

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE PUBLIC SERVICE COMMISSION**

**In the Matter of:**

|                                            |          |                   |
|--------------------------------------------|----------|-------------------|
| <b>APPLICATION OF KENTUCKY UTILITIES</b>   | <b>)</b> |                   |
| <b>COMPANY FOR AN ADJUSTMENT OF ITS</b>    | <b>)</b> | <b>CASE NO.</b>   |
| <b>ELECTRIC RATES AND FOR CERTIFICATES</b> | <b>)</b> | <b>2016-00370</b> |
| <b>OF PUBLIC CONVENIENCE AND NECESSITY</b> | <b>)</b> |                   |

**RESPONSE OF**  
**KENTUCKY UTILITIES COMPANY**  
**TO**  
**THE ATTORNEY GENERAL’S SUPPLEMENTAL DATA REQUESTS**  
**DATED FEBRUARY 7, 2017**

**FILED: FEBRUARY 20, 2017**

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

  
Daniel K. Arbough

Judy Schott (SEAL)  
Notary Public

My Commission Expires:  
**JUDY SCHOOLER**  
**Notary Public, State at Large, KY**  
**My commission expires July 11, 2018**  
**Notary ID # 512743**

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

  
Lonnie E. Bellar

Jerry Scholtz (SEAL)  
Notary Public

**JUDY SCHOOLER**  
Notary Public, State at Large, KY  
**My commission expires July 11, 2018**  
Notary ID # 512743

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

Kent W. Blake  
Kent W. Blake

Jammyf. Elzy (SEAL)  
Notary Public

November 9, 2018

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

  
Robert M. Conroy

Susan M. Watkins (SEAL)  
Notary Public

**SUSAN M. WATKINS**  
Notary Public, State at Large, KY  
My Commission Expires Mar. 19, 2017  
Notary ID # 485723

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

  
Christopher M. Garrett

Judy Schoder (SEAL)  
Notary Public

**JUDY SCHOOLER**  
Notary Public, State at Large, KY  
~~My commission expires July 11, 2018~~  
Notary ID # 512743

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

ef.

  
\_\_\_\_\_  
**John P. Malloy**

Judy Schork (SEAL)  
Notary Public

**JUDY SCHOOLER**  
**Notary Public, State at Large, KY**  
~~My commission expires July 11, 2018~~  
**Notary ID # 512743**

# VERIFICATION

STATE OF TEXAS

)

) SS:

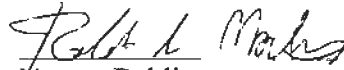
COUNTY OF TRAVIS

)

The undersigned, **Adrien M. McKenzie**, being duly sworn, deposes and says he is President of FINCAP, Inc., that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

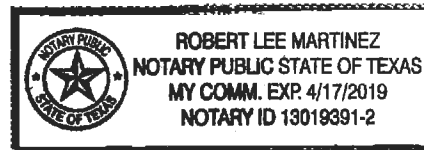
  
**Adrien M. McKenzie**

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 13<sup>th</sup> day of January 2017.

 (SEAL)  
Notary Public

My Commission Expires:

April 17, 2019



COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

  
Gregory J. Meiman

Subscribed and sworn to before me, a Notary Public in and before said County  
and State, this 25th day of January 2017.

Judy Scholte (SEAL)  
Notary Public

**JUDY SCHOOLER**  
**Notary Public, State at Large, KY**  
**My commission expires July 11, 2018**  
**Notary ID # 512743**

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

Valerie L Scott  
Valerie L. Scott

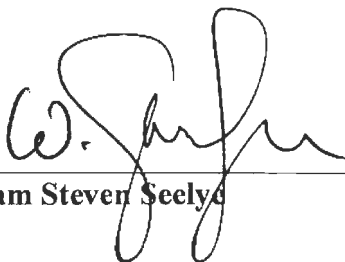
Judy Schor (SEAL)  
Notary Public

**JUDY SCHOOLER**  
Notary Public, State at Large, KY  
~~My commission expires July 11, 2018~~  
Notary ID # 512743

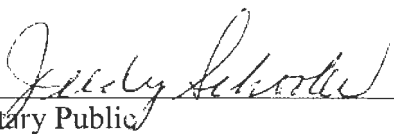
# VERIFICATION

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

The undersigned, **William Steven Seelye**, being duly sworn, deposes and states that he is a Principal of The Prime Group, LLC, that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

  
\_\_\_\_\_  
William Steven Seelye

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20th day of January 2017.

 (SEAL)  
\_\_\_\_\_  
Notary Public

My Commission Expires:

**JUDY SCHOOLER**  
**Notary Public, State at Large, KY**  
**My commission expires July 11, 2018**  
**Notary ID # 512743**

COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

  
David S. Sinclair

Judy Scholtz (SEAL)  
Notary Public

**JUDY SCHOOLER**  
**Notary Public, State at Large, KY**  
**My commission expires July 11, 2018**  
**Notary ID # 512743**

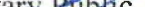
## VERIFICATION

**COMMONWEALTH OF PENNSYLVANIA**       )  
                                                           ) **SS:**  
**COUNTY OF CUMBERLAND**               )

The undersigned, **John J. Spanos**, being duly sworn, deposes and says he is Senior Vice President, for Gannett Fleming Valuation and Rate Consultants, LLC, that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.

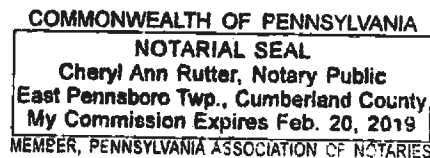
  
John J. Spanos

Subscribed and sworn to before me, a Notary Public in and before said County and Commonwealth, this 19<sup>th</sup> day of January 2017.

