITNESS WHEREOF, the parties have caused this Agreement to be signed and executed by their authorized officers.

By: 
Tralese Morgan
HR Generalist

Date: 11/23/15

National Rural Electric Cooperative Association

By: 

Date: 12/3/2015

**Attachment A for
Deferred Compensation Plan
Administrative Services Agreement**

This Attachment A to the NRECA Deferred Compensation Plan Administrative Services Agreement (ASA) specifies when annual invoiced fees are due and what services they support. Attachment A applies to each of the ASAs applicable to your co-op's Deferred Compensation Plans.

The bulleted provisions that follow apply for all deferred compensation plans.

- The annual invoiced fee is due within 60 days of receipt. The applicable fee shall continue to be due in each subsequent year for so long as the plan is in effect; provided, however, that NRECA may adjust the annual fee upon 30 days' written notice.
- In accordance with the provisions of the attached ASA, the following services are provided by NRECA to the adopting employer for the specified annual fee:
 - Web Site access to current plan materials
 - Sample plan documents, sample resolutions, election forms, plan adoption instructions
 - Targeted Web seminars
 - Assistance from NRECA field representatives
 - Access to subject matter experts
 - Consultations regarding use and options for non-qualified deferred compensation plans
 - Consultations to clarify plan features with co-op's attorney and other advisors on a limited basis

The Pension Restoration Plan for Taxable Employers, the Global Pension Restoration Plan, and the Pension Restoration Plan for Tax-Exempt Employers will receive the following services, in addition to those provided to all deferred compensation plans listed above:

- Actuarial determination of benefit values as of requested date of occurrence
- Calculation of credit and credit request processing for Retirement Security Plan billing

The Executive Benefit Restoration Plan for Tax-Exempt Employers and the Executive Benefit Restoration Plan for Taxable Employers will receive the following services, in addition to those provided to all deferred compensation plans listed above (but not including those provided to any of the Pension Restoration Plans):

- Two individual benefit projections per participant per year (upon request)

- o Pension expense determination report and/or end of year accounting disclosures report (required for defined benefit approach; additional fees apply)
- o Plan level annual contribution projection (upon request; additional fees apply)
- o Consulting fees for special projects (additional fees apply)

The fee charts provided below are for reference purposes only. NRECA may modify its fees at any time upon renewal.² For co-ops sponsoring both the Pension Restoration Plan and the Executive Benefit Restoration Plan, a different fee structure may apply.

Annual fees (for plans other than Pension Restoration Plans or Executive Benefit Restoration Plans)

Total value of assets in the NODC plan (as of 3/31)	Fee per plan type
\$0 - \$10,000	None
\$10,001 - \$50,000	\$250
\$50,001 - \$100,000	\$500
\$100,001 and above	\$1,000

Executive Benefit Restoration Plan fees

Fee Type	Amount
Annual administrative fee	\$2,500, plus \$100 per participant > 2 participants
Pension expense determination report and/or EOY accounting report (required for defined benefit approach)	\$2,000, plus \$100 per participant > 2 participants
Level annual contribution projection (on request)	\$1,000, plus \$100 per participant > 2
Individual benefit projections > 2 projections per participant per year	\$200 per projection

For co-ops that sponsor both the Pension Restoration Plan and the Executive Benefit Restoration Plan, a different fee structure may apply.

Pension Restoration Plan fees

Fee Type	Amount
Annual administrative fee	\$1,500

² NRECA will provide your co-op with 30 days' prior written notice of any changes in the fees listed in this Attachment.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

35. Provide a detailed explanation of the eligibility and qualification basis for vacation payouts. In calendar year 2015 and 2016, provide the length of time it took for each employee to accumulate the number of hours/amounts for the payouts.

Response 35.

Refer to **Exhibit 2-35** for a copy of Board Policy #904 which provides eligibility and qualification for an employee to receive a vacation payout of up to five (5) working days.

Active employees who received vacation payouts in 2015 and 2016, as provided in Board Policy #904, Section II (F), worked a length of three (3) months each year to earn forty (40) hours of vacation which is eligible for vacation payout.

There is one other situation in which an employee would receive a vacation payout and that is upon retirement or separation of employment with Shelby Energy. At that time, the employee is paid for earned vacation following separation.

SHELBY ENERGY COOPERATIVE, INC.
Shelbyville, Kentucky

POLICY NO. 904

VACATION

I. OBJECTIVE:

To have a clear and definite understanding with all employees in regard to how vacation leave is earned and accumulated.

II. CONTENT:

- A. New full-time employees, after successfully completing six (6) months of training and continuous employment, will have forty (40) hours of vacation time placed on the books which may be taken thereafter, upon approval of the department vice president/manager.
- B. Regular, full-time employees shall earn vacation days as follows, based on their employment date:
 - 1. Ten (10) working days earned per year through five (5) years of continuous service.
 - 2. Ten (10) working days earned per year plus one additional working day per year added for six (6) through fourteen (14) years of continuous service.
 - 3. The maximum earned vacation, twenty (20) working days, will be earned at fifteen (15) years of continuous service.
- C. Maximum carryover of vacation leave at the end of the calendar year will be equal to annual vacation earned, plus five (5) working days. Example: An employee who earns twenty (20) working days of vacation may carry over twenty-five (25) working days at year end.
- D. To the extent practical, the employee may select the date on which earned vacation will commence, provided it has been approved in advance by the department vice president/manager. Vacation is not to be scheduled during annual meeting, employee development day and/or first aid/CPR training.
- E. In the event one of Shelby Energy's regularly scheduled holidays falls within the employee's scheduled vacation, such holiday will not be charged against the employee's vacation time.

- F. Employees who have earned twenty (20) working days of vacation per year may take up to five (5) working days of pay in lieu of an equivalent amount of time off. Payment will be made during a designated time in the month of December.
- G. Key employees may take up to five (5) working days of pay in lieu of an equivalent amount of time off. Payment will be made during the same designated time as provided in Item F. above. The key employee must have taken no less than ten (10) working days of vacation leave prior to a request for payment. This payment may be made in addition to Item F. above.

Payment to the key employee must have prior approval by the President and CEO and resulting from a request by management to cancel or delay a scheduled vacation, due to an emergency, special project or unusual situation at Shelby Energy that prevents the employee from taking time off.

When the key employee is the President and CEO, payment must have prior approval by the Chairman of the Board.

- H. Vacation leave will not be advanced nor may an employee show a negative leave balance on his/her leave record.
- I. Accumulated vacation leave will be paid to the employee by the employee's next regular pay day or within fourteen (14) days of separation from employment, whichever last occurs.
- J. Vacation time will not be earned while an employee is on short-term disability, long-term disability, workers' compensation or off work for any reason without pay.
- K. Time spent on active military duty will be considered as time worked for purposes of calculating vacation leave.
- L. The terms of any collective bargaining unit agreement supersede any conflicting language in this policy.

III. RESPONSIBILITY:

The President and CEO is responsible for the administration of this policy.

Adopted: 03/24/66

Revised: 10/17/74 11/24/82 11/23/88 5/27/99 11/18/10
 08/18/11 07/19/12 08/29/14 07/14/16

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

36. Provide the cost of non-productive time, by category, for the test year, including vacation taken, vacation payout, holidays and sick leave. Also, provide the same information for each year 2012-2016.

Response 36.

Refer to **Exhibit 2-36** for a list of costs for non-productive time which is included as part of this response.

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434

<u>YEAR</u>	<u>VAC TAKEN</u>	<u>VAC PAYOUT</u>	<u>SICK LEAVE</u>	<u>HOLIDAYS</u>	<u>TOTAL</u>
2012	\$109,536.33	\$15,112.85	\$82,721.10	\$82,709.40	\$290,079.68
2013	\$124,955.46	\$9,531.38	\$70,494.06	\$88,137.92	\$293,118.82
2014	\$128,145.71	\$22,102.87	\$83,040.45	\$95,484.56	\$328,773.58
2015	\$145,152.24	\$8,875.20	\$83,409.88	\$96,642.88	\$334,080.20
2016	\$162,397.00	\$24,302.88	\$94,909.01	\$108,484.80	\$390,093.68
TEST YEAR					
08/15 - 07/16	\$169,297.58	\$13,193.98	\$90,315.11	\$96,567.12	\$369,373.79

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

37. Provide the age range of Shelby Energy's employee complement in terms of up to 30 years of age, 31-40 years of age, 41-50 years of age, 51-60 years of age, and 61 and older years of age.

Response 37.

The age range of Shelby Energy's employee complement is:

<u>Age Range</u>	<u>Number of Employees</u>
Up to 30 years of age	8
31-40 years of age	10
41-50 years of age	14
51-60 years of age	8
61 years of age and older	2

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

38. Refer to the Application, Exhibits 3 and 21, which relate to depreciation. In Exhibit 21, page 9 of 179, Shelby Energy's proposed rates, present rates and the RUS low and high rates are listed. Also, refer to Case No. 2009-00410,² Commission Staffs Second Request for Information, Item 28.

a. Describe in detail the process that Shelby Energy must undertake if the Commission approves its proposed depreciation rates.

b. Explain what factors influence each of Shelby Energy's proposed rates being lower or higher than the RUS's depreciation ranges.

c. If the Commission were to approve Shelby Energy's proposed rates, explain the timing for the implementation of the rates.

d. Explain how Shelby Energy's current depreciation rates were determined.

Response 38a.

The annual rate would be divided into the monthly rate. Shelby Energy would then input the monthly rate by account number into the general ledger setup. The computer system calculates the monthly depreciation accrual.

Response 38b.

The rates for accounts 365, 366, 368, and 371 are barely over or under the RUS recommended low and high rates. These differences can be caused by demographics due to the all-around terrain of Kentucky in relation to other states. The RUS recommended range was designed for cooperatives throughout the United States. The

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

reason RUS allows for rates outside of the low and high rates is due to these demographics that are individual to each state.

Account 365, Overhead conductor and devices proposed rate is 2.9%, the high RUS range is 2.8%. Shelby Energy has been replacing older copper with aluminum conductor.

Accounts 366 and 367, Underground conduit and conductor. The majority of underground is located in and around subdivisions. As subdivisions grow, the need to replace underground services increases.

Account 368, Transformers. Shelby Energy has been consistent in the size of transformer installed on consumers' premises. As a result, it is not necessary to install a different size transformer when consumers disconnect and a new consumer is reconnected.

Account 370, Meters. Shelby Energy changed its meters to AMI technology which has reduced the estimated life of meters from the older mechanical meters.

Account 371, Installations on consumer premises. This will change in future years as LED lights will replace HPS and mercury vapor lights that are on the system.

Response 38c.

Shelby Energy proposes to implement the new rates at the same time as the rates proposed in this application are approved. This will match the expense with revenues.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 38d.

To the best of everyone's knowledge, these rates have always been in place.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

39. Refer to the Application, Exhibit 3, page 5 of 6. Confirm that the calculation for the Distribution Plant End Balance is correct. If so, confirm the same for "Office furn and eqt" and "Transportation." If not, confirm the differences are the amounts in the Original Cost column.

Response 39.

General plant accumulated depreciation balances are calculated by adding the beginning balance, plus depreciation accrual, less accumulated depreciation on assets retired. The balances for general plant are correct.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

40. Refer to the Application, Exhibit 21, page 9 of 179.

a. For those proposed depreciation rates that are greater than the high range of the RUS depreciation rates, other than Meters, explain why the proposed depreciation rates are greater.

b. For those proposed depreciation rates that are less than the low range of the RUS depreciation rates, explain why the proposed depreciation rates are less. Provide the depreciation adjustment, except for Meters, if the proposed depreciation rates were the midpoint of the RUS depreciation rate range on page 3 of 6 of Exhibit 3.

c. For each year 2012 to 2016, provide the amount of Removal Cost and the Gain/Loss Salvage for distribution and general plant.

d. Provide how Shelby Energy determines Original Cost retired for mass distribution property.

e. Explain whether Shelby Energy maintains a continuous property record ledger by 300 plant account for all the accounts listed in the depreciation study.

Response 40a.

Refer to Response 38 of the Second Data Request of Commission Staff.

Response 40b.

Refer to Response 38 of the Second Data Request of Commission Staff for the explanation for those that are less than the low range. The proposed rates at the midpoint are as follows:

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Account Number	Description	Test Year Balance	Existing Rate	Test Year Expense	Midpoint Rate	Normalized Expense
Distribution plant:						
364	Poles, towers & fixtures	24,567,655	3.00%	725,698	3.50%	859,868
365	Overhead conductors & devices	24,115,106	3.00%	711,384	2.55%	614,935
366	Underground conduit	307,821	3.00%	9,230	2.05%	6,310
367	Underground conductor & devices	6,660,183	3.00%	193,403	2.65%	176,495
368	Line transformers	10,381,942	3.00%	306,289	2.85%	295,885
369	Services	11,166,134	3.00%	332,027	3.35%	374,065
370	Meters	4,226,007	6.67%	200,836	6.67%	281,875
371	Installations on customer premises	2,476,615	3.00%	71,930	4.15%	102,780
373	Street lights	67,096	3.00%	2,013	4.05%	2,717
		83,968,559		2,552,809		2,714,931

Response 40c.

The removal cost for distribution plant and gain/loss salvage for general plant are as follows:

		Removal Cost	Gain/Loss Salvage
	2016	867,037	363,032
	2015	493,764	135,383
	2014	394,619	94,951
	2013	399,867	64,855
	2012	596,218	45,413

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 40d.

Shelby Energy uses the original cost less Accumulated Depreciation plus cost of labor for retirement cost.

Response 40e.

Yes, Shelby Energy does maintain a CPR Ledger.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

41. Refer to the Application, Exhibit 4, Adjustment for Property Taxes, page 2 of 2, line 10.

a. Provide the gross receipts and the amount of the Public Service Commission ("PSC") Assessment paid in 2016.

b. Provide the amount of the PSC Assessment Shelby Energy would have to pay based on its proposed increase using the 2016 PSC Assessment rate.

c. Provide the amount of property taxes Shelby Energy paid in 2016 based upon its December 31, 2015 assessment.

Response 41a-b.

Refer to **Exhibit 2-41a-b.** which is included as part of this response.

Response 41c.

Refer to **Exhibit 2-41c.** which is included as part of this response.