 (SEAL)  
Notary Public

My Commission Expires:

February 20, 2019



COMMONWEALTH OF KENTUCKY )  
 ) SS:  
COUNTY OF JEFFERSON )

  
John K. Wolfe

Judy Schoder (SEAL)  
Notary Public

**JUDY SCHOOLER**  
Notary Public, State at Large, KY  
~~My commission expires July 11, 2018~~  
Notary ID # 512743

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 1**

**Responding Witness: Christopher M. Garrett**

- Q-1. Refer to the Company's response to AG-1-36.
- a. Has the Company included any asset in rate base relating to the Accumulated Deferred Income Tax balance for CCR Pond Closures? If so, identify, quantify and explain the related asset.
  - b. Referring to the amount of ADIT for "FAC Under Recovery KY-Current" identify the amount of FAC under (or over) recovery (1) for the 13 month average ending February 28, 2017 ("base period") and (2) as projected for the twelve-month forecasted test period beginning July 1, 2017, and ending June 30, 2018 ("forecasted Test Year").
  - c. Show in detail how the Federal NOL amount was derived.
  - d. Identify, quantify and provide all projections as to when the Company expects to utilize the Federal NOL to reduce income taxes.
  - e. How much of the Federal NOL relates to accelerated tax depreciation including bonus tax depreciation? Identify, quantify and explain the amounts.
  - f. How much of the Federal NOL relates to tax deductions other than accelerated tax depreciation including bonus tax depreciation? Identify, quantify and explain the amounts.
  - g. Referring to the ADIT balance for Pensions - Regulatory Asset, has the Company included any asset in rate base relating to that ADIT component? If not, explain fully why not. If so, identify, quantify and explain the related asset.
- A-1.
- a. No, accumulated deferred income taxes associated with CCR Pond Closures are eliminated through the ECR rate base adjustment.
  - b. See attached.

- c. See attached.
- d. See attached.
- e. The Federal NOL is based on the level of pre-tax income and various tax deductions. Accelerated tax depreciation, including bonus depreciation is the company's largest tax deduction that contributes to the Federal NOL, but the Federal NOL is not tracked or measured by individual tax deductions.
- f. See the response to part e.
- g. The Company has not included in rate base the Pension – Regulatory Asset. The Company has included an ADIT liability in rate base that relates to the Pension Regulatory Asset. The 13 month average liability is \$38,923,525. An offsetting ADIT asset is also included in rate base associated with the corresponding increase in the pension liability recognized as part of the Pension - Regulatory Asset journal entry.

KENTUCKY UTILITIES COMPANY  
Accumulated Deferred Taxes on Income  
FAC Under Recovery KY-Current  
As of February 28, 2017  
Reg 1.167(l)-(h)(6)ii  
(Dollars)

| <u>Line No.</u> |                                                                           |                                  |                  |                 |  | <u>Amount</u>  |
|-----------------|---------------------------------------------------------------------------|----------------------------------|------------------|-----------------|--|----------------|
| 1               | Accumulated Deferred Taxes at February 29, 2016                           |                                  |                  |                 |  | \$ 3,512,055   |
| 2               | Projected Accumulated Deferred Taxes at February 28, 2017                 |                                  |                  |                 |  | 1,865,192      |
| 3               | Change in Accumulated Deferred Taxes for the base year                    |                                  |                  |                 |  | \$ (1,646,863) |
|                 |                                                                           | <u>Monthly Increase/Decrease</u> | <u>Proration</u> | <u>Activity</u> |  |                |
| 4               | Balance February 29, 2016                                                 |                                  |                  |                 |  | \$ 3,512,055   |
| 5               | March 1-31, 2016                                                          | \$ (137,239)                     | 335/365          | \$ (125,959)    |  | 3,386,096      |
| 6               | April 1-30, 2016                                                          | (137,239)                        | 305/365          | (114,679)       |  | 3,271,417      |
| 7               | May 1-31, 2016                                                            | (137,239)                        | 274/365          | (103,023)       |  | 3,168,394      |
| 8               | June 1-30, 2016                                                           | (137,239)                        | 244/365          | (91,743)        |  | 3,076,651      |
| 9               | July 1-31, 2016                                                           | (137,239)                        | 213/365          | (80,087)        |  | 2,996,564      |
| 10              | August 1-31, 2016                                                         | (137,239)                        | 182/365          | (68,431)        |  | 2,928,133      |
| 11              | September 1-30, 2016                                                      | (137,239)                        | 152/365          | (57,151)        |  | 2,870,982      |
| 12              | October 1-31, 2016                                                        | (137,239)                        | 121/365          | (45,496)        |  | 2,825,486      |
| 13              | November 1-30, 2016                                                       | (137,239)                        | 91/365           | (34,216)        |  | 2,791,270      |
| 14              | December 1-31, 2016                                                       | (137,239)                        | 60/365           | (22,560)        |  | 2,768,710      |
| 15              | January 1-31, 2017                                                        | (137,239)                        | 29/365           | (10,904)        |  | 2,757,806      |
| 16              | February 1-28, 2017                                                       | (137,239)                        | 1/365            | (376)           |  | 2,757,430      |
| 17              | 13 Month Average with pro rata ending Deferred Taxes at February 28, 2017 |                                  |                  |                 |  | \$ 3,008,538   |

KENTUCKY UTILITIES COMPANY  
Accumulated Deferred Taxes on Income  
FAC Under Recovery KY-Current  
As of June 30, 2018  
Reg 1.167(l)-(h)(6)ii  
(Dollars)