		<u>2016</u>	<u>Proposed</u>
Revenue		43,507,714	42,604,672
Power cost, proposed	30,352,906		
Power cost, 2015	33,144,801	<u>16,572,401</u>	<u>15,176,453</u>
Assessable revenues		26,935,313	27,428,219
Rate		<u>0.0019410</u>	<u>0.0019410</u>
Public Service Company Assessment		<u>52,281.44</u>	<u>53,238.17</u>
Increase			<u>957</u>

2016

Ky State Treas	10.00
Ky State Treas	265,055.51
KY State Treas - PSC	52,281.44
Shelby County	246,725.08
Henry County	194,691.70
Trimble County	96,783.06
Carrol County	29,369.68
Oldham County	3,177.36
Spencer County	1,537.44
Owen County	410.57
Jefferson County	394.66
Anderson County	936.80
Franklin County	221.41
City of Shelbyville	408.79
Town of Milton	109.08
City of Campbellsburg	111.59
City of Simpsonville	7.48
City of Bedford	4.32
	<u>892,235.97</u>

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

42. a. Refer to the Application, Exhibit 5. Provide the principal amount paid in the test year.

b. Provide an updated Exhibit 5 for the most current period using updated variable interest rates and any other changes in interest rates.

Response 42a-b.

Refer to **Exhibit 2-42** which is included as part of this response.

Shelby Energy Cooperative

Case No. 2016-00434

Schedule of Outstanding Long-Term Debt
July 31, 2016

Exhibit 2-42

Test Yr-Exhibit 5

Page 1 of 2

Witness: James Adkins

Type of Debt Issued (a)	Date of Issue (b)	Date of Maturity (c)	Outstanding Amount (d)	Cost Rate to Maturity (g)	Annualized Cost Col (d)x(g) (j)	Test Year Interest Cost	Principal Paid Test year
RUS loans							
1B310	Dec-94	Dec-29	0	var	0	486,324	Refinanced
1B320	Apr-98	Mar-33	1,059,146	2.125%	22,507	23,070	52,957
1B325	Apr-98	Mar-33	655,420	4.125%	27,036	27,712	32,771
1B326	Apr-98	Mar-33	445,333	4.500%	20,040	20,541	22,267
1B327	Apr-98	Mar-33	52,968	4.500%	2,384	2,443	2,648
			<u>2,212,867</u>		<u>71,966</u>	<u>560,090</u>	
FFB loans							
H0010	Sep-99	Aug-34	1,639,320	4.562%	74,786	77,690	146,075
H0020	Sep-99	Aug-34	716,928	4.522%	32,419	33,683	64,163
H0025	Sep-99	Aug-34	807,762	5.348%	43,199	44,754	66,011
H0030	May-01	Apr-36	751,759	4.458%	33,513	34,608	57,869
H0035	May-01	Apr-36	781,557	5.366%	41,938	43,180	53,824
H0040	May-01	Apr-36	761,007	4.680%	35,615	36,752	57,018
H0045	May-01	Apr-36	761,226	4.604%	35,047	36,175	57,566
H0050	May-01	Apr-36	1,909,081	4.837%	92,342	95,241	140,320
H0055	May-01	Apr-36	986,470	4.442%	43,819	45,253	76,085
H0060	May-01	Apr-36	1,294,208	4.524%	58,550	60,450	98,829
H0065	May-01	Apr-36	1,539,373	4.257%	65,531	67,716	121,421
H0070	May-01	Apr-36	1,091,649	4.513%	49,266	49,416	83,473
H0075	Sep-14	Sep-49	2,684,548	0.559%	15,007	8,951	45,787
H0080	Oct-14	Sep-49	4,508,799	0.559%	25,204	15,033	91,201
H0080	Oct-14	Sep-49	1,874,387	0.559%	10,478	10,818	25,613
F0090	Sep-14	Aug-49	1,300,000	0.559%	7,267	7,493	
H0085	Sep-14	Aug-49	5,300,000	0.559%	29,627	0	
			<u>28,708,074</u>		<u>693,609</u>	<u>667,213</u>	
CFC loans							
9011	Mar-77	Feb-12	33,540	6.40%	2,147	2,278	4,112
9012	Jun-78	Jun-13	178,155	6.55%	11,669	12,384	21,842
9013	Feb-81	Jan-16	273,894	6.55%	17,940	19,040	33,579
9014	Jun-83	May-18	446,537	6.60%	29,471	31,278	54,745
9015	Oct-85	Oct-20	496,493	6.65%	33,017	35,041	60,870
9016	Apr-95	Mar-30	723,803	6.65%	48,133	51,083	88,738
9015	Oct-85	Oct-20	324,160	3.20%	10,373	11,009	39,742
9016005	Aug-15	Aug-16	58,894	3.50%	2,061	258	
9016006	Aug-15	Aug-17	214,233	3.75%	8,034	1,004	
9016007	Aug-15	Aug-18	214,813	4.00%	8,593	1,074	
9016008	Aug-15	Aug-19	201,351	4.20%	8,457	1,057	

Shelby Energy Cooperative

Case No. 2016-00434

Schedule of Outstanding Long-Term Debt

July 31, 2016

Exhibit 2-42

Test Yr - Exhibit 5

Page 2 of 2

Witness: James Adkins

Schedule 2

Type of Debt Issued (a)	Date of Issue (b)	Date of Maturity (c)	Outstanding Amount (d)	Cost Rate to Maturity (g)	Annualized Cost Col (d)x(g) (j)	Test Year Interest Cost	Principal Paid Test year
9016009	Aug-15	Aug-20	211,557	4.35%	9,203	1,150	
9016010	Aug-15	Aug-21	222,562	4.50%	10,015	1,252	
9016011	Aug-15	Aug-22	170,424	4.60%	7,840	980	
9016012	Aug-15	Aug-23	161,014	4.70%	7,568	946	
9016013	Aug-15	Aug-24	169,216	4.80%	8,122	1,015	
9016014	Aug-15	Aug-25	152,424	4.90%	7,469	934	
9016015	Aug-15	Aug-26	102,296	4.95%	5,064	633	
9016016	Aug-15	Aug-27	96,919	5.05%	4,894	612	
9019001	Nov-15	Nov-16	271,435	2.60%	7,057	882	
9019002	Nov-15	Nov-17	506,194	2.70%	13,667	1,708	
9019003	Nov-15	Nov-18	521,128	2.75%	14,331	1,791	
9019004	Nov-15	Nov-19	535,222	2.90%	15,521	1,940	
9019005	Nov-15	Nov-20	549,387	3.20%	17,580	2,198	
9019006	Nov-15	Nov-21	567,959	3.30%	18,743	2,343	
9019007	Nov-15	Nov-22	586,255	3.40%	19,933	2,492	
9019008	Nov-15	Nov-23	605,597	3.45%	20,893	2,612	
9019009	Nov-15	Nov-24	624,807	3.55%	22,181	2,773	
9019010	Nov-15	Nov-25	647,507	3.60%	23,310	2,914	
9019011	Nov-15	Nov-26	670,123	3.65%	24,459	3,057	
9019012	Nov-15	Nov-27	693,852	3.70%	25,673	3,209	
9019013	Nov-15	Nov-28	717,856	3.75%	26,920	3,365	
9019014	Nov-15	Nov-29	738,074	3.80%	28,047	3,506	
9019015	Nov-15	Nov-30	665,482	3.85%	25,621	3,203	
9019016	Nov-15	Nov-31	690,286	3.90%	26,921	3,365	
9019017	Nov-15	Nov-32	715,641	3.90%	27,910	3,489	
9019018	Nov-15	Nov-33	743,272	3.95%	29,359	3,670	
9019019	Nov-15	Nov-34	771,562	3.95%	30,477	3,810	
9019020	Nov-15	Nov-35	801,063	4.00%	32,043	4,005	
9019021	Nov-15	Nov-36	831,668	4.00%	33,267	4,158	
9019022	Nov-15	Nov-37	863,941	4.00%	34,558	4,320	
9019023	Nov-15	Nov-38	897,191	4.00%	35,888	4,486	
9019024	Nov-15	Nov-39	468,387	4.00%	18,735	2,342	
			<u>20,136,174</u>		<u>813,162</u>	<u>244,665</u>	
Total long term debt and annualized cost			<u>51,057,115</u>		<u>1,578,738</u>	<u>1,471,968</u>	<u>1,599,527</u>

Annualized cost rate [Total Col. (j) / Total Col. (d)] 3.09%

Actual test year cost rate [Total Col (k) / Total Reported in Col (d)] 2.88%

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

43. Refer to the Application, Exhibit 7, NRECA R&S.
- a. State whether the NRECA R&S Plan is available to all employees.
 - b. State whether the NRECA R&S Plan is voluntary to all employees.
 - c. If the response to a. above is negative, explain why some employees may not participate in the NRECA R&S Plan.
 - d. Explain whether Shelby Energy has reviewed any employee benefit surveys to determine whether its NRECA R&S Plan is comparable to other defined employee benefits plans locally, regionally or nationally. If so, identify the surveys and explain the results. If not, explain why not.
 - e. With respect to its 401 (k) program, explain Shelby Energy's policy for matching employee contributions.
 - f. Explain why an NRECA R&S rate of 22.40 percent is applicable to some employees, but not all.
 - g. Explain why the 401 (k) rate varies from 2 percent to 12 percent for employees.

Response 43a.

The NRECA R&S Plan is no longer available to all Shelby Energy employees.

Response 43b.

The NRECA R&S is not voluntary to all Shelby Energy employees.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 43c.

Shelby Energy grandfathered employees participating in the NRECA R&S Plan in 2009. Any employees hired after 2009 are not eligible to participate in the R&S Plan. Shelby Energy discontinues contributions to the NRECA R&S Plan after an eligible employee has reached thirty (30) years of participation in the plan. In addition, highly compensated employees, as defined by the IRS, may not participate in the R&S Plan, effective 2015.

Response 43d.

Shelby Energy has reviewed no employee benefit surveys to determine whether its NRECA R&S Plan is comparable to other defined employee benefits plans. Shelby Energy made the decision to grandfather current employees in 2009 and eliminate the participation of new employees, so no survey has been pursued. Shelby Energy regrets that it was necessary to terminate participation in the NRECA R&S Plan for new hires and highly compensated employees, but to continue the defined contribution plan into the future, for new employees, would be cost prohibitive for Shelby Energy's members.

Response 43e.

Refer to **Exhibit 2-43e.** which is included as part of this response.

Response 43f.

For any Shelby Energy employee, who is an eligible participant of the NRECA R&S Plan, the rate of 22.40 percent will be applicable.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 43g.

Contributions made to the 401(k) plan by Shelby Energy will vary based on the employee's elective contribution. Refer to **Exhibit 2-43e.** for the schedule of 401(k) contribution percentages for the employee and Shelby Energy. Should a Shelby Energy employee be a participant of the NRECA R&S Plan and elects to contribute 1% of regular wages to the 401(k) plan, Shelby Energy will contribute a maximum 2% match of regular wages. The employee may contribute to the 401(k) plan, up to the maximum amount allowed by IRS, but Shelby Energy will make no further contributions.

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434

	<u>EMPLOYEE ELECTIVE %</u>	<u>SHELBY ENERGY MATCH %</u>
UNION:	1	2
	2	3
	3	4
	4	5
	5	6
	6	7
	7	8
	8	9
	9	10
NON-UNION:	1	8
	2	9
	3	10
	4	11
	5	12

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

44. Refer to the Application, Exhibit 9, page 4 of 5, line 88. Explain whether the \$4,338.75 paid to James R Adkins labeled Miscellaneous Rate Work should be removed.

Response 44.

Shelby Energy feels that this is a legitimate expense for ratemaking purposes since it was preliminary analytical evaluation for the determination to the need and timing for a rate application.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

45. Refer to the Application, Exhibit 10, Director Fees and Expenses. Confirm that the following Directors' Expenses have been excluded for ratemaking purposes:

- a. All per diems for Directors attending industry association meetings with the exception of representatives to the industry association.
- b. Costs of health insurance coverage.
- c. Costs of post-retirement benefits.
- d. Costs of Christmas gifts.
- e. Costs of insurance for dependents of deceased directors.

Response 45a-e.

Shelby Energy confirms that the items as referenced have been excluded for ratemaking purposes.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

46. Provide Shelby Energy's current nepotism policy, if any, and indicate when it was most recently changed.

Response 46.

Refer to **Exhibit 2-46** for a copy of Shelby Energy's nepotism policy which is included as part of this response. The most recent revisions were made on May 18, 2015.

SHELBY ENERGY COOPERATIVE, INC.
Shelbyville, Kentucky

POLICY NO. 900

EMPLOYMENT OF PERSONNEL

I. OBJECTIVE

It is the commitment of Shelby Energy to ensure fair and equal treatment for everyone in our employ. Employment, training, promotion, discipline, compensation, and all other decisions related to employment should be made without regard to race, age, religion, sex, color, national origin, genetic information, creed, disability, or military status, or in retaliation against a person because the person complained about discrimination, filed a charge of discrimination or participated in an employment discrimination investigation or lawsuit.

The selection, training, promotion, and other employment practices are based on job-related qualifications. Shelby Energy strives to comply with all federal, state, and local laws that regulate employment practices.

Shelby Energy is committed to compliance with laws that address the employment of qualified persons with a disability. To this end, all recruitment is conducted in an ethical, professional, and non-discriminatory manner. Those requiring assistance in completing an application form or accommodation to participate in employment interviews, because of disability, will be accommodated. Efforts are made to accommodate those who can perform the essential functions of the job to enjoy employment opportunities with Shelby Energy.

II. CONTENT

- A. This policy covers all employment practices including, but not limited to: hiring, upgrading, demotion, transfer, recruitment, termination or other forms of compensation and selection for training programs.
- B. A "full time," "regular," and/or "active" employee, as those terms are used in these policies, is defined as a person who is scheduled for a work week of not less than forty (40) hours for a period of fifty-two (52) weeks per year, and is eligible for the employee benefit plans.
- C. A "close relative" of a current Shelby Energy employee, director, or attorney shall not be employed by Shelby Energy on a permanent basis. "Close relative" shall be defined as a person who by blood or marriage, including half, step and adoptive kin is either a spouse, child, grandchild, parent, grandparent, brother, sister, aunt, uncle, nephew, or niece of the employee, board member, or attorney.