| <u>Line No.</u> |                                                                       |                                  |                  |                 |  | <u>Amount</u> |
|-----------------|-----------------------------------------------------------------------|----------------------------------|------------------|-----------------|--|---------------|
| 1               | Projected Accumulated Deferred Taxes at June 30, 2017                 |                                  |                  |                 |  | \$ 1,933,286  |
| 2               | Projected Accumulated Deferred Taxes at June 30, 2018                 |                                  |                  |                 |  | 2,148,428     |
| 3               | Change in Accumulated Deferred Taxes for the forward year             |                                  |                  |                 |  | \$ 215,142    |
|                 |                                                                       | <u>Monthly Increase/Decrease</u> | <u>Proration</u> | <u>Activity</u> |  |               |
| 4               | Balance June 30, 2017                                                 |                                  |                  |                 |  | \$ 1,933,286  |
| 5               | July 1-31, 2017                                                       | \$ 11,349                        | 335/365          | \$ 10,416       |  | 1,943,702     |
| 6               | August 1-31, 2017                                                     | 11,349                           | 304/365          | 9,452           |  | 1,953,154     |
| 7               | September 1-30, 2017                                                  | 11,349                           | 274/365          | 8,520           |  | 1,961,674     |
| 8               | October 1-31, 2017                                                    | 11,349                           | 243/365          | 7,556           |  | 1,969,230     |
| 9               | November 1-30, 2017                                                   | 11,349                           | 213/365          | 6,623           |  | 1,975,853     |
| 10              | December 1-31, 2017                                                   | 11,349                           | 182/365          | 5,659           |  | 1,981,512     |
| 11              | January 1-31, 2018                                                    | 24,508                           | 151/365          | 10,139          |  | 1,991,651     |
| 12              | February 1-28, 2018                                                   | 24,508                           | 123/365          | 8,259           |  | 1,999,910     |
| 13              | March 1-31, 2018                                                      | 24,508                           | 92/365           | 6,177           |  | 2,006,087     |
| 14              | April 1-30, 2018                                                      | 24,508                           | 62/365           | 4,163           |  | 2,010,250     |
| 15              | May 1-31, 2018                                                        | 24,508                           | 31/365           | 2,082           |  | 2,012,332     |
| 16              | June 1-30, 2018                                                       | 24,508                           | 1/365            | 67              |  | 2,012,399     |
| 17              | 13 Month Average with pro rata ending Deferred Taxes at June 30, 2018 |                                  |                  |                 |  | \$ 1,980,849  |

**KENTUCKY UTILITIES COMPANY**  
**Accumulated Deferred Taxes on Income**  
**Federal Net Operating Losses**  
**As of June 30, 2018**  
**Reg 1.167(l)-(h)(6)ii**  
**(Dollars)**

| <b><u>Line No.</u></b> |                                                                       |                                         |                         |                        |            | <b><u>Amount</u></b> |
|------------------------|-----------------------------------------------------------------------|-----------------------------------------|-------------------------|------------------------|------------|----------------------|
| 1                      | Projected Accumulated Deferred Taxes at June 30, 2017                 |                                         |                         |                        |            | \$ 47,115,205        |
| 2                      | Projected Accumulated Deferred Taxes at June 30, 2018                 |                                         |                         |                        |            | 30,251,121           |
| 3                      | Change in Accumulated Deferred Taxes for the forward year             |                                         |                         |                        |            | \$ (16,864,084)      |
|                        |                                                                       | <b><u>Monthly Increase/Decrease</u></b> | <b><u>Proration</u></b> | <b><u>Activity</u></b> |            |                      |
| 4                      | Balance June 30, 2017                                                 |                                         |                         |                        |            | \$ 47,115,205        |
| 5                      | July 1-31, 2017                                                       | \$ (4,395,220)                          | 335/365                 | \$ (4,033,969)         | 43,081,236 |                      |
| 6                      | August 1-31, 2017                                                     | (4,395,220)                             | 304/365                 | (3,660,677)            | 39,420,559 |                      |
| 7                      | September 1-30, 2017                                                  | (4,395,220)                             | 274/365                 | (3,299,426)            | 36,121,133 |                      |
| 8                      | October 1-31, 2017                                                    | (4,395,220)                             | 243/365                 | (2,926,133)            | 33,195,000 |                      |
| 9                      | November 1-30, 2017                                                   | (4,395,220)                             | 213/365                 | (2,564,882)            | 30,630,118 |                      |
| 10                     | December 1-31, 2017                                                   | (4,395,220)                             | 182/365                 | (2,191,589)            | 28,438,529 |                      |
| 11                     | January 1-31, 2018                                                    | 1,584,540                               | 151/365                 | 655,522                | 29,094,051 |                      |
| 12                     | February 1-28, 2018                                                   | 1,584,540                               | 123/365                 | 533,968                | 29,628,019 |                      |
| 13                     | March 1-31, 2018                                                      | 1,584,540                               | 92/365                  | 399,391                | 30,027,410 |                      |
| 14                     | April 1-30, 2018                                                      | 1,584,540                               | 62/365                  | 269,155                | 30,296,565 |                      |
| 15                     | May 1-31, 2018                                                        | 1,584,540                               | 31/365                  | 134,577                | 30,431,142 |                      |
| 16                     | June 1-30, 2018                                                       | 1,584,540                               | 1/365                   | 4,341                  | 30,435,483 |                      |
| 17                     | 13 Month Average with pro rata ending Deferred Taxes at June 30, 2018 |                                         |                         |                        |            | \$ 33,685,727        |

**Kentucky Utilities Company**

Net Operating Losses

\$ thousands

Line No.

| Actual   | Forecasted Taxable amounts per filing |                |                    |                |          |          |
|----------|---------------------------------------|----------------|--------------------|----------------|----------|----------|
| Aug 2016 | Sep - Dec 2016                        | Jan - Jun 2017 | Test Period        | Jul - Dec 2018 | 2019     | 2020     |
|          |                                       |                | Jul 2017- Jun 2018 |                |          |          |
|          | 23,997                                | 75,347         | 48,183             | 7,406          | 57,999   | 210,981  |
|          | (23,997)                              | (75,347)       | (48,183)           | (7,406)        | (57,999) | (21,027) |
|          | -                                     | -              | -                  | -              | -        | 189,954  |
|          | -                                     | -              | -                  | -              | -        | (10,955) |
|          | -                                     | -              | -                  | -              | -        | 178,999  |
|          | 35%                                   | 35%            | 35%                | 35%            | 35%      | 35%      |
| -        | -                                     | -              | -                  | -              | -        | 62,650   |
| 233,958  | 209,962                               | 134,615        | 86,432             | 79,026         | 21,027   | -        |
| 35%      | 35%                                   | 35%            | 35%                | 35%            | 35%      | 35%      |
| 81,885   | 73,487                                | 47,115         | 30,251             | 27,659         | 7,360    | -        |