- D. If a Shelby Energy employee is in a domestic partnership with a current Shelby Energy employee, director, or attorney, or with a close relative of a current Shelby Energy employee, director or attorney, the employee will not be allowed to continue their employment with Shelby Energy. If two (2) Shelby Energy employees are affected, only one of the employees will be allowed to continue their employment with Shelby Energy. If the affected employees cannot decide which of them will terminate, the employee with the least service to Shelby Energy will be terminated at the end of thirty (30) days. A 'domestic partnership' as used in this policy shall be defined as an interpersonal relationship between two individuals of the same or opposite sex who live together and share a common domestic life, but are not married to each other.
- E. Approval from the President and CEO is required to create a new position or fill a vacant position. A written job description must accompany the request.
- F. The minimum educational and experience requirements will be stated in the written job description.
- G. When an existing position is upgraded or combined with another position, the current employee(s) holding the position(s) will be given first consideration if qualified. If the current employee(s) is determined to be "unqualified", the position will be considered a new position and will be filled through the process found in Item "H" below.
- H. When an existing position becomes vacant, or a new position is created, this position will be announced inside and outside Shelby Energy. It will be posted internally on bulletin boards and/or Shelby Energy's Intranet, accessible to employees. Internal and external candidates will receive equal consideration.

External sources may include schools, specialized training facilities, other Internet sites, newspapers, job fairs, and other recruiting sources within the recruiting area.
- I. The selection of employee(s) to fill a position will be the responsibility of the hiring manager and a human resources representative, with guidance and approval of the President and CEO.
- J. All candidates must complete and sign a Shelby Energy application form. Those who refuse to complete and sign an application form will not be considered as a candidate for the position.

- K. The employment interview procedure must be structured and comply with the *Guidelines for Selection* established by the Equal Employment Opportunity Commission.
- L. Candidates for whom an employment offer will be made are required to have a pre-employment drug and alcohol testing. Prospective employees will be required to disclose any prescribed medication and over-the-counter medications used, when such information is requested by the Medical Review Officer, prior to the screening procedure. A positive drug screen will be an immediate disqualification for employment.
- M. The employment offer will be made in writing after conferring with the President and CEO.
- N. Certain positions require the completion of a post-offer physical examination to determine if the candidate can perform the essential functions of the position. The physician conducting the examination will be the final authority regarding physical ability. At the recommendation of the physician, the employment offer may be withdrawn.
- O. Each new employee will be provided with *New Employee Orientation Training* at which time the employee benefit program will be explained. Participation in specified Shelby Energy benefit programs is available to all employees, based on employment status.
- P. All regular employees are considered in training for the first (6) six months of employment. Employees may be dismissed at any time during or after the training period unless termination is covered by a contract.
- Q. Should two (2) employees marry after becoming employed at Shelby Energy, only one of the employees will be allowed to continue their employment with Shelby Energy. If the affected employees cannot decide which of them will terminate, the employee with the least service to Shelby Energy will be terminated at the end of 30 days.
- R. A non-bargaining unit employee, who left Shelby Energy in good standing and was rehired, may receive credit for previous years of service toward vacation, provided the period of previous service was greater than the period of time between the date the employee left Shelby Energy and was rehired. The decision to grant previous vacation credit will be at the sole discretion of the President and CEO.
- S. A non-bargaining unit new hire with more than five years of service to a utility similar to Shelby Energy, may be granted paid vacation credit as a condition of employment at a rate greater than other new hires. The level of benefit granted will be at the sole discretion of the President and CEO and

must be approved prior to the time the offer letter is delivered to the prospective employee.

III. RESPONSIBILITY

The President and CEO is responsible for the administration of this policy.

Adopted: 05/27/65

Revised: 03/25/76 06/23/88 04/26/90 05/27/99 07/26/01
05/17/07 09/22/09 05/16/11 07/19/12 07/17/13
05/18/15

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

47. Refer to the Application, Exhibit 11, page 3 of 7, line 32. Explain the account activity in "Annual Mtg Labor/Benefits" amount \$42,983.03. Provide, by employee, the labor, including any overtime, associated benefits, and any other charges.

Response 47.

\$42,983.03 represents all labor and benefits for the test year period in account 930.20 and was listed in error for Exhibit 11 of the Application. Labor cost for the annual meeting was \$4,058.97 which represents overtime pay for any hourly employee who worked the evening of Shelby Energy's Annual Meeting. There is no cost for benefits applicable to the overtime pay.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

48. Refer to the application, Exhibit 14, page 1 of 3. State the number of Shelby Energy customers taking service under the Renewable Energy Program tariff and in which account the revenues from this tariff are recorded in the annual report.

Response 48.

Refer to **Exhibit 2-48**, which is included as a part of this response.

SHELBY ENERGY COOPERATIVE
Case No. 2016-00434
EnviroWatts Monthly Sales Report

Exhibit 2-48
Page 1 of 1
Witness: James Adkins

Dec-16

<u>Member Class</u>	<u>No. of Members Participating</u>	<u>No. of Increments Sold</u>	<u>Type of Increments Sold</u>				
			<u>Biomass</u>	<u>Solar</u>	<u>Wind</u>	<u>Hydro</u>	<u>Total</u>
Residential	60	106	100	5	1	0	106
Commercial	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0
Total	60	106	100	5	1	0	106

Projected Sales for the Next Month

<u>Member Class</u>	<u>No. of Members Participating</u>	<u>No. of Increments Sold</u>	<u>Type of Increments Sold</u>				
			<u>Biomass</u>	<u>Solar</u>	<u>Wind</u>	<u>Hydro</u>	<u>Total</u>
Residential	60	106	100	5	1	0	106
Commercial	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0
Total	60	106	100	5	1	0	106

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

49. Refer to the Application, Exhibit 15. Using the test year, provide the TIER and OTIER for each phase.

Response 49.

Refer to **Exhibit 2-49**, which is included as part of this response.

Shelby Energy Cooperative

Case No. 2016-00434

TIER & OTIER for all Three Phases

	NORMALIZED TEST YEAR	PHASE 1		PHASE 2		PHASE 3	
		Increase	Proposed	Increase	Proposed	Increase	Proposed
			Test Year		Test Year		Test Year
Operating Revenues:							
Base rates	\$ 39,969,502	\$ 1,089,635	\$ 41,059,137	\$ 456,378	\$ 41,515,515	\$ 451,627	\$ 41,967,142
Fuel and surcharge	-	-	-	-	-	-	-
Other electric revenue	637,530	637,530	637,530	637,530	637,530	637,530	637,530
	\$ 40,607,032		\$ 41,696,667		\$ 42,153,045		\$ 42,604,672
Total operating expenses	36,756,770		36,756,770		36,756,770		36,756,770
Total other expenses	4,640,017		4,640,017		4,640,017		4,640,017
Total cost of electric service	\$ 41,396,787		\$ 41,396,787		\$ 41,396,787		\$ 41,396,787
Utility operating margins	\$ (789,755)		\$ 299,880		\$ 756,258		\$ 1,207,885
Other revenue & expenses	142,353		142,353		142,353		142,353
Net Margins	\$ (647,402)		\$ 442,233		\$ 898,611		\$ 1,350,238
Interest on long term debt	\$ 1,542,945		\$ 1,542,945		\$ 1,542,945		\$ 1,542,945
Other capital Credits	\$ 62,300		\$ 62,300		\$ 62,300		\$ 62,300
OTIER	\$ 0.53		\$ 1.23		\$ 1.53		\$ 1.82
TIER	\$ 0.58		\$ 1.29		\$ 1.58		\$ 1.88

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

50. Refer to the Application, Exhibit 19. Explain whether Capital Credits are paid to estates.

Response 50.

Shelby Energy pays capital credits to estates. Exhibit 19 of the Application reflects General and Estates retirement of capital credits as listed for years 2010-2015 and a cumulative total for prior years.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

51. Refer to the Application, Exhibit 22, Affiliate Transactions.
- a. Provide an organizational chart for Shelby Energy Services ("SES").
 - b. State whether any of SES's personnel are employed by both Shelby Energy and SES, and if so, provide a list of those employees.
 - c. Provide the salaries and benefits of any personnel that work for both Shelby Energy and SES and the allocation.
 - d. Explain whether SES is located and housed in Shelby Energy's facilities, and if there is any allocation of costs to SES from Shelby Energy. If so, provide the allocation methodology and costs allocated.
 - e. Explain if there was or should be any allocation of costs between Shelby Energy and SES and whether this was taken in consideration in the revenue requirement calculation and COSS.
 - f. Explain whether SES is included in Shelby Energy's capital structure, as provided in the Application. customer.
 - g. Explain whether an SES customer must also be a Shelby Energy
 - h. Provide the financial statements of SES for 2013 through 2016.
 - i. Does Shelby Energy have a cost allocation manual? If so, provide
 - j. What was the amount of annual labor allocation to SES for the test year, and was an adjustment made to payroll and benefit expense for the allocation?

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

k. Is Shelby Energy compliant with the provisions of KRS 278.2203 and KRS 278.2205?

Response 51a.

SES has no organizational chart as there are no employees for SES. SES owns 100% of the stock of Shelby Energy Propane Plus, LLC ("Propane Plus").

Response 51b.

There are no employees that are employed by both SES and Shelby Energy. SES has no employees. Additionally, there are no employees that are employed by both Shelby Energy and Propane Plus. All employees of Propane Plus are independent of Shelby Energy. Propane Plus employees a General Manager, office personnel and delivery personnel. Management and operating decisions are made by Propane Plus. Shelby Energy is not involved in any of the day-to-day operations of Propane Plus.

Response 51c.

N/A. There are no employees that work for both companies.

Response 51d.

SES is a holding company owned by Shelby Energy. SES has no facilities, equipment, or employees. There are two (2) Shelby Energy employees that serve on the management committee for quarterly SES meetings. In addition, SES financial statements are prepared by Shelby Energy on a monthly basis. The only entries recorded on SES books are a monthly loan payment, recording labor and benefits, quarterly tax

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

payments, and the annual entry to record the net income of Propane Plus. The labor and benefits are charged to SES for the meetings and preparing the financials.

Shelby Energy directors record a portion of their monthly per diem to SES as they are given the monthly financial statements of SES. Propane Plus prepares its own financial statements and these are included in the monthly board information.

Propane Plus owns its facilities. In addition, Propane Plus has purchased its own office equipment, billing and accounting system, vehicles, and tools and work equipment. These are all located away from Shelby Energy's facilities.

Response 51e.

There is no allocation of costs required between Shelby Energy, SES, or Propane Plus.

Response 51f.

The accumulated earnings of SES are included in the equity of Shelby Energy as it is a wholly-owned subsidiary. Shelby Energy records the net income of SES as income from a subsidiary and as other Investments in the assets section.

Response 51g.

No. SES has no customers. Propane Plus makes its own decisions regarding its customers. Propane Plus does not provide Shelby Energy with its customer information, nor does Shelby Energy provide Propane Plus with its member information.

Response 51h.

* Refer to **Exhibit 2-51h.** which is included as part of this response.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 51i.

Shelby Energy developed a Cost Allocation Manual in 2001. There are no costs to allocate since there are no common facilities or employees. Labor and benefits are charged to SES based on the amount of time spent by Shelby Energy employees as described in 51d. above.

Response 51j.

The amount of labor and benefits allocated to SES for the test year was \$3,449. The labor was recorded in Account 143.11 and has been removed for rate-making purposes.

Response 51k.

Yes, Shelby Energy is compliant with the provisions of KRS 278.2203 and KRS 278.2205.

8:31 AM
03/19/14
Accrual Basis

Shelby Energy Services
Balance Sheet
As of December 31, 2013

	<u>Dec 31, 13</u>
ASSETS	
Current Assets	
Checking/Savings	
Cash	29,405.24
Total Checking/Savings	29,405.24
Accounts Receivable	
Accounts Receivable	623.44
Total Accounts Receivable	623.44
Other Current Assets	
Shelby Energy Propane - Loan	110,000.00
Total Other Current Assets	110,000.00
Total Current Assets	140,028.68
Other Assets	
Investment-Shelby Propane Plus	1,275,000.00
P&L - Shelby Propane Plus	526,866.79
Total Other Assets	1,801,866.79
TOTAL ASSETS	<u>1,941,895.47</u>
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
A/P SEC	2,192.13
Total Accounts Payable	2,192.13
Total Current Liabilities	2,192.13
Total Liabilities	2,192.13
Equity	
Capital Stock	
Capital Stock - EKP	460,000.00
Capital Stock - SEC	1,379,000.00
Total Capital Stock	1,839,000.00
Retained Earnings	-249,809.89
Net Income	350,513.23
Total Equity	1,939,703.34
TOTAL LIABILITIES & EQUITY	<u>1,941,895.47</u>

8:27 AM
03/19/14
Accrual Basis

Shelby Energy Services
Profit & Loss
January through December 2013

	<u>Jan - Dec 13</u>
Ordinary Income/Expense	
Income	
P&L - Shelby Propane	354,373.39
Total Income	354,373.39
Expense	
Audits	3,200.00
Professional Fees	
Tax Preparation	900.00
Total Professional Fees	900.00
Taxes	
State	175.00
Total Taxes	175.00
Total Expense	4,275.00
Net Ordinary Income	350,098.39
Other Income/Expense	
Other Income	
Interest Income	2,621.97
Total Other Income	2,621.97
Other Expense	
Other Expenses	15.00
SEC - Annual Allocations	2,192.13
Total Other Expense	2,207.13
Net Other Income	414.84
Net Income	<u>350,513.23</u>

8:28 AM
03/19/14
Accrual Basis

Shelby Energy Services
Profit & Loss
December 2013

	<u>Dec 13</u>
Ordinary Income/Expense	
Income	
P&L - Shelby Propane	<u>354,373.39</u>
Total Income	<u>354,373.39</u>
Net Ordinary Income	354,373.39
Other Income/Expense	
Other Income	
Interest Income	<u>623.76</u>
Total Other Income	<u>623.76</u>
Other Expense	
SEC - Annual Allocations	<u>2,192.13</u>
Total Other Expense	<u>2,192.13</u>
Net Other Income	<u>-1,568.37</u>
Net Income	<u><u>352,805.02</u></u>