Note: Taxable income amounts above are absent proposed increases to rates in this rate case filing.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 2**

**Responding Witness: Christopher M. Garrett**

- Q-2. Refer to the response to AG-1-36.
- a. Why does the Company show a debit-balance ADIT amount for a "Recycling Credit Carryforward"? Explain fully.
  - b. What sections of the tax code produced the Recycling Credit?
  - c. On which tax forms is the Recycling Credit claimed?
  - d. For which years and in what amounts was a Recycling credit claimed?
  - e. When does the Company expect to utilize the Recycling Credit Carryforward? Explain fully and provide projections.
- A-2.
- a. The Company was not able to utilize the credit on its state tax return. As a result, the credit will be carryforward and applied to a future tax year. The credit carryforward is an asset (debit balance to ADIT) that will reduce future state taxes.
  - b. KRS 141.390.
  - c. Schedules QR – Qualified Research Facility Tax Credit and TCS – Tax Credit Summary Schedule in Form 720 Kentucky Corporation Income Tax and LLET Return.
  - d. The credit was claimed on the 2012 state tax return.
  - e. The Company filed amended state income tax returns in 2016 for 2012-2014 to utilize the credit. Upon the acceptance of the amended returns, the ADIT balance was reversed in September.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests**

**Dated February 7, 2017**

**Question No. 3**

**Responding Witness: Christopher M. Garrett**

- Q-3. Refer to the response to AG-1-36.
- a. Why does the Company show a debit-balance ADIT amount for a "Research & Experimental Credit Carryforward"? Explain fully.
  - b. What sections of the tax code produced the Research & Experimental Credit?
  - c. On which tax forms is the Research & Experimental Credit claimed?
  - d. For which years and in what amounts was a Research & Experimental credit claimed?
  - e. When does the Company expect to utilize the Research & Experimental Credit Carryforward? Explain fully and provide projections.
- A-3.
- a. The Company was not able to utilize the credit on its federal tax returns due to its Net Operating Losses (NOL). NOLs must be completely used before credits can be utilized. The credit carryforward is an asset (debit balance to ADIT) that will reduce future federal taxes.
  - b. I.R.C. Code Section 41 and 280C.
  - c. Form 6765 – Credit for Increasing Research Activities in Form 1120 U.S. Corporation Income Tax Return.

| d.                                 | Annual<br><u>Amount</u> | Cumulative<br><u>Carryforward</u> |
|------------------------------------|-------------------------|-----------------------------------|
| Actual – 2014                      | \$191,611               | \$191,611                         |
| Actual – 2015                      | \$209,777               | \$401,388                         |
| Projected – 2016                   | \$200,000               | \$601,388                         |
| Projected – 2017                   | \$200,000               | \$801,388                         |
| Projected (1/2 Year) – 2018        | \$100,000               | \$901,388                         |
| 13 Month Average – Forecast Period |                         | \$762,530                         |

- e. The Company expects to use credits in 2021 absent rate case increases. See attachment to response to Question No. 1d, line 7.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 4**

**Responding Witness: Christopher M. Garrett**

- Q-4. Refer to the response to AG-1-36.
- a. Why does the Company show a debit-balance ADIT amount for a "Solar Credit Carryforward"? Explain fully.
  - b. What sections of the tax code produced the Solar Credit?
  - c. On which tax forms is the Solar Credit claimed?
  - d. For which years and in what amounts was a Solar credit claimed?
  - e. When does the Company expect to utilize the Solar Credit Carryforward? Explain fully and provide projections.
- A-4.
- a. The Company was not able to utilize the credit on its federal tax returns due to its Net Operating Losses (NOL). NOL must be completely used before credits can be utilized. The credit carryforward is an asset (debit balance to ADIT) that will reduce future federal taxes.
  - b. I.R.C. Code Section 48C.
  - c. Form 3468 – Investment Credit in Form 1120 U.S. Corporation Income Tax Return.
  - d. 2016 - \$4,000,000.
  - e. The Company expects to use credits in 2021 absent rate case increases. See attachment to response to Question No. 1d, line 7.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 5**

**Responding Witness: Christopher M. Garrett**

- Q-5. Refer to the response to AG-1-36.
- a. Provide the detail for the Tax Repair Expensing amounts, including the amounts of repairs deductions that were claimed in each year, and the income tax rates that were applied to the annual Tax Repair Expensing amounts to produce the ADIT amounts.
- A-5. a. See attached.

**KENTUCKY UTILITIES COMPANY**  
**Accumulated Deferred Taxes on Income**  
**Tax Repair Expensing**  
**As of June 30, 2018**  
**Reg 1.167(l)-(h)(6)ii**  
**(Dollars)**

|                                    | <u>Timing Difference<sup>1</sup></u> | <u>Tax Rate</u> | <u>Deferred Tax</u> | <u>ADIT</u>  |
|------------------------------------|--------------------------------------|-----------------|---------------------|--------------|
| Projected 2016 Deduction           | (30,000,000)                         | 38.9%           | (11,670,000)        | (11,670,000) |
| Projected 2017 Deduction           | (30,000,000)                         | 38.9%           | (11,670,000)        | (23,340,000) |
| Projected 2018 Half-year Deduction | (15,000,000)                         | 38.9%           | (5,835,000)         | (29,175,000) |