2:24 PM
02/05/15
Accrual Basis

Shelby Energy Services
Balance Sheet
As of December 31, 2014

	Dec 31, 14
ASSETS	
Current Assets	
Checking/Savings	
Cash	93,027.97
Total Checking/Savings	93,027.97
Accounts Receivable	
Accounts Receivable	337.94
Total Accounts Receivable	337.94
Other Current Assets	
Shelby Energy Propane - Loan	40,000.00
Total Other Current Assets	40,000.00
Total Current Assets	133,365.91
Other Assets	
Investment-Shelby Propane Plus	1,155,000.00
P&L - Shelby Propane Plus	882,217.60
Total Other Assets	2,037,217.60
TOTAL ASSETS	2,170,583.51
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Accounts Payable	
A/P SEC	3,288.16
Total Accounts Payable	3,288.16
Total Current Liabilities	3,288.16
Total Liabilities	3,288.16
Equity	
Capital Stock	
Capital Stock - EKP	460,000.00
Capital Stock - SEC	1,379,000.00
Total Capital Stock	1,839,000.00
Retained Earnings	100,703.34
Net Income	227,592.01
Total Equity	2,167,295.35
TOTAL LIABILITIES & EQUITY	2,170,583.51

2:23 PM
02/05/15
Accrual Basis

Shelby Energy Services
Profit & Loss
January through December 2014

	<u>Jan - Dec 14</u>
Ordinary Income/Expense	
Income	
P&L - Shelby Propane	355,350.81
Total Income	<u>355,350.81</u>
Expense	
Audits	3,250.00
Professional Fees	
Tax Preparation	900.00
Total Professional Fees	<u>900.00</u>
Taxes	
Federal	101,468.00
State	20,537.00
Total Taxes	<u>122,005.00</u>
Total Expense	<u>126,155.00</u>
Net Ordinary Income	229,195.81
Other Income/Expense	
Other Income	
Interest Income	1,699.36
Total Other Income	<u>1,699.36</u>
Other Expense	
Other Expenses	15.00
SEC - Annual Allocations	3,288.16
Total Other Expense	<u>3,303.16</u>
Net Other Income	<u>-1,603.80</u>
Net Income	<u><u>227,592.01</u></u>

2:23 PM
02/05/16
Accrual Basis

Shelby Energy Services
Profit & Loss
December 2014

	<u>Dec 14</u>
Ordinary Income/Expense	
Income	
P&L - Shelby Propane	355,350.81
Total Income	<u>355,350.81</u>
Net Ordinary Income	355,350.81
Other Income/Expense	
Other Income	
Interest Income	337.94
Total Other Income	<u>337.94</u>
Other Expense	
SEC - Annual Allocations	3,288.16
Total Other Expense	<u>3,288.16</u>
Net Other Income	<u>-2,950.22</u>
Net Income	<u><u>352,400.59</u></u>

9:24 AM
02/17/16
Accrual Basis

Shelby Energy Services
Balance Sheet
As of December 31, 2015

	<u>Dec 31, 15</u>
ASSETS	
Current Assets	
Checking/Savings	
Cash	1,984.54
Total Checking/Savings	<u>1,984.54</u>
Total Current Assets	1,984.54
Other Assets	
Investment-Shelby Propane Plus	1,086,560.88
P&L - Shelby Propane Plus	1,093,620.44
Total Other Assets	<u>2,180,181.32</u>
TOTAL ASSETS	<u><u>2,182,165.86</u></u>
LIABILITIES & EQUITY	
Liabilities	
Long Term Liabilities	
Notes Payable - EKP - Propane P	540,655.10
Total Long Term Liabilities	<u>540,655.10</u>
Total Liabilities	540,655.10
Equity	
EKPC Retained Earnings	81,823.83
Treasury Stock	-100,886.00
Capital Stock	
Capital Stock - SEC	1,379,000.00
Total Capital Stock	<u>1,379,000.00</u>
Retained Earnings	246,471.52
Net Income	35,101.41
Total Equity	<u>1,641,510.76</u>
TOTAL LIABILITIES & EQUITY	<u><u>2,182,165.86</u></u>

7:41 AM
01/28/16
Accrual Basis

Shelby Energy Services
Profit & Loss
January through December 2015

	<u>Jan - Dec 15</u>
Ordinary Income/Expense	
Income	
P&L - Shelby Propane	211,402.84
Total Income	<u>211,402.84</u>
Expense	
Audits	3,250.00
Interest Expense	
Loan Interest	5,048.94
Interest Expense - Other	1,285.36
Total Interest Expense	<u>6,334.30</u>
Professional Fees	
Tax Preparation	900.00
Total Professional Fees	<u>900.00</u>
Taxes	
Federal	138,211.00
State	25,585.00
Total Taxes	<u>163,796.00</u>
Total Expense	<u>174,280.30</u>
Net Ordinary Income	37,122.54
Other Income/Expense	
Other Income	
Interest Income	85.31
Total Other Income	<u>85.31</u>
Other Expense	
Other Expenses	15.00
SEC - Annual Allocations	2,091.44
Total Other Expense	<u>2,106.44</u>
Net Other Income	<u>-2,021.13</u>
Net Income	<u><u>35,101.41</u></u>

9:15 AM
02/17/16
Accrual Basis

Shelby Energy Services
Profit & Loss
December 2015

	<u>Dec 15</u>
Ordinary Income/Expense	
Income	
P&L - Shelby Propane	211,402.84
Total Income	<u>211,402.84</u>
Expense	
Interest Expense	
Loan Interest	1,248.32
Total Interest Expense	<u>1,248.32</u>
Taxes	
Federal	31,250.00
State	6,250.00
Total Taxes	<u>37,500.00</u>
Total Expense	<u>38,748.32</u>
Net Ordinary Income	<u>172,654.52</u>
Net Income	<u><u>172,654.52</u></u>

11:17 AM
01/31/17
Accrual Basis

Shelby Energy Services
Balance Sheet
As of December 31, 2016

	<u>Dec 31, 16</u>
ASSETS	
Current Assets	
Checking/Savings	
Cash	23,667.40
Total Checking/Savings	<u>23,667.40</u>
Total Current Assets	23,667.40
Other Assets	
Investment-Shelby Propane Plus	995,247.84
P&L - Shelby Propane Plus	<u>1,093,620.44</u>
Total Other Assets	<u>2,088,868.28</u>
TOTAL ASSETS	<u><u>2,112,535.68</u></u>
LIABILITIES & EQUITY	
Liabilities	
Long Term Liabilities	
Notes Payable - EKP - Propane P	<u>491,425.94</u>
Total Long Term Liabilities	<u>491,425.94</u>
Total Liabilities	491,425.94
Equity	
EKPC Retained Earnings	81,823.83
Treasury Stock	-100,886.00
Capital Stock	
Capital Stock - SEC	<u>1,379,000.00</u>
Total Capital Stock	1,379,000.00
Retained Earnings	281,572.93
Net Income	<u>-20,401.02</u>
Total Equity	<u>1,621,109.74</u>
TOTAL LIABILITIES & EQUITY	<u><u>2,112,535.68</u></u>

11:17 AM
01/31/17
Accrual Basis

Shelby Energy Services
Profit & Loss
December 2016

	<u>Dec 16</u>
Ordinary Income/Expense	
Expense	
Interest Expense	1,238.90
Taxes	
Federal	186.00
State	<u>1,169.00</u>
Total Taxes	<u>1,355.00</u>
Total Expense	<u>2,593.90</u>
Net Ordinary Income	<u>-2,593.90</u>
Net Income	<u><u>-2,593.90</u></u>

11:17 AM
01/31/17
Accrual Basis

Shelby Energy Services
Profit & Loss
January through December 2016

	<u>Jan - Dec 16</u>
Ordinary Income/Expense	
Expense	
Audits	3,250.00
Interest Expense	14,881.02
Professional Fees	
Tax Preparation	900.00
Total Professional Fees	<u>900.00</u>
Taxes	
Federal	186.00
State	1,169.00
Total Taxes	<u>1,355.00</u>
Total Expense	<u>20,386.02</u>
Net Ordinary Income	-20,386.02
Other Income/Expense	
Other Expense	
Other Expenses	15.00
Total Other Expense	<u>15.00</u>
Net Other Income	<u>-15.00</u>
Net Income	<u><u>-20,401.02</u></u>

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

52. State whether Shelby Energy has any smart grid investment in EKPC substations. If so, provide the type of equipment and the capital investment.

Response 52.

Shelby Energy has equipment for the AMI infrastructure to send and receive meter data located within EKPC substations. The total amount invested in this equipment is \$796,833.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

53. Provide Shelby Energy's line losses for years 2011-2016.

Response 53.

Refer to **Exhibit 2-53**, which is included as part of this response.

SHELBY ENERGY COOPERATIVE
CASE NO. 2016-00434
LINE LOSSES

<u>Year</u>	<u>kWh Purchased</u>	<u>kWh Sold</u>	<u>kWh Variance</u>	<u>Line Loss</u>
2011	465,407,167	453,101,660	12,305,507	2.64%
2012	467,695,359	450,373,613	17,321,746	3.70%
2013	481,530,544	465,282,670	16,247,874	3.37%
2014	500,439,567	482,267,891	18,171,676	3.63%
2015	498,300,344	481,471,660	16,828,684	3.38%
2016	516,352,906	497,788,134	18,564,772	3.60%

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

54. Provide Shelby Energy's December 31 trial balance for 2015 and 2016.

Response 54.

Refer to **Exhibit 2-54(1)** and **Exhibit 2-54(2)**, which is included as part of this response.

ACCOUNT	DESCRIPTION	AMOUNT
107.00	CONST.FUNDS - CLOSED WORK ORDERS	0.00
107.20	CONSTRUCTION WORK IN PROGRESS	881,537.52
107.21	AMI SUBSTATION WORK IN PROGRESS	0.00
107.28	CONSTRUCTION OVERHEAD INDIRECT	82.19
107.29	CONSTRUCTION MISC. OVERHEAD	0.00
107.30	SPECIAL EQUIP. WORK IN PROGRESS	0.00
107.50	CONST. IN PROGRESS	0.00
108.50	ACC PROVISION DEPR-TRANSMISSION	0.00
108.60	ACC PROVISION FOR DEPR-DIST PLANT	15,527,556.67-
108.70	ACC PROVISION FOR DEPR-GEN. PLANT	2,640,960.09-
108.80	RETIREMENT WORK IN PROGRESS	75,877.70
108.88	RETIREMENT OVERHEAD INDIRECT	0.00
108.89	RETIREMENT MISC. OVERHEAD	0.00
111.00	ACC PROVISION FOR AMORT ELEC.PLT	0.00
123.10	INVEST IN ASSOC ORG PATR CAP EKP	19,862,502.29
123.20	INVEST IN ASSOC ORG PTR CAP KAEC	40,838.73
123.21	SUBSCRIPTIONS CAP.TERM CERT.CFC	0.00
123.22	INVESTMENTS CAPITAL TRM CERT.CFC	638,073.10
123.23	OTHER INVEST.IN ASSOC.ORGANIZATN	8,700.00
123.24	OTHER INVEST ENVISION ENERGY SER	10,000.00
123.25	EQUITY INVESTMENT - C.R.C.	20,000.00
123.30	INVEST ASSOC ORG PAT CAP U.U.S.	368,908.11
123.40	INVEST ASSOC ORG PAT CAP C.F.C.	240,342.55
123.41	COOPERATIVE INTEGRITY FUND	0.00
123.42	INVEST ASSOC ORG PAT CAP C.R.C.	9,264.50
123.50	INVEST ASSOC ORG PAT CAP CON. CR	0.00
123.60	INVEST ASSOC ORG PAT CAP NISC	33,027.07
123.65	INVEST ASSOC ORG PAT CAP SEDC	113,663.48
123.70	INVEST ASSOC PAT CAP FEDERATED	0.00
123.80	INVEST ASSOC PAT CAP TARHEEL EMA	0.00
123.90	INVEST RUS RURAL ECONOMIC DEVMNT	335,156.65
123.91	INVEST SUBSID. S E S EARNINGS	281,572.93
123.92	INVEST SUBSID. SES CAPITAL STOCK	1,379,000.00
124.00	OTHER INVESTMENTS	94,949.42
124.10	INVESTMENT-CFC MEMBER CAP. SEC.	25,000.00
128.00	OTHER SPECIAL FUNDS	0.00
128.20	INVESTMENT - OTHER SPECIAL FUNDS	0.00
131.00	CASH-PAYROLL-CITIZENS UNION BANK	0.00
131.10	CASH-GEN.FNDS-CITIZENS UNION BNK	1,059,884.21
131.11	CASH-GEN.FNDS-FARMERS BK AND TRT	0.00
131.13	CASH-ECON.DEV.COOP FUND-C.U.B	320,416.23
131.20	CASH-RUS / CFC CONSTRUCTION FUND	0.00
131.30	CASH-GEN.FND-BEDFORD LN / DEP.BK	75,283.14
131.40	CASH - TRANSFER OF FUNDS	0.00
131.50	CASH - GEN FNDS - UNITED CITIZEN	10,214.80
131.60	CASH-CAPITAL CREDIT REFUNDS	15,176.43
131.70	CASH - GEN FUNDS - FARMERS BANK	8,772.60
131.80	CASH - HRA ACCT - CITIZENS UNION	0.00
134.00	OTHER SPECIAL DEPOSITS	425.00

Exhibit 2-54(1)
 Page 1 of 7
 Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
135.00	WORKING FUNDS - PERMANENT	5,050.00
136.00	TEMPORARY CASH INVESTMENTS	0.00
136.30	TEMP CASH INVEST CFC COM PAPER	2,040,252.84
141.00	NOTES REC-SHELBY ENERGY SERVICES	0.00
142.00	ACCOUNTS RECEIVABLE - CONSUMERS	3,542,333.87
142.10	ACCT REC-CONSUMERS OFF SERVICE	0.00
142.20	DEBT MANAGEMENT	2,082.63
142.30	UNBILLED/(OVERBILLED) REVENUE	35,448.93-
142.42	LOAD MANAGEMENT CREDITS	193.83
143.00	ACCOUNTS RECEIVABLE - OTHER	20,545.33
143.10	ACCOUNTS RECEIVABLE - ACRE CONT.	467.66-
143.11	ACCT REC-SHELBY ENERGY SERVICES	36.94
143.12	ACCT REC-SHELBY PROPANE PLUS	0.00
143.13	ACCOUNTS REC - OTHER - MEDICAL	68.84-
143.14	ACCT.REC-OTHER-EMPLOYEE PURCHASE	309.25-
143.15	CONSUMER BILL CONTRACT	28,506.45
143.16	ACCOUNTS REC. - OTHER - UNION	0.00
143.17	ACCT. REC. - EMPLOYEE ASSOC. DUE	0.00
143.19	ACCOUNTS REC. OTHER COOPS	0.00
143.20	ACCT REC-OTHER GROUP INS & 401K	5.60-
143.21	ACCOUNTS REC - OTHER - RETIREES	0.00
143.22	EMPLOYEE - ROTH 401K	0.00
143.25	YARD LIGHT ADVANCED PAYMENTS	0.00
143.30	ACCT REC - EAST KENTUCKY POWER	7,267.58
143.31	ACCOUNTS REC - E T S UNITS	0.00
143.40	ACCOUNTS RECEIVABLE-MATERIAL SLD	130.00-
143.50	ACCOUNTS RECEIVABLE VOUCHERS	344.59
143.58	ACCOUNTS RECEIVABLE - ONLINE COL	0.00
143.60	ACCOUNTS RECEIVABLE - F.E.M.A.	0.00
143.70	ACCT REC-OTHER-EAST KY POWER	0.00
143.71	ACCOUNTS RECEIVABLE - A.T.& T.	0.00
143.80	A/R ADV EXP-DIRECTORS AND ATTY.	0.00
143.81	DIRECTOR AND ATTY-GUEST REIMBRMT	0.00
143.82	ACCOUNTS REC. - ASSISTING COOPS	0.00
143.90	CLEARING ACCOUNTS - VOID CHECKS	0.00
143.91	ACCOUNTS RECEIVABLE - KATAYAMA	0.00
143.92	ACCOUNTS RECEIVABLE - DIAGEO	0.00
144.10	ACCUM PROV UNCOLLECT RES/SM COM	12,000.50-
144.11	ACCUM PROV FOR UNCOLL LG POWER	342,541.38-
144.20	ACCUM PROV FOR UNCOLL CONS.ACCTS	0.00
154.00	MATERIAL AND SUPPLIES - ELECTRIC	503,107.48
154.40	MATERIAL SOLD CLEARING ACCOUNT	0.00
154.90	TRANSPORTATION INVENTORY	0.00
155.10	MERCHANDISE RESALE MARKETING PGM	0.00
155.20	MERCHANDISE RESALE TOY BUCKET TR	0.00
155.30	MERCHANDISE RESALE MISCELLANEOUS	0.00
163.00	STORES EXPENSE CLEARING ACCOUNT	17.26
163.10	MINOR MATERIAL - STORES EXP. CL.	0.00
165.10	PREPAID INSURANCE	130,710.65

Exhibit 2-54(1)
 Page 2 of 7
 Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
165.20	OTHER PREPAYMENTS	18,888.45
165.30	PREPAID SALES AND USE TAX	49,145.14
165.40	PREPAID INS - LIFE,DIS AND 24 HR	0.00
165.50	PREPAID M I N T PROGRAM	0.00
165.80	PREPAID TRU CHECK MTR RDG SERV	0.00
165.90	PREPAID EKP MEDICAL INSURANCE	0.00
171.00	INTEREST AND DIVIDEND RECEIVABLE	7,211.71
181.00	UNAMORTIZED DEBT EXPENSE	0.00
183.00	PRELIM SRVY AND INVESTIGATN CHGS	0.00
183.60	PRE-LOAN EXPENSE	0.00
184.10	TRANSPORTATION CLEARING ACCOUNT	0.02
184.30	HEAVY WORK EQUIP CLEARING ACCT	0.00
186.00	MISCELLANEOUS DEFERRED DEBITS	0.00
186.10	SYSTEM MAPPING PROJECT	0.00
186.11	DEFERRED DEBIT-XL RUN TM LIC3100	0.00
186.13	DEFERRED DEBIT INVENTORY ADJMT	0.00
186.20	DEFERRED DEBIT LN RNG PLN ENGR	0.00
186.30	MANAGEMENT AUDIT PROJECT	0.00
186.40	DEFERRED DEBIT/ PROJECTS	0.00
186.50	DEFERRED DEBIT - METERS RETIRED	0.00
186.60	SERVICE UPGRADE - GENERAL PLANT	0.00
186.70	DEFERRED DEBIT - INSURANCE SURPL	0.00
186.80	R & S PENSION PLAN PREPAYMENT	0.00
201.10	PATRONAGE CAPITAL CR ASSIGNED	34,863,620.12-
201.11	G & T PATRONAGE ASSIGNED	0.00
201.20	PATRONAGE CAPITAL CR ASSIGNABLE	0.00
208.00	DONATED CAPITAL	419,926.59-
208.10	GAINS - ESTATE REFUNDS	594,665.53-
208.20	GAINS - SEDC	1,037,884.04-
215.31	Other Comprehensive Income	209,741.00
217.00	REACQUIRED CAPITAL STOCK	161,431.20-
219.10	OPERATING MARGINS	711,519.05-
219.11	OPERATING DEFICIT	0.00
219.20	NON-OPERATING MARGINS	43,112.08-
219.21	NON-OPERATING DEFICIT	519,638.55-
219.40	OTHER MARGINS AND EQUITIES PRIOR	0.00
224.12	OTHER LT DEBTS - CFC CONST LOAN	4,645,145.00-
224.13	CFC - NOTES EXECUTED - DEBIT	0.00
224.30	LT DEBT - RUS OBLIGATION	18,143,913.06-
224.31	LT DEBT - RUS ECONOMIC DEVELOPMT	0.00
224.32	LONG TERM DEBT FFB OBLIGATION	42,472,308.30-
224.40	RUS NOTES EXECUTED-CONST-DEBT	0.00
224.41	FFB NOTES EXECUTED	13,400,000.00
224.50	OTHER LONG TERM DEBT - NRECA	0.00
224.60	ADVANCE PAYMENTS - UNAPPLIED RUS	0.00
224.70	OTHER LT DEBT - CFC CONST LOAN	0.00
226.00	INTEREST ACCRUED-DEFERRED-REA	0.00
227.00	ADVANCED PYMTS APPLIED LT DEBT	0.00
228.30	ACCUM PROV PENSION / BEN SEC 125	861.87-

Exhibit 2-54(1)
 Page 3 of 7
 Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
228.31	ACC PROV PENSION / BEN-FASB 106	1,983,441.69-
228.32	ACCUM PROV BENEFIT C/A AND AEGON	0.48-
228.33	ACC PROV BENEFITS DEFERRED COMP.	0.00
228.34	ACCUM PROV BENEFITS - DENTALCARE	151.82-
228.35	ACCUM. PROV. BENEFITS - GROUP ME	0.00
228.36	ACCUM PROV BENEFITS - CANCER INS	0.72-
231.00	NOTES PAYABLE-CFC LINE OF CREDIT	0.00
231.10	NOTES PAYABLE CFC SHELBY EN SERV	0.00
232.10	ACCOUNTS PAYABLE	519,540.48-
232.11	WINTERCARE ENERGY FUND	0.00
232.12	ACCOUNTS PAYABLE - POWER BILL	2,790,369.00-
232.14	ACCOUNTS PAYABLE DAVIS H.ELLIOT	0.00
232.15	ACCOUNTS PAYABLE DOBSON POWER LN	0.00
232.16	ACCOUNTS PAYABLE M&M ELECTRICAL	0.00
232.17	ACCOUNTS PAYABLE - STS	0.00
232.18	ACCOUNTS PAYABLE - PAYROLL	0.00
232.20	OVERPAYMENT OF BILLS	0.00
232.25	PLAN 457F - DEFERRED COMP	64,000.00
232.30	ACCOUNTS PAYABLE BEDFORD LN & DP	0.00
232.40	ACCOUNTS PAYABLE - UNION DUES	0.00
232.50	ACCOUNTS PAYABLE - ONLINE COLL	0.00
232.60	ACCOUNTS PAYABLE - BLDG ADDITION	0.00
232.70	ACCOUNTS PAYABLE FISHEL	0.00
232.80	A/P CUB ECONOMIC DEVELOPMENT FND	0.00
232.90	A/P Health Reimbursement Account	0.00
232.98	AP PURCHASE ORDER ACCRUAL	733.27-
232.99	AP PLANT PO ACCRUAL	0.00
233.00	NOTES PAYABLE EAST KENTUCKY PWR	0.00
235.00	CONSUMER DEPOSITS	1,543,140.00-
236.10	ACCRUED PROPERTY TAXES	0.00
236.20	ACCRUED FEDERAL UNEMPLOYMENT	3,945.33
236.30	ACCRUED FICA TAX	0.36-
236.40	ACCRUED STATE UNEMPLOYMENT TAX	0.01
236.50	ACCRUED KENTUCKY SALES TAX	88,038.69-
236.60	DISTRICT TAX TOTAL	0.00
236.61	SHELBY COUNTY SCHOOL TAX	57,752.78-
236.62	HENRY COUNTY SCHOOL TAX	14,453.22-
236.63	TRIMBLE COUNTY SCHOOL TAX	10,733.04-
236.64	CARROLL COUNTY SCHOOL TAX	2,298.76-
236.65	EMINENCE SCHOOL TAX	0.00
236.66	SPENCER COUNTY SCHOOL TAX	196.86-
236.67	ANDERSON COUNTY SCHOOL TAX	41.45-
236.68	FRANKLIN COUNTY SCHOOL TAX	25.86-
236.69	FRANCHISE TX - SIMPSONVILLE	0.00
236.71	FRANCHISE TX-S'VILLE-RES AND COM	0.00
236.72	FRANCHISE TX-S'VILLE-LARGE POWER	0.00
236.73	FRANCHISE TAX - CAMPBELLSBURG	0.00
236.80	DISCRETIONARY ANNUAL BONUS	0.00
236.90	ACCRUED FOR UNION ALLOWANCE	5,959.09

Exhibit 2-54(1)
 Page 4 of 7
 Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
237.10	INTEREST ACCRUED-RUS OBLIGATION	0.00
237.11	INTEREST ACCRUED FFB OBLIGATION	0.00
237.30	OTHER INTEREST ACCRUED	0.00
237.40	INTEREST ACCRUED CFC OBLIGATION	23,167.00-
237.50	INTEREST ACCRUED CONS. DEPOSITS	1,653.76-
238.10	PATRONAGE CAPITAL - PAYABLE	0.00
241.00	ACC. FEDERAL INCOME TAX EMPLOYEE	0.00
241.10	ACC STATE INCOME TAX EMPLOYEE	0.00
241.20	ACCRUED EMPLOYEE OCCUPATIONAL TX	4,872.95-
242.00	MISC CURRENT / ACCRUED LIABILITIS	496.06
242.01	PAYROLL CLEARING ACCOUNT	8.02-
242.10	ACCRUED VACATION	121,875.06-
242.20	AWARDED SICK LEAVE	0.00
252.10	CONS ADV PYMT 150' THRU 300'	0.00
252.20	CONS ADV PYMT 301' THRU 1000'	59,874.66-
252.30	CONS ADV PYMT ALL OVER 1000'	424,472.14-
252.40	DEFERRED CREDIT DEPR ADJUSTMENT	0.00
253.00	DEFERRED CREDIT INVENTORY ADJMT	0.00
253.10	OTHER DEFERRED CREDITS	0.00
364.00	POLES, TOWERS AND FIXTURES	24,045,085.85
365.00	OVERHEAD CONDUCTORS AND DEVICES	23,469,256.84
365.10	O C R'S AT SUBSTATION	0.00
366.00	UNDERGROUND CONDUIT	307,518.52
367.00	UNDERGROUND CONDUCTORS / DEVICES	6,498,003.09
368.00	LINE TRANSFORMERS	10,161,172.57
369.00	SERVICES	11,089,640.68
370.00	METERS	4,170,093.09
370.10	MIN-MAX-AMP METERS @ SUBSTATION	0.00
371.00	INSTALLATION ON CONS PREMISES	2,359,068.05
373.00	STREET LIGHTS AND SIGNAL SYSTEM	67,096.05
389.00	LAND AND LAND RIGHTS (NEW OFFICE)	20,010.19
389.10	LAND AND LAND RIGHTS	2,075.00
390.00	STRUCTURES AND IMPROVEMENTS	1,346,220.56
390.10	STRUCTURE AND IMPROVEMENTS-LEASE	9,820.04
391.00	OFFICE FURNITURE AND FIXTURES	532,080.97
392.00	TRANSPORTATION EQUIPMENT	1,596,914.38
393.00	STORES EQUIPMENT	5,020.97
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	22,025.70
395.00	LABORATORY EQUIPMENT	101,744.18
396.00	POWER OPERATED EQUIPMENT	143,325.72
396.10	UNDERGROUND EQUIPMENT	0.00
397.00	COMMUNICATIONS EQUIPMENT	220,993.13
398.00	MISCELLANEOUS EQUIPMENT	45,052.85
403.60	DEPR. EXPENSE-DISTRIBUTION PLANT	2,412,324.23
403.70	DEPR. EXPENSE - GENERAL PLANT	62,190.11
407.00	AMORTIZATION OF PROPERTY LOSSES	0.00
408.40	TAXES - STATE UNEMPLOYMENT	0.00
408.50	TAXES - STATE ASSESSMENT	53,496.40
408.60	TAXES - HEALTH CARE / PCOR	0.00