**Line****No.****Amount**

|   |                                                           |    |                     |
|---|-----------------------------------------------------------|----|---------------------|
| 1 | Projected Accumulated Deferred Taxes at June 30, 2017     | \$ | (17,505,000)        |
| 2 | Projected Accumulated Deferred Taxes at June 30, 2018     |    | <u>(29,175,000)</u> |
| 3 | Change in Accumulated Deferred Taxes for the forward year | \$ | <u>(11,670,000)</u> |

|    | <u>Monthly Increase/Decrease</u>                                      | <u>Proration</u> | <u>Activity</u> |                           |
|----|-----------------------------------------------------------------------|------------------|-----------------|---------------------------|
| 4  | Balance June 30, 2017                                                 |                  |                 | \$ (17,505,000)           |
| 5  | July 1-31, 2017                                                       | \$ (972,500)     | 335/365         | \$ (892,569) (18,397,569) |
| 6  | August 1-31, 2017                                                     | (972,500)        | 304/365         | (809,973) (19,207,542)    |
| 7  | September 1-30, 2017                                                  | (972,500)        | 274/365         | (730,041) (19,937,583)    |
| 8  | October 1-31, 2017                                                    | (972,500)        | 243/365         | (647,445) (20,585,028)    |
| 9  | November 1-30, 2017                                                   | (972,500)        | 213/365         | (567,514) (21,152,542)    |
| 10 | December 1-31, 2017                                                   | (972,500)        | 182/365         | (484,918) (21,637,460)    |
| 11 | January 1-31, 2018                                                    | (972,500)        | 151/365         | (402,322) (22,039,782)    |
| 12 | February 1-28, 2018                                                   | (972,500)        | 123/365         | (327,719) (22,367,501)    |
| 13 | March 1-31, 2018                                                      | (972,500)        | 92/365          | (245,123) (22,612,624)    |
| 14 | April 1-30, 2018                                                      | (972,500)        | 62/365          | (165,192) (22,777,816)    |
| 15 | May 1-31, 2018                                                        | (972,500)        | 31/365          | (82,596) (22,860,412)     |
| 16 | June 1-30, 2018                                                       | (972,500)        | 1/365           | (2,664) (22,863,076)      |
| 17 | 13 Month Average with pro rata ending Deferred Taxes at June 30, 2018 |                  |                 | <u>\$ (21,072,610)</u>    |

<sup>1</sup> The tax repairs expensing deduction is estimated to be \$30 million per year based on prior year deductions.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 6**

**Responding Witness: Valerie L. Scott**

- Q-6. Refer to the response to AG-1-37.
- a. Explain what is included in the "Other" category.
  - b. How much of the amounts in the "Other" category are expensed? Quantify and include supporting calculations.
  - c. How much of the amounts in the "Other" category are capitalized? Quantify and include supporting calculations.
- A-6.
- a. The charges shown in the "Other" category within the attachment to AG 1-37 include, but are not limited to; stores expense undistributed, other regulatory assets, preliminary survey charges, accounts receivable and engineering overheads. Certain amounts included in "Other" will ultimately be expensed or capitalized, based on the nature of the transaction. However, due to the system process in which these amounts are recorded, the labor portion of the amount is not readily determinable once the process is completed.
  - b - c. See the response to part a.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 7**

**Responding Witness: Valerie L. Scott**

Q-7. Refer to the response to AG-1-37.

- a. Why are the Expensed amounts for 2016 lower than 2015?
- b. Why are the Capitalized amounts for 2016 higher than 2015?
- c. Why are the Other Labor Cost amounts for 2016 lower than 2015?
- d. Why is the Total Labor Cost for 2016 lower than 2015?

A-7.

- a. The decrease in expensed amounts is primarily due to amounts capitalized for work performed on an IT Customer Services project and the Green River Plant closure.
- b. The increase in capitalized amounts is primarily due to amounts capitalized for work performed on an IT Customer Services project.
- c. The decrease in other labor cost is primarily due to establishing a regulatory asset for the Green River Plant closure in 2015 as approved in case 2014-00371.
- d. See explanations for parts a-c.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 8**

**Responding Witness: Kent W. Blake**

Q-8. Refer to the response to AG-1-49.

- a. Does the Company's claimed revenue requirement include Labor Cost for authorized but unfilled positions?
- b. Is the \$.224 million amount for KU's four vacant positions for payroll costs only? If not, show a detailed breakout between payroll and benefit costs, showing the amount for each type of benefit.
- c. Is the \$5.7 million amount for LG&E and KU Services Company's 34 vacant positions for payroll costs only? If not, show a detailed breakout between payroll and benefit costs, showing the amount for each type of benefit.
- d. Show in detail how much LG&E and KU Services Company Labor Cost was included in the claimed revenue requirement for the KU electric utility.
- e. If possible, show the amounts identified in the response to part (d) by account.

A-8.

- a. Yes, the Company's filed forecast test period includes authorized positions for the twelve month period ended June 30, 2018. This differs from the positions filled as of December 31, 2016. The number of positions provided in response to AG 1-49 represent the difference between the number of employees for the respective companies as of December 31, 2016, and those projected as of June 30, 2018.
- b. No. See attached. In preparing this response, the Company noted an average salary across all departments was used rather than using the average salary for departments where the positions filled as of December 31, 2016 were lower than those projected as of June 30, 2018. This raised the amount shown in question 8(a) above, from \$0.224 million to \$0.409 million.
- c. No. See attached. In preparing this response, the Company noted an average salary across all departments was used rather than using the average salary

for departments where the positions filled as of December 31, 2016 were lower than those projected as of June 30, 2018. This lowered the amount shown in question 8(c) above, from \$5.7 million to \$4.7 million.

- d. As noted above, in responding to AG 1-49, the Companies provided the difference in actual headcount as of December 31, 2016, and that projected as of June 30, 2018, the end of the forecast test period. The estimated dollar amounts in Question No. 8(b) and 8(c) above were developed based on average pay rates by department multiplied by this difference in headcount with applicable benefit burden adders applied, as noted above. This represented total dollar costs as noted in the Company's response to AG 1-49. Using the average expense percentage for departments with such headcount differences, the dollar figures charged to expense above would be \$0.260 million for Question No. 8(b) and \$3.7 million for Question No. 8(c). Using the average company allocation for each department in Question No. 8(c), an estimated \$2.0 million would be applied to KU.
- e. It is not possible to show the amounts identified in the response to part (d) by account, due to the manner in which the budget is prepared.

**Kentucky Utilities Company**  
**Case No. 2016-00370**

**Comparing Actual Headcount at December 31, 2016 to Budgeted  
Headcount at June 30, 2018**

| <u><b>Kentucky Utilities</b></u>  |                |
|-----------------------------------|----------------|
| <b>Number of Vacant Positions</b> | <b>4</b>       |
| <b>Salary</b>                     | <b>280,561</b> |
| <b>Team Incentive Award</b>       | <b>25,250</b>  |
| 401(k) Match                      | 11,784         |
| Retirement Income                 | 8,417          |
| Group Life Insurance              | 1,367          |
| LTD                               | 1,473          |
| Post Retirement Benefits          | 7,738          |
| Post Employment Benefits          | -              |
| Workers Compensation              | 2,426          |
| Dental                            | 2,213          |
| Medical                           | 44,388         |
| Other Misc                        | 1,200          |
| Payroll Taxes                     | 22,175         |
| <b>Total Benefits and Taxes</b>   | <b>103,181</b> |
| <b>Total</b>                      | <b>408,992</b> |

## Kentucky Utilities Company

Case No. 2016-00370

**Comparing Actual Headcount at December 31, 2016 to Budgeted  
Headcount at June 30, 2018****LG&E and KU  
Services Company**

|                                   |                                |
|-----------------------------------|--------------------------------|
| <b>Number of Vacant Positions</b> | <b>34</b>                      |
| <b>Salary</b>                     | <b>3,348,176</b>               |
| <b>Team Incentive Award</b>       | <b>301,336</b>                 |
| 401(k) Match                      | 140,623                        |
| Retirement Income                 | 100,445                        |
| Group Life Insurance              | 16,312                         |
| LTD                               | 17,578                         |
| Post Retirement Benefits          | 59,806                         |
| Post Employment Benefits          | 19,075                         |
| Workers Compensation              | 2,579                          |
| Dental                            | 18,809                         |
| Medical                           | 377,298                        |
| Other Misc                        | 10,200                         |
| Payroll Taxes                     | 262,187                        |
| <b>Total Benefits and Taxes</b>   | <b><u>1,024,912</u></b>        |
| <b>Total</b>                      | <b><u><u>4,674,424</u></u></b> |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 9**

**Responding Witness: Daniel K. Arbough / Valerie L. Scott**

- Q-9. Refer to the response to AG-1-50(e), Charges from LG&E and KU Services Company.
- a. Why are the charges from this affiliate projected to increase from \$246.7 million for the base period to \$319.8 million for the forecast period?
  - b. Identify and provide a copy of each advertisement and advertising campaign for which LG&E and KU Services Company is charging cost to the utility.
- A-9.
- a. See the response to KIUC 1-38.
  - b. See attached.



## BYE BYE LATE FEES.

**My Notifications** makes it easy to stay on top of your bill by sending you a little reminder. To sign up:

- Register or sign in to **My Account** ([my.lge-ku.com](http://my.lge-ku.com))
- Click on **My Profile** in the top right corner
- Choose **how** you'd like to be notified:
  - Email
  - Text
  - Voice Call
- Choose **when** you'd like to be notified:
  - When a new bill is available
  - Five days before due date
  - One day past due date



VISIT  
[LGE-KU.COM/NOTIFICATIONS](http://LGE-KU.COM/NOTIFICATIONS)