Exhibit 2-54(1)
Page 5 of 7
Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
415.00	REVENUE FROM MERCHANDISING	0.00
416.00	COST AND EXP. FROM MERCHANDISING	0.00
417.00	MANAGEMENT/CONSULTING SERVICES	600.00-
418.10	EQUITY EARNINGS-SUBSIDIARY - SES	35,101.41-
418.20	EQUITY EARNINGS-SUBSID ENVISION	0.00
419.00	INVESTMENT AND DIVIDEND INCOME	35,909.47-
421.00	NON-OPERATING MARGIN - OTHER	0.00
421.10	GAIN ON DISPOSITION OF PROPERTY	16,678.01-
421.20	LOSS ON DISPOSITION OF PROPERTY	20,778.72
423.00	G AND T CAPITAL CREDITS	1,972,964.25-
424.00	OTHER CAPITAL CR / PAT DIVIDENDS	72,161.92-
426.10	DONATIONS	2,780.11
426.40	CIVIC,POLITICAL / RELATED ACTVTS	1,470.54
427.10	INTEREST ON REA CONSTRUCTION LN	660,940.21
427.20	INTEREST ON CFC CONSTRUCTION LN	252,988.82
427.30	INTEREST ON FFB CONSTRUCTION LN	656,326.78
430.00	INT ON DEBT TO ASSOC ORGANIZATNS	0.00
431.10	INTEREST EXP.-CONSUMER DEPOSITS	1,729.96
431.30	SHORT TERM INTEREST - CFC	26,913.73
440.10	RESIDENTIAL SALES-RESIDENTIAL	24,435,569.95-
440.11	RESIDENTIAL SALES-07 CORRECTION	0.00
440.20	RESIDENTIAL SALES - SEASONAL	2,197.24-
442.10	COMMERCIAL / INDUSTRIAL SALES-SM	7,525,004.10-
442.11	COMMERCIAL-IND-SM-07 CORRECTION	0.00
442.20	COMMERCIAL / INDUSTRIAL SALES-LG	10,808,753.39-
442.21	COMMERCIAL-IND-LG-07 CORRECTION	0.00
444.00	PUBLIC STREET / HIGHWAY LIGHTING	48,363.26-
444.10	PUBLIC ST-HWY LIGHT-07 CORRECTIN	0.00
450.00	FORFEITED DISCOUNTS	406,272.77-
454.00	RENT FROM ELECTRIC PROPERTY	316,673.66-
456.00	OTHER ELECTRIC REVENUE	35,120.49
555.00	PURCHASE POWER	33,144,801.00
580.00	OPERATION,SUPERVISION AND ENGR.	51,221.06
583.00	OVERHEAD LINE EXPENSE	638,378.59
584.00	UNDERGROUND LINE EXPENSE	16,004.37
585.00	STREET LIGHTING / SIGNAL EXPENSE	884.21
586.00	METER EXPENSE	182,493.64
586.10	METER TESTING	27,621.78
586.20	METERS CHANGED FOR TESTING	393.49
586.30	METER RECORD KEEPING (D.GRAHAM)	6,803.26
587.00	CONSUMER INSTALLATION EXPENSE	172,513.99
588.00	MISCELLANEOUS DISTRIBUTION EXP.	410,756.54
590.00	MAINTENANCE-SUPERVISION / ENGR.	22,117.99
593.00	MAINTENANCE OF OVERHEAD LINES	727,619.40
593.01	MAINTENANCE - STANDBY TIME	44,936.08
593.10	PATROLLING - PLANNED	454.32
593.20	O.C.R. MAINTENANCE - PLANNED	47,085.86-
593.30	RIGHT OF WAY - PLANNED	1,466,060.54
593.35	RIGHT OF WAY - SPRAYING	84,315.50

Exhibit 2-54(1)
 Page 6 of 7
 Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
593.40	AIR PATROL	17,670.00
593.50	TREATMENT OF POLES	0.00
593.60	FUSE MAINTENANCE - SHELBY LABOR	0.00
594.00	MAINTENANCE OF UNDERGROUND LINES	157,064.92
595.00	MAINTENANCE OF LINE TRANSFORMERS	3,984.12-
597.00	MAINTENANCE OF METERS	6,849.32
598.00	MAINTENANCE OF MISC. DIST. PLANT	142,837.25
599.99	CLEARING ACCOUNT FOR BALANCING	0.00
777.77	CA/GA INTEGRATION DEFAULT	0.00
901.00	SUPERVISION	79,653.36
902.00	METER READING EXPENSE	177,096.29
903.00	CONSUMER RECORDS / COLLECT. EXP.	301,914.53
904.00	UNCOLLECTIBLE ACCOUNTS	137,825.35-
907.00	SUPERVISION	46,686.54
908.00	CUSTOMER ASSISTANCE EXPENSE	133,087.15
909.00	INFORMATIONAL / INSTRUCTIONAL EP	52,851.16
910.00	MISCELLANEOUS CUSTOMER SERV.EXP.	218,044.55
912.00	DEMONSTRATING / SELLING EXPENSE	66,722.23-
920.00	ADMINISTRATIVE / GENERAL SALARY	365,407.71
921.00	OFFICE SUPPLIES AND EXPENSE	35,746.21
921.10	OFFICE SUPPLIES / EXP.-CLEARING	0.00
923.00	OUTSIDE SERVICES EMPLOYED	126,066.67
925.00	INJURIES AND DAMAGES	0.00
926.10	EMPLOYEE PENSIONS / BENEFIT CLR	0.00
928.00	REGULATORY COMMISSION EXPENSES	0.00
930.20	MISCELLANEOUS GENERAL EXPENSE	214,773.96
930.21	MISC.GENERAL EXP-DUES/MAGAZINE	151,624.29
930.22	PRESIDENT/CEO MISC GENERAL EXP	0.00
930.30	DIRECTORS FEES AND EXPENSES	108,698.64
931.00	RENTS	6,300.00
935.10	MAINT.OF STRUCTURES / IMPROVMTS	16,682.14
935.20	MAIN.OF OFFICE FURNITURE / FIXTS	17,411.34
935.30	MAIN.OF COMMUNICATIONS EQUIPMENT	14,975.26
935.40	MAIN. OF GENERAL PROPERTY	15,622.88
999.00	PAYROLL EST. HRS. CLEARING ACCT.	0.00
	ACCOUNTS 000.00 TO 399.99	2,340,366.96
	ACCOUNTS 400.00 TO 999.99	2,340,366.96-

Exhibit 2-54(1)
Page 7 of 7
Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
107.00	CONST.FUNDS - CLOSED WORK ORDERS	0.00
107.20	CONSTRUCTION WORK IN PROGRESS	1,186,874.77
107.21	AMI SUBSTATION WORK IN PROGRESS	0.00
107.28	CONSTRUCTION OVERHEAD INDIRECT	0.00
107.29	CONSTRUCTION MISC. OVERHEAD	0.00
107.30	SPECIAL EQUIP. WORK IN PROGRESS	0.00
107.50	CONST. IN PROGRESS	0.00
108.50	ACC PROVISION DEPR-TRANSMISSION	0.00
108.60	ACC PROVISION FOR DEPR-DIST PLANT	14,872,082.66-
108.70	ACC PROVISION FOR DEPR-GEN.PLANT	2,491,270.34-
108.80	RETIREMENT WORK IN PROGRESS	200,242.66
108.88	RETIREMENT OVERHEAD INDIRECT	0.00
108.89	RETIREMENT MISC. OVERHEAD	0.00
111.00	ACC PROVISION FOR AMORT ELEC.PLT	0.00
123.10	INVEST IN ASSOC ORG PATR CAP EKP	21,994,666.36
123.20	INVEST IN ASSOC ORG PTR CAP KAEC	40,838.73
123.21	SUBSCRIPTIONS CAP.TERM CERT.CFC	0.00
123.22	INVESTMENTS CAPITAL TRM CERT.CFC	635,839.90
123.23	OTHER INVEST.IN ASSOC.ORGANIZATN	3,700.00
123.24	OTHER INVEST ENVISION ENERGY SER	10,000.00
123.25	EQUITY INVESTMENT - C.R.C.	20,000.00
123.30	INVEST ASSOC ORG PAT CAP U.U.S.	376,678.08
123.40	INVEST ASSOC ORG PAT CAP C.F.C.	251,978.97
123.41	COOPERATIVE INTEGRITY FUND	0.00
123.42	INVEST ASSOC ORG PAT CAP C.R.C.	10,504.50
123.50	INVEST ASSOC ORG PAT CAP CON. CR	0.00
123.60	INVEST ASSOC ORG PAT CAP NISC	33,027.07
123.65	INVEST ASSOC ORG PAT CAP SEDC	117,885.64
123.70	INVEST ASSOC PAT CAP FEDERATED	0.00
123.80	INVEST ASSOC PAT CAP TARHEEL EMA	0.00
123.90	INVEST RUS RURAL ECONOMIC DEVMNT	92,407.49
123.91	INVEST SUBSID. S E S EARNINGS	396,642.38
123.92	INVEST SUBSID. SES CAPITAL STOCK	1,379,000.00
124.00	OTHER INVESTMENTS	107,858.42
124.10	INVESTMENT-CFC MEMBER CAP. SEC.	25,000.00
128.00	OTHER SPECIAL FUNDS	0.00
128.20	INVESTMENT - OTHER SPECIAL FUNDS	0.00
131.00	CASH-PAYROLL-CITIZENS UNION BANK	0.00
131.10	CASH-GEN.FNDS-CITIZENS UNION BNK	890,708.44
131.11	CASH-GEN.FNDS-FARMERS BK AND TRT	0.00
131.13	CASH-ECON.DEV.COOP FUND-C.U.B	566,733.59
131.20	CASH-RUS / CFC CONSTRUCTION FUND	0.00
131.30	CASH-GEN.FND-BEDFORD LN / DEP.BK	64,952.18
131.40	CASH - TRANSFER OF FUNDS	0.00
131.50	CASH - GEN FNDS - UNITED CITIZEN	10,517.59
131.60	CASH-CAPITAL CREDIT REFUNDS	4,652.74
131.70	CASH - GEN FUNDS - FARMERS BANK	8,387.65
131.80	CASH - HRA ACCT - CITIZENS UNION	0.00
134.00	OTHER SPECIAL DEPOSITS	425.00

Exhibit 2-54(2)
 Page 1 of 7
 Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
135.00	WORKING FUNDS - PERMANENT	5,050.00
136.00	TEMPORARY CASH INVESTMENTS	0.00
136.30	TEMP CASH INVEST CFC COM PAPER	0.00
141.00	NOTES REC-SHELBY ENERGY SERVICES	0.00
142.00	ACCOUNTS RECEIVABLE - CONSUMERS	4,174,566.55
142.10	ACCT REC-CONSUMERS OFF SERVICE	0.00
142.20	DEBT MANAGEMENT	2,997.75
142.30	UNBILLED/(OVERBILLED) REVENUE	83,892.43
142.42	LOAD MANAGEMENT CREDITS	238.00
143.00	ACCOUNTS RECEIVABLE - OTHER	253,579.01
143.10	ACCOUNTS RECEIVABLE - ACRE CONT.	73.92
143.11	ACCT REC-SHELBY ENERGY SERVICES	3,633.93
143.12	ACCT REC-SHELBY PROPANE PLUS	0.00
143.13	ACCOUNTS REC - OTHER - MEDICAL	39.44-
143.14	ACCT.REC-OTHER-EMPLOYEE PURCHASE	429.62-
143.15	CONSUMER BILL CONTRACT	5,701.29
143.16	ACCOUNTS REC. - OTHER - UNION	0.00
143.17	ACCT. REC. - EMPLOYEE ASSOC. DUE	0.00
143.19	ACCOUNTS REC. OTHER COOPS	46,119.04
143.20	ACCT REC-OTHER GROUP INS & 401K	0.21
143.21	ACCOUNTS REC - OTHER - RETIREES	0.00
143.22	EMPLOYEE - ROTH 401K	0.00
143.25	YARD LIGHT ADVANCED PAYMENTS	2,195.80-
143.30	ACCT REC - EAST KENTUCKY POWER	813.64
143.31	ACCOUNTS REC - E T S UNITS	0.00
143.40	ACCOUNTS RECEIVABLE-MATERIAL SLD	898.15
143.50	ACCOUNTS RECEIVABLE VOUCHERS	1,132.00
143.58	ACCOUNTS RECEIVABLE - ONLINE COL	0.00
143.60	ACCOUNTS RECEIVABLE - F.E.M.A.	0.00
143.70	ACCT REC-OTHER-EAST KY POWER	0.00
143.71	ACCOUNTS RECEIVABLE - A.T.& T.	0.00
143.80	A/R ADV EXP-DIRECTORS AND ATTY.	0.00
143.81	DIRECTOR AND ATTY-GUEST REIMBRMT	0.00
143.82	ACCOUNTS REC. - ASSISTING COOPS	0.00
143.90	CLEARING ACCOUNTS - VOID CHECKS	0.00
143.91	ACCOUNTS RECEIVABLE - KATAYAMA	0.00
143.92	ACCOUNTS RECEIVABLE - DIAGEO	0.00
144.10	ACCUM PROV UNCOLLECT RES/SM COM	86,492.82-
144.11	ACCUM PROV FOR UNCOLL LG POWER	342,541.38-
144.20	ACCUM PROV FOR UNCOLL CONS.ACCTS	0.00
154.00	MATERIAL AND SUPPLIES - ELECTRIC	672,021.89
154.40	MATERIAL SOLD CLEARING ACCOUNT	2,535.55-
154.90	TRANSPORTATION INVENTORY	0.00
155.10	MERCHANDISE RESALE MARKETING PGM	0.00
155.20	MERCHANDISE RESALE TOY BUCKET TR	0.00
155.30	MERCHANDISE RESALE MISCELLANEOUS	0.00
163.00	STORES EXPENSE CLEARING ACCOUNT	0.00
163.10	MINOR MATERIAL - STORES EXP. CL.	0.00
165.10	PREPAID INSURANCE	117,874.65