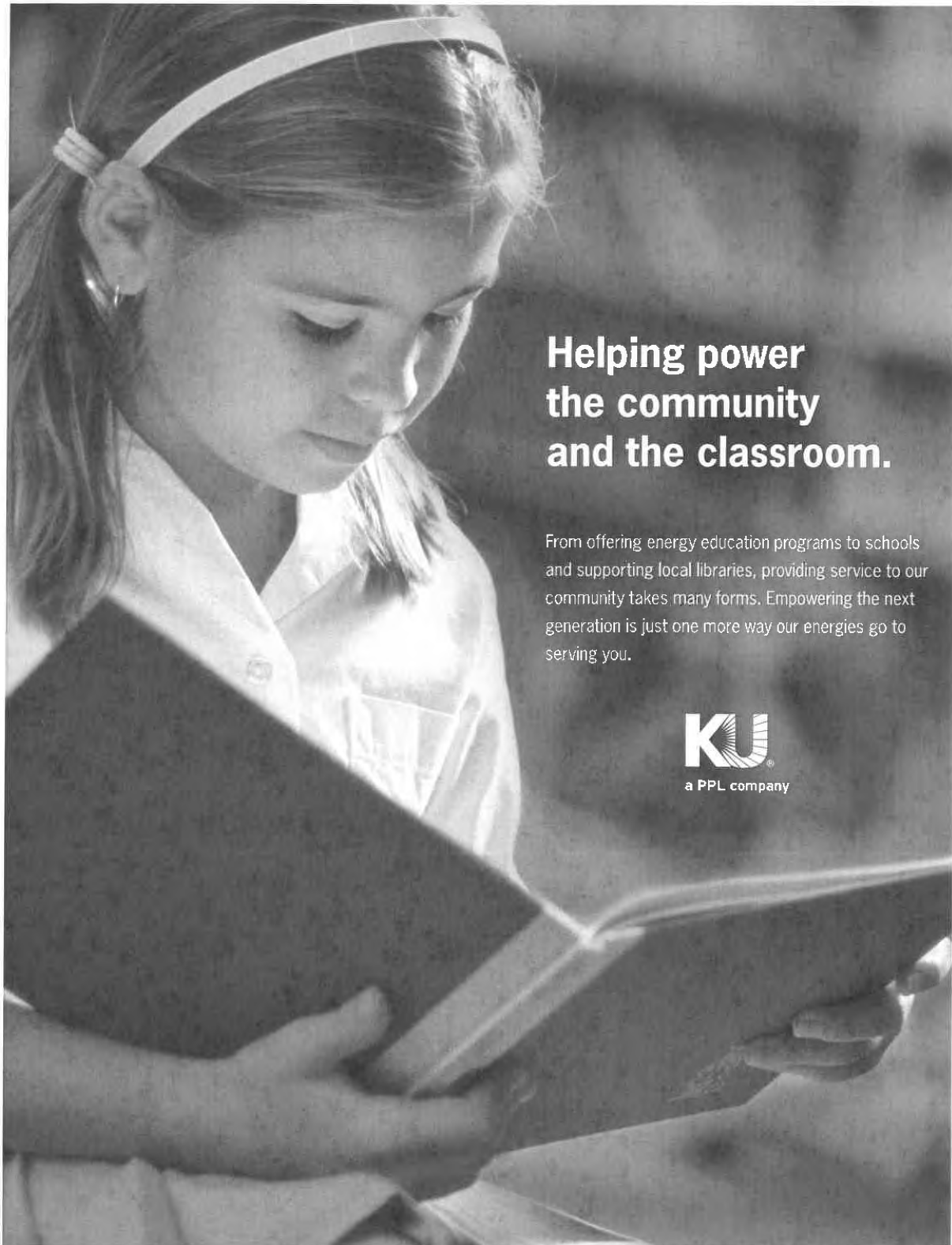


# Setting the stage for a bright future.

For years, the Maysville Players have enriched the lives and inspired the community of Maysville. As a sponsor, we're proud to play a supporting role in keeping the spotlights on. Our energies go to serving you.



a PPL company



**Helping power  
the community  
and the classroom.**

From offering energy education programs to schools and supporting local libraries, providing service to our community takes many forms. Empowering the next generation is just one more way our energies go to serving you.

**KU**  
a PPL company





**LG&E and KU**

Published by Michael Fimiani [?] · Sponsored (demo) · ✱

Like Page

e're looking to hire a friendly customer representative to work in our  
inchester business office. Power your next career by applying at  
<http://goo.gl/R0vZhG>



Like

Comment

Share

# ON BACK

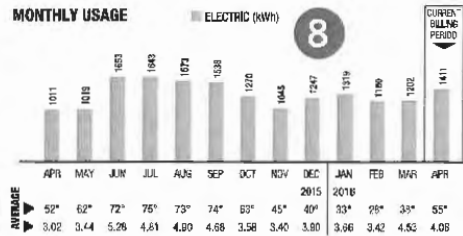
Page 2

Account # 3000-0000-0001

## BILLING PERIOD AT-A-GLANCE

|                                   | THIS YEAR | LAST YEAR |
|-----------------------------------|-----------|-----------|
| Average Temperature               | 55°       | 53°       |
| Number of Days Billed             | 32        | 32        |
| Avg. Electric Charges per Day     | \$4.08    | \$3.02    |
| Avg. Electric Usage per Day (kWh) | 44.09     | 31.59     |

## MONTHLY USAGE



- 7 Average temperature, usage and charges compared to the same time last year.
- 8 **NEW!** We're now including a chart, so you can see how your monthly usage compares to previous months, as well as for the same time period the previous year.
- 9 **NEW!** Daily average gives you even more information, like a daily average of your monthly cost for energy.
- 10 A breakdown of taxes and fees included in your bill.
- 11 Billing Information gives you relevant information about your bill, account and service.

## Taxes &amp; Fees

|                                                    |               |
|----------------------------------------------------|---------------|
| Rate Increase For School Tax (3.00% x \$130.38)    | 3.91          |
| Franchise Fee-Lexington-Fayette (4.00% x \$130.38) | 5.22          |
| <b>Total Taxes and Fees</b>                        | <b>\$9.13</b> |

## BILLING INFORMATION

|                                                                                                                             |        |
|-----------------------------------------------------------------------------------------------------------------------------|--------|
| <b>Late Payment Charge</b>                                                                                                  |        |
| Late Charge to be Assessed After Due Date:                                                                                  | \$4.19 |
| <b>Rate Schedule</b>                                                                                                        |        |
| For a copy of your rate schedule, visit <a href="http://lge-ku.com">lge-ku.com</a> or call our Customer Service Department. |        |

## CUSTOMER SERVICE

[lge-ku.com](http://lge-ku.com)  
800-981-0600



YOU'LL LOVE  
YOUR NEW BILL.

It's All About You

**KU**  
a PPL company

# TAKE A LOOK



Say hello to your new KU bill! Your new and improved bill is presented in a reader-friendly manner with charts and messages designed to give you more information so you can better manage your energy usage.

- 1 Easy-to-find the Amount Due and Payment Due Date.
- 2 Easy-to-read Billing Summary that shows your previous balance, payments received and your current charges.
- 3 The account name and service address along with ways to pay and contact information for Customer Service. We also include the date range for your next meter reading.
- 4 A detailed breakdown of your electric usage, always shown in bold with a lightning bolt.
- 5 An item-by-item summary of your current charges with the total amount of the charges in bold at the bottom of the section.
- 6 Use the handy payment stub at the bottom of your bill if you mail your payment.



a PPL company

## BILLING SUMMARY

|                                            |                 |
|--------------------------------------------|-----------------|
| Previous Balance                           | 121.16          |
| Payment(s) Received                        | -121.16         |
| <b>Balance as of 4/21/16</b>               | <b>\$0.00</b>   |
| Current Electric Charges                   | 130.63          |
| Current Taxes and Fees                     | 9.13            |
| <b>Total Current Charges as of 4/21/16</b> | <b>\$139.76</b> |
| <b>Total Amount Due</b>                    | <b>\$139.76</b> |

Mailed 4/29/16 for Account # 3000-0000-0001

AMOUNT DUE  
**\$139.76**

DUE DATE  
**5/18/16**

Account Name: JOHN SMITH  
Service Address: 100 Deer Crossing Way  
LEXINGTON KY

Online Payments: lge-ku.com  
Telephone Payments: (659) 255-0394, press 1-2-3  
24 hours a day; \$2.25 fee