Exhibit 2-54(2)
Page 2 of 7
Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
165.20	OTHER PREPAYMENTS	19,095.96
165.30	PREPAID SALES AND USE TAX	46,632.27
165.40	PREPAID INS - LIFE,DIS AND 24 HR	0.00
165.50	PREPAID M I N T PROGRAM	0.00
165.80	PREPAID TRU CHECK MTR RDG SERVIC	0.00
165.90	PREPAID EKP MEDICAL INSURANCE	0.00
171.00	INTEREST AND DIVIDEND RECEIVABLE	7,277.85
181.00	UNAMORTIZED DEBT EXPENSE	0.00
183.00	PRELIM SRVY AND INVESTIGATN CHGS	0.00
183.60	PRE-LOAN EXPENSE	0.00
184.10	TRANSPORTATION CLEARING ACCOUNT	0.04
184.30	HEAVY WORK EQUIP CLEARING ACCT	0.00
186.00	MISCELLANEOUS DEFERRED DEBITS	0.00
186.10	SYSTEM MAPPING PROJECT	0.00
186.11	DEFERRED DEBIT-XL RUN TM LIC3100	0.00
186.13	DEFERRED DEBIT INVENTORY ADJMT	0.00
186.20	DEFERRED DEBIT LN RNG PLN ENGR	0.00
186.30	MANAGEMENT AUDIT PROJECT	0.00
186.40	DEFERRED DEBIT/ PROJECTS	0.00
186.50	DEFERRED DEBIT - METERS RETIRED	0.00
186.60	SERVICE UPGRADE - GENERAL PLANT	0.00
186.70	DEFERRED DEBIT - INSURANCE SURPL	0.00
186.80	R & S PENSION PLAN PREPAYMENT	0.00
201.10	PATRONAGE CAPITAL CR ASSIGNED	36,520,673.81-
201.11	G & T PATRONAGE ASSIGNED	0.00
201.20	PATRONAGE CAPITAL CR ASSIGNABLE	0.00
208.00	DONATED CAPITAL	436,774.10-
208.10	GAINS - ESTATE REFUNDS	659,149.73-
208.20	GAINS - SEDC	1,189,201.60-
215.31	Other Comprehensive Income	198,702.00
217.00	REACQUIRED CAPITAL STOCK	161,431.20-
219.10	OPERATING MARGINS	786,030.64-
219.11	OPERATING DEFICIT	0.00
219.20	NON-OPERATING MARGINS	36,110.66-
219.21	NON-OPERATING DEFICIT	519,638.55-
219.40	OTHER MARGINS AND EQUITIES PRIOR	0.00
224.12	OTHER LT DEBTS - CFC CONST LOAN	19,673,357.40-
224.13	CFC - NOTES EXECUTED - DEBIT	0.00
224.30	LT DEBT - RUS OBLIGATION	2,170,897.18-
224.31	LT DEBT - RUS ECOMONIC DEVELOPMT	0.00
224.32	LONG TERM DEBT FFB OBLIGATION	41,622,683.08-
224.40	RUS NOTES EXECUTED-CONST-DEBT	0.00
224.41	FFB NOTES EXECUTED	9,400,000.00
224.50	OTHER LONG TERM DEBT - NRECA	0.00
224.60	ADVANCE PAYMENTS - UNAPPLIED RUS	0.00
224.70	OTHER LT DEBT - CFC CONST LOAN	0.00
226.00	INTEREST ACCRUED-DEFERRED-REA	0.00
227.00	ADVANCED PYMTS APPLIED LT DEBT	0.00
228.30	ACCUM PROV PENSION / BEN SEC 125	1,131.37-

Exhibit 2-54(2)
Page 3 of 7
Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
228.31	ACC PROV PENSION / BEN-FASB 106	1,995,518.21-
228.32	ACCUM PROV BENEFIT C/A AND AEGON	0.92-
228.33	ACC PROV BENEFITS DEFERRED COMP.	0.00
228.34	ACCUM PROV BENEFITS - DENTALCARE	167.06-
228.35	ACCUM. PROV. BENEFITS - GROUP ME	0.00
228.36	ACCUM PROV BENEFITS - CANCER INS	661.46-
231.00	NOTES PAYABLE-CFC LINE OF CREDIT	1,346,471.57-
231.10	NOTES PAYABLE CFC SHELBY EN SERV	0.00
232.10	ACCOUNTS PAYABLE	1,164,603.09-
232.11	WINTERCARE ENERGY FUND	0.00
232.12	ACCOUNTS PAYABLE - POWER BILL	3,329,216.00-
232.14	ACCOUNTS PAYABLE DAVIS H.ELLIOT	0.00
232.15	ACCOUNTS PAYABLE DOBSON POWER LN	0.00
232.16	ACCOUNTS PAYABLE M&M ELECTRICAL	0.00
232.17	ACCOUNTS PAYABLE - STS	0.00
232.18	ACCOUNTS PAYABLE - PAYROLL	0.00
232.20	OVERPAYMENT OF BILLS	0.00
232.25	PLAN 457F - DEFERRED COMP	0.00
232.30	ACCOUNTS PAYABLE BEDFORD LN & DP	0.00
232.40	ACCOUNTS PAYABLE - UNION DUES	0.00
232.50	ACCOUNTS PAYABLE - ONLINE COLL	56.67-
232.60	ACCOUNTS PAYABLE - BLDG ADDITION	94,890.64
232.70	ACCOUNTS PAYABLE FISHEL	0.00
232.80	A/P CUB ECONOMIC DEVELOPMENT FND	0.00
232.90	A/P Health Reimbursement Account	0.00
232.98	AP PURCHASE ORDER ACCRUAL	5,768.51-
232.99	AP PLANT PO ACCRUAL	0.00
233.00	NOTES PAYABLE EAST KENTUCKY PWR	0.00
235.00	CONSUMER DEPOSITS	1,529,886.00-
236.10	ACCRUED PROPERTY TAXES	29,366.22-
236.20	ACCRUED FEDERAL UNEMPLOYMENT	0.01
236.30	ACCRUED FICA TAX	1,671.03-
236.40	ACCRUED STATE UNEMPLOYMENT TAX	16.66-
236.50	ACCRUED KENTUCKY SALES TAX	95,326.14-
236.60	DISTRICT TAX TOTAL	0.00
236.61	SHELBY COUNTY SCHOOL TAX	70,795.91-
236.62	HENRY COUNTY SCHOOL TAX	24,889.17-
236.63	TRIMBLE COUNTY SCHOOL TAX	18,556.93-
236.64	CARROLL COUNTY SCHOOL TAX	3,981.04-
236.65	EMINENCE SCHOOL TAX	0.00
236.66	SPENCER COUNTY SCHOOL TAX	354.14-
236.67	ANDERSON COUNTY SCHOOL TAX	59.90-
236.68	FRANKLIN COUNTY SCHOOL TAX	42.27-
236.69	FRANCHISE TX - SIMPSONVILLE	0.00
236.71	FRANCHISE TX-S'VILLE-RES AND COM	0.00
236.72	FRANCHISE TX-S'VILLE-LARGE POWER	0.00
236.73	FRANCHISE TAX - CAMPBELLSBURG	0.00
236.80	DISCRETIONARY ANNUAL BONUS	0.00
236.90	ACCRUED FOR UNION ALLOWANCE	6,250.00

Exhibit 2-54(2)
Page 4 of 7
Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
237.10	INTEREST ACCRUED-RUS OBLIGATION	0.00
237.11	INTEREST ACCRUED FFB OBLIGATION	0.00
237.30	OTHER INTEREST ACCRUED	0.00
237.40	INTEREST ACCRUED CFC OBLIGATION	21,250.00-
237.50	INTEREST ACCRUED CONS. DEPOSITS	5,309.97-
238.10	PATRONAGE CAPITAL - PAYABLE	0.00
241.00	ACC. FEDERAL INCOME TAX EMPLOYEE	0.00
241.10	ACC STATE INCOME TAX EMPLOYEE	0.00
241.20	ACCRUED EMPLOYEE OCCUPATIONAL TX	4,801.63-
242.00	MISC CURRENT / ACCRUED LIABILITS	496.06
242.01	PAYROLL CLEARING ACCOUNT	24.00-
242.10	ACCRUED VACATION	115,472.64-
242.20	AWARDED SICK LEAVE	0.00
252.10	CONS ADV PYMT 150' THRU 300'	0.00
252.20	CONS ADV PYMT 301' THRU 1000'	64,936.33-
252.30	CONS ADV PYMT ALL OVER 1000'	306,146.36-
252.40	DEFERRED CREDIT DEPR ADJUSTMENT	0.00
253.00	DEFERRED CREDIT INVENTORY ADJMT	0.00
253.10	OTHER DEFERRED CREDITS	0.00
364.00	POLES, TOWERS AND FIXTURES	25,010,559.39
365.00	OVERHEAD CONDUCTORS AND DEVICES	24,489,876.43
365.10	O C R'S AT SUBSTATION	0.00
366.00	UNDERGROUND CONDUIT	307,821.20
367.00	UNDERGROUND CONDUCTORS / DEVICES	6,723,270.12
368.00	LINE TRANSFORMERS	10,598,074.05
369.00	SERVICES	11,230,107.33
370.00	METERS	4,279,878.82
370.10	MIN-MAX-AMP METERS @ SUBSTATION	0.00
371.00	INSTALLATION ON CONS PREMISES	2,543,365.84
373.00	STREET LIGHTS AND SIGNAL SYSTEM	67,096.05
389.00	LAND AND LAND RIGHTS (NEW OFFICE)	20,010.19
389.10	LAND AND LAND RIGHTS	2,075.00
390.00	STRUCTURES AND IMPROVEMENTS	1,456,270.56
390.10	STRUCTURE AND IMPROVEMENTS-LEASE	9,820.04
391.00	OFFICE FURNITURE AND FIXTURES	532,080.97
392.00	TRANSPORTATION EQUIPMENT	1,800,963.92
393.00	STORES EQUIPMENT	5,020.97
394.00	TOOLS, SHOP AND GARAGE EQUIPMENT	25,180.67
395.00	LABORATORY EQUIPMENT	133,768.68
396.00	POWER OPERATED EQUIPMENT	143,325.72
396.10	UNDERGROUND EQUIPMENT	0.00
397.00	COMMUNICATIONS EQUIPMENT	261,594.31
398.00	MISCELLANEOUS EQUIPMENT	48,485.13
403.60	DEPR. EXPENSE-DISTRIBUTION PLANT	2,653,400.02
403.70	DEPR. EXPENSE - GENERAL PLANT	75,985.83
407.00	AMORTIZATION OF PROPERTY LOSSES	0.00
408.40	TAXES - STATE UNEMPLOYMENT	0.00
408.50	TAXES - STATE ASSESSMENT	52,281.44
408.60	TAXES - HEALTH CARE / PCOR	0.00

Exhibit 2-54(2)
 Page 5 of 7
 Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
415.00	REVENUE FROM MERCHANDISING	0.00
416.00	COST AND EXP. FROM MERCHANDISING	0.00
417.00	MANAGEMENT/CONSULTING SERVICES	0.00
418.10	EQUITY EARNINGS-SUBSIDIARY - SES	115,069.45-
418.20	EQUITY EARNINGS-SUBSID ENVISION	0.00
419.00	INVESTMENT AND DIVIDEND INCOME	38,060.33-
421.00	NON-OPERATING MARGIN - OTHER	567.41-
421.10	GAIN ON DISPOSITION OF PROPERTY	17,895.99-
421.20	LOSS ON DISPOSITION OF PROPERTY	72,560.62
423.00	G AND T CAPITAL CREDITS	2,132,164.07-
424.00	OTHER CAPITAL CR / PAT DIVIDENDS	62,660.12-
426.10	DONATIONS	5,792.18
426.40	CIVIC, POLITICAL / RELATED ACTVTS	1,550.02
427.10	INTEREST ON REA CONSTRUCTION LN	326,004.37
427.20	INTEREST ON CFC CONSTRUCTION LN	498,039.96
427.30	INTEREST ON FFB CONSTRUCTION LN	684,284.79
430.00	INT ON DEBT TO ASSOC ORGANIZATNS	0.00
431.10	INTEREST EXP.-CONSUMER DEPOSITS	5,549.93
431.30	SHORT TERM INTEREST - CFC	5,636.39
440.10	RESIDENTIAL SALES-RESIDENTIAL	24,550,970.04-
440.11	RESIDENTIAL SALES-07 CORRECTION	0.00
440.20	RESIDENTIAL SALES - SEASONAL	58,117.77-
442.10	COMMERCIAL / INDUSTRIAL SALES-SM	8,007,459.68-
442.11	COMMERCIAL-IND-SM-07 CORRECTION	0.00
442.20	COMMERCIAL / INDUSTRIAL SALES-LG	11,342,764.17-
442.21	COMMERCIAL-IND-LG-07 CORRECTION	0.00
444.00	PUBLIC STREET / HIGHWAY LIGHTING	49,220.08-
444.10	PUBLIC ST-HWY LIGHT-07 CORRECTIN	0.00
450.00	FORFEITED DISCOUNTS	356,308.11-
454.00	RENT FROM ELECTRIC PROPERTY	305,320.97-
456.00	OTHER ELECTRIC REVENUE	3,275.54
555.00	PURCHASE POWER	33,721,739.00
580.00	OPERATION, SUPERVISION AND ENGR.	103,949.98
583.00	OVERHEAD LINE EXPENSE	602,481.78
584.00	UNDERGROUND LINE EXPENSE	22,460.54
585.00	STREET LIGHTING / SIGNAL EXPENSE	933.98
586.00	METER EXPENSE	207,429.45
586.10	METER TESTING	30,546.93
586.20	METERS CHANGED FOR TESTING	554.39
586.30	METER RECORD KEEPING (D.GRAHAM)	12,052.90
587.00	CONSUMER INSTALLATION EXPENSE	184,266.38
588.00	MISCELLANEOUS DISTRIBUTION EXP.	539,952.05
590.00	MAINTENANCE-SUPERVISION / ENGR.	28,934.48
593.00	MAINTENANCE OF OVERHEAD LINES	579,154.56
593.01	MAINTENANCE - STANDBY TIME	60,537.21
593.10	PATROLLING - PLANNED	7,263.20
593.20	O.C.R. MAINTENANCE - PLANNED	193,145.54
593.30	RIGHT OF WAY - PLANNED	2,225,186.30
593.35	RIGHT OF WAY - SPRAYING	106,749.50

Exhibit 2-54(2)
 Page 6 of 7
 Witness: James Adkins

ACCOUNT	DESCRIPTION	AMOUNT
593.40	AIR PATROL	25,840.00
593.50	TREATMENT OF POLES	0.00
593.60	FUSE MAINTENANCE - SHELBY LABOR	0.00
594.00	MAINTENANCE OF UNDERGROUND LINES	187,815.31
595.00	MAINTENANCE OF LINE TRANSFORMERS	14,794.83
597.00	MAINTENANCE OF METERS	12,157.48
598.00	MAINTENANCE OF MISC. DIST. PLANT	89,748.63
599.99	CLEARING ACCOUNT FOR BALANCING	0.00
777.77	CA/GA INTEGRATION DEFAULT	0.00
901.00	SUPERVISION	154,229.49
902.00	METER READING EXPENSE	177,102.97
903.00	CONSUMER RECORDS / COLLECT. EXP.	315,172.03
904.00	UNCOLLECTIBLE ACCOUNTS	60,000.00
907.00	SUPERVISION	27,637.38
908.00	CUSTOMER ASSISTANCE EXPENSE	79,247.67
909.00	INFORMATIONAL / INSTRUCTIONAL EP	54,192.02
910.00	MISCELLANEOUS CUSTOMER SERV. EXP.	283,877.91
912.00	DEMONSTRATING / SELLING EXPENSE	4,104.47
920.00	ADMINISTRATIVE / GENERAL SALARY	294,711.96
921.00	OFFICE SUPPLIES AND EXPENSE	35,814.61
921.10	OFFICE SUPPLIES / EXP.-CLEARING	0.00
923.00	OUTSIDE SERVICES EMPLOYED	108,084.51
925.00	INJURIES AND DAMAGES	0.00
926.10	EMPLOYEE PENSIONS / BENEFIT CLR	0.00
928.00	REGULATORY COMMISSION EXPENSES	1,083.74
930.20	MISCELLANEOUS GENERAL EXPENSE	212,241.72
930.21	MISC.GENERAL EXP-DUES/MAGAZINE	142,573.09
930.22	PRESIDENT/CEO MISC GENERAL EXP	0.00
930.30	DIRECTORS FEES AND EXPENSES	109,135.25
931.00	RENTS	6,300.00
935.10	MAINT.OF STRUCTURES / IMPROVMTS	15,543.82
935.20	MAIN.OF OFFICE FURNITURE / FIXTS	19,827.00
935.30	MAIN.OF COMMUNICATIONS EQUIPMENT	11,068.26
935.40	MAIN. OF GENERAL PROPERTY	32,486.70
999.00	PAYROLL EST. HRS. CLEARING ACCT.	0.00

ACCOUNTS 000.00 TO 399.99 1,550,088.08
 ACCOUNTS 400.00 TO 999.99 1,550,088.08-

Exhibit 2-54(2)
 Page 7 of 7
 Witness: James Adkins

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

55. a. Refer to the response to Staff's First Request, Item 48. Describe in detail Shelby Energy's future plans regarding demand-side management ("DSM"), energy efficiency, and conservation.

b. Provide the account and amount of DSM expenditures that were charged during the test year, and how these charges were considered in the Application.

c. Provide the account amount of DSM incentives or reimbursements received from EKPC during the test year, and how these charges were considered in the Application.