Customer Service: (659) 255-0394  
M-F, 7am-7pm ET  
1 Quality Street  
Lexington, KY 40507  
M-F, 8am-5pm ET

Next read will occur 5/18/16 - 5/21/16 (Meter Read Portion 14)

## CURRENT USAGE

| ELECTRIC                            |                 |
|-------------------------------------|-----------------|
| Meter Reading Information           | Meter # L200000 |
| Actual (R) kWh Reading on 4/21/16   | 16109           |
| Previous (R) kWh Reading on 3/20/16 | 6696            |
| Current kWh Usage                   | 1411            |
| Meter Multiplier                    | 1               |
| <b>Metered kWh Usage</b>            | <b>1411</b>     |

## CURRENT CHARGES

| ELECTRIC                                    |                 | Rate: Residential Service |
|---------------------------------------------|-----------------|---------------------------|
| Basic Service Charge                        | 10.75           |                           |
| Energy Charge (\$0.07744 x 1,411 kWh)       | 109.27          |                           |
| Electric DSM (\$0.00376 x 1,411 kWh)        | 5.31            |                           |
| Fuel Adjustment (\$0.00007 x 1,411 kWh)     | 0.10            |                           |
| Environmental Surcharge (3.950% x \$125.43) | 4.95            |                           |
| Home Energy Assistance Fund Charge          | 0.25            |                           |
| <b>Total Charges</b>                        | <b>\$130.63</b> |                           |

Please return only this portion with your payment. Make checks payable to KU and write your account number on your check.

|                                  |                 |
|----------------------------------|-----------------|
| Amount Due 5/18/16               | <b>\$139.76</b> |
| After Due Date, Pay this Amount: | \$143.99        |
| WinterCare Donation:             |                 |
| <b>Total Amount Enclosed:</b>    |                 |

Account # 3000-0000-0001  
Service Address: 100 Deer Crossing Way

#926190001 SF

JOHN SMITH  
100 DEER CROSSING WAY  
LEXINGTON, KY 40509-0000



a PPL company  
PO Box 9001954  
Louisville, KY 40290-1954



0203000000000010000000014395000000139760000000000028



**AUDIBLE PDF** is a new service we offer for the visually impaired. Your KU bill is now available in a format that can be read by most popular readers. For more information or if you have questions about audible PDFs, call **800-981-0600**.

## PAYING YOUR DELINQUENT BALANCE



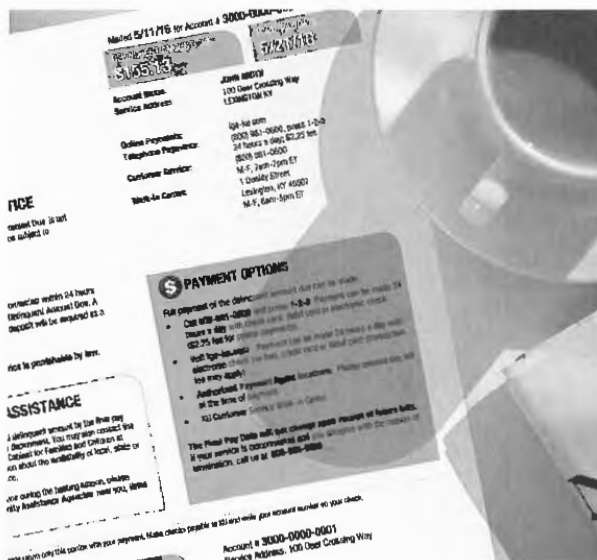
You may receive a new KU Bill before you've paid the Delinquent Amount Due on your Disconnect Notice. A common mistake is to assume that you now have until the due date on the new bill to pay your Delinquent Amount Due. **The Final Pay Date on your Disconnect Notice does not change upon receipt of new bills.** This is important to understand to avoid disconnection of service. Refer to the **Payment Options** section of your Disconnect Notice for ways to pay your delinquent balance.



### CUSTOMER SERVICE

lge-ku.com

800-981-0600



## A GUIDE TO KU'S DISCONNECT NOTICE.

**KU**  
a PPL company



## IMPORTANT FEATURES

- 
- a PPL company

Your account is past due. If the **Delinquent Amount Due** is not received by the **Final Date**, your service will be subject to disconnection.

**Reconnection:** Your service will be reconnected within 24 hours after verification of full payment of the Delinquent Amount Due. A reconnect fee and a new or additional deposit will be required as a condition of reconnection.

Unauthorized reconnection of service is punishable by law.

If you are unable to pay the total delinquent amount by the final pay date, call our Customer Service department. You may also contact the Commonwealth of Kentucky's Cabinet for Families and Children at 1-800-372-2973 for information about the availability of local, state or federal programs for assistance.

If you need financial assistance during the hunting season, please contact one of the Community Assistance Agencies near you, listed on the back of this notice.

**DELINQUENT AMOUNT DUE**  
**\$155.13**

FINAL PAY DATE  
5/21/16

Account Name: JOHN SMITH  
Service Address: 100 Dear Counseling Way  
LEXINGTON KY

**Online Payments:** [lge-ku.com](http://lge-ku.com)  
**Telephone Payments:** (800) 981-0800, press 1-2-3  
 24 hours a day, \$2.25 fee  
**Customer Service:** (800) 981-0800  
 M-F, 7am-7pm ET  
**Walk-In Center:** 1 Quality Street  
 Lexington, KY 40507  
 M-F, 8am-5pm ET

Full payment of the delinquent amount due can be made:

- Call 800-081-0000 and press 1-2-3. Payment can be made 24 hours a day with credit card, debit card or electronic check (\$2.25 fee for phone payments).
- Visit [ign-tso.com](http://ign-tso.com). Payment can be made 24 hours a day with electronic check (no fee), credit card or debit card (transaction fee may apply).
- Authorized Payment Agent locations: Please present this bill at the time of payment.
- NJ Customer Service Walk-In Center.

The Final Pay Date will not change upon