Response 55a.

Shelby Energy will continue to participate in and support DSM programs to encourage energy efficiency and conservation by its members.

Response 55b.

The total amount for DSM expenditures charged during the test year were \$15,179.27. The charges were considered in the Application as actual expenses.

While gathering the information for this response, Shelby Energy discovered that the response to Question 48 of the First Data Request of Commission Staff, regarding cost incurred for demand-side management, conservation and energy efficiency programs was incorrect. The following is the correct costs for the applicable years:

2016	\$13,515
2015	\$16,004
2014	\$ 9,439
2013	\$11,761
2012	\$13,131

Response 55c.

The total amount of incentives or reimbursements received from EKPC during the test year period was \$73,064 which was paid to Shelby Energy members.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

56. Refer to the Shelby Energy Annual Reports for 2013 to 2015.

a. Refer to the income statements. By year, explain the change in the annual residential-rural kWh sales.

b. Refer to the income statements. Provide by year the average monthly residential-rural usage. Include the information for 2016, if available.

c. Refer to the income statement. Confirm whether the kWh sales for Commercial & Industrial Sales- Large in 2014 is correct. If not, provide the kWh sales amount.

d. Refer to the income statements. Explain why Other Electric Revenues for each year are negative, and explain the types of transactions that are in the revenues.

e. Refer to the operation and maintenance expenses. Explain why the account balance for Account 595- Line Transformers is negative for each year.

f. Refer to the operation and maintenance expenses. Explain why the account balance for Account 912 - Demonstrating & Selling Expenses is negative for each year.

Response 56a.

Each year the main cause of the fluctuation in residential kWh is weather related. Shelby Energy is a winter peaking distribution cooperative and has experienced mild winter weather causing reduced revenue.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Response 56b.

2013 – 1,300 kWh

2014 – 1,336 kWh

2015 – 1,259 kWh

2016 – 1,270 kWh

Response 56c.

The income statement is correct for the 2014 kWh sales amount for the Commercial and Industrial Sales – Large.

Response 56d.

This account, 456.00, is used for paying the Kentucky State Sales and Use Tax each month and the debit for this payment, in most cases, is more than the credits posted to the account for other revenue items.

The types of credit transactions in this account for revenue consist of the following: Prepay Service fees, un-honored check fees, reconnect service fees, trip fees, meter test fees, annual unreconciled accounts payable checks and capacitor lease fees.

Response 56e.

Account 595 - Line Transformers is negative due to the estimated installation costs on transformers purchased. The RUS Uniform System of Accounts requires Shelby Energy to record a debit to Account 368, Transformers and credit Account 595,

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

Line transformers. As services are built, repaired, etc. and a transformer is used on the system, the account is debited for labor, benefits, and other costs.

Response 56f.

Refer to Response 23 of the Second Data Request of Commission Staff. Timing as to when the reimbursements are received from EKPC and when they are paid to the members creates credits in this account.

Shelby Energy Cooperative
Case No. 2016-00434
Second Data Request of Commission Staff

57. Explain whether there is a revised revenue requirement amount for the Application test year. If so, provide electronically, with cells unprotected and formulas intact, all relevant work papers and exhibits supporting all revised adjustments.

Response 57.

There is a revised revenue requirement of \$99 resulting from rate change referenced in Question 17 of the Second Data Request of Commission Staff.

Refer to **Exhibit 2-57** for a revised Exhibit S. The electronic Excel worksheet version of the revised Exhibit is on the **USB Drive (B)** which is included as part of this response.

Shelby Energy Cooperative
Case No. 2016-00434
Statement of Operations, Adjusted

Exhibit 2-57
Revised Exhibit S
page 1 of 4
Witness: James Adkins

	<u>Actual</u> <u>Test Year</u>	<u>Normalized</u> <u>Adjustments</u>	<u>Normalized</u> <u>Test Year</u>	<u>Proposed</u> <u>Increase</u>	<u>Proposed</u> <u>Test Year</u>
Operating Revenues:					
Base rates	\$ 39,969,502	\$ -	<u>\$39,969,404</u>	\$ 1,997,640	\$ 41,967,044
Fuel and surcharge	2,763,519	(2,763,519)	-		-
Other electric revenue	<u>634,621</u>	<u>2,909</u>	<u>637,530</u>		<u>637,530</u>
	<u>43,367,642</u>	<u>(2,760,610)</u>	<u>40,606,934</u>	<u>1,997,640</u>	<u>42,604,574</u>
Operating Expenses:					
Cost of power:					
Base rates	30,352,946	(40)	30,352,906		30,352,906
Fuel and surcharge	2,427,842	(2,427,842)	-		-
Distribution - operations	1,639,712	26,676	1,666,388		1,666,388
Distribution - maintenance	3,433,368	(502,835)	2,930,533		2,930,533
Consumer accounts	510,028	(3,178)	506,850		506,850
Customer service	428,204	(4,087)	424,117		424,117
Sales	(11,891)	(138)	(12,029)		(12,029)
Administrative and general	<u>987,129</u>	<u>(99,124)</u>	<u>888,005</u>		<u>888,005</u>
Total operating expenses	<u>39,767,338</u>	<u>(3,010,568)</u>	<u>36,756,770</u>	<u>-</u>	<u>36,756,770</u>
Depreciation	2,617,512	422,492	3,040,004		3,040,004
Taxes - other	53,103	-	53,103		53,103
Interest on long-term debt	1,471,969	70,976	1,542,945		1,542,945
Interest expense - other	15,561	(11,597)	3,964		3,964
Other deductions	<u>6,869</u>	<u>(6,868)</u>	<u>1</u>		<u>1</u>
Total cost of electric service	<u>43,932,352</u>	<u>(2,535,565)</u>	<u>41,396,787</u>	<u>-</u>	<u>41,396,787</u>
Utility operating margins	<u>(564,710)</u>	<u>(225,045)</u>	<u>(789,853)</u>	<u>1,997,640</u>	<u>1,207,787</u>
Nonoperating margins, interest	39,459	-	39,459		39,459
Income from equity investments	35,101	-	35,101		35,101
Nonoperating margins, other	5,493	-	5,493		5,493
G&T capital credits	1,810,069	(1,810,069)	-		-
Other capital credits	<u>62,300</u>	<u>-</u>	<u>62,300</u>		<u>62,300</u>
Net Margins	<u>\$ 1,387,712</u>	<u>\$ (2,035,114)</u>	<u>\$ (647,500)</u>	<u>\$ 1,997,640</u>	<u>\$ 1,350,140</u>
TIER	1.94		0.58		1.88
(Net margins + long-term interest / long-term interest)					
OTIER	0.66		0.53		1.82
(Operating margins + long-term interest + other capital credits / long-term interest)					

Shelby Energy Cooperative
Case No. 2016-00434
Balance Sheet, Adjusted
July 31, 2016

Exhibit 2-57
Revised Exhibit S
Page 2 of 4
Witness: James Adkins

<u>Assets</u>	<u>Actual Test Year</u>	<u>Adjustments to Test Year</u>	<u>Adjusted Test Year</u>
Electric Plant:			
In service	\$ 88,069,787		\$ 88,069,787
Under construction	773,290		773,290
	<u>88,843,077</u>		<u>88,843,077</u>
Less accumulated depreciation	17,810,020	425,821	18,235,841
	<u>71,033,057</u>	<u>(425,821)</u>	<u>70,607,236</u>
Investments	<u>23,313,171</u>		<u>23,313,171</u>
Current Assets:			
Cash and temporary investments	979,041		979,041
Accounts receivable, net	3,838,184		3,838,184
Material and supplies	766,261		766,261
Prepayments and current assets	122,406		122,406
	<u>5,705,892</u>		<u>5,705,892</u>
Net change in assets and defer debits	<u>-</u>	<u>581,152</u>	<u>581,152</u>
Total	<u>\$ 100,052,120</u>	<u>\$ 155,331</u>	<u>\$ 100,207,451</u>
<u>Equity and Liabilities</u>			
Margins:			
Other equities	\$ 2,063,480		\$ 2,063,480
Patronage capital	38,247,532	155,331	38,402,863
	<u>40,311,012</u>	<u>155,331</u>	<u>40,466,343</u>
Long Term Debt	<u>51,057,115</u>		<u>51,057,115</u>
Accumulated postretirement benefits	<u>1,995,976</u>		<u>1,995,976</u>
Current Liabilities:			
Notes payable	205,652		205,652
Accounts payable	3,934,965		3,934,965
Consumer deposits	1,540,868		1,540,868
Accrued expenses	640,094		640,094
	<u>6,321,579</u>		<u>6,321,579</u>
Consumer advances for construction	<u>366,438</u>		<u>366,438</u>
Total	<u>\$ 100,052,120</u>	<u>\$ 155,331</u>	<u>\$ 100,207,451</u>

Shelby Energy Cooperative
Case No. 2016-00434
Summary of Adjustments to Test Year

Exhibit 2-57
Revised Exhibit S
Page 3 of 4
Witness: James Adkins

	Exhibit 1	Exhibit 2	Exhibit 3	Exhibit 4	Exhibit 5	Exhibit 6	Exhibit 7	Exhibit 8	Exhibit 9	Exhibit 10	Exhibit 11	Exhibit 12	Exhibit 13	Exhibit 14	Exhibit 15	Exhibit 16	
	<u>Salaries</u>	<u>Payroll Taxes</u>	<u>Deprec</u>	<u>Property Tax</u>	<u>Interest</u>	<u>R-O-W Contract</u>	<u>Retirement</u>	<u>Donations</u>	<u>Professional Fees</u>	<u>Directors</u>	<u>Misc Expenses</u>	<u>Rate Case</u>	<u>EKPC</u>	<u>Normalize</u> <u>Purchase Power</u>	<u>Revenue</u>	<u>Additional Revenue</u>	<u>Total</u>
Operating Revenues:																	
Base rates																	
Fuel and surcharge															(2,763,519)	2,909	(2,763,519)
Other electric revenue																2,909	2,909
															(2,763,519)	2,909	(2,760,610)
Operating Expenses:																	
Cost of power:																	
Base rates														(40)			(40)
Fuel and surcharge														(2,427,842)			(2,427,842)
Distribution - operations	(4,184)	(433)	778	31,741			(1,226)										26,676
Distribution - maintenance	(6,035)	(625)	1,391			(495,798)	(1,768)										(502,835)
Consumer accounts	(2,532)	(262)	358				(742)										(3,178)
Customer service	(3,138)	(325)	295				(919)										(4,087)
Sales	(99)	(10)					(29)										(138)
Administrative and general	(2,667)	(276)	507	1,168			(781)		(31,332)	(73,181)	(17,562)	25,000					(99,124)
Total operating expenses	(18,655)	(1,932)	3,329	32,909	-	(495,798)	(5,464)	-	(31,332)	(73,181)	(17,562)	25,000	-	(2,427,882)	-	-	(3,010,568)
Depreciation			422,492														422,492
Taxes - other																	-
Interest on long-term debt					70,976												70,976
Interest expense - other					(11,597)												(11,597)
Other deductions								(6,868)									(6,868)
Total cost of electric service	(18,655)	(1,932)	425,821	32,909	59,379	(495,798)	(5,464)	(6,868)	(31,332)	(73,181)	(17,562)	25,000	-	(2,427,882)	-	-	(2,535,565)
Utility operating margin	18,655	1,932	(425,821)	(32,909)	(59,379)	495,798	5,464	6,868	31,332	73,181	17,562	(25,000)	-	2,427,882	(2,763,519)	2,909	(225,045)
Nonoperating margins, interest																	-
Income from equity investments																	-
Nonoperating margins, other																	-
G&T capital credits													(1,810,069)				(1,810,069)
Other capital credits																	-
													(1,810,069)				(1,810,069)
Net Margins	18,655	1,932	(425,821)	(32,909)	(59,379)	495,798	5,464	6,868	31,332	73,181	17,562	(25,000)	(1,810,069)	2,427,882	(2,763,519)	2,909	(2,035,114)

Shelby Energy Cooperative
Case No. 2016-00434
Proposed increase
July 31, 2016

Interest on long term debt	\$ 1,542,945
Normalized margins	<u>(647,500)</u>
Proposed increase in revenues over normalized revenues to attain a TIER of 2.0x	<u>\$ 2,190,445</u>
Increase approved by Board of Directors	<u>\$ 1,997,640</u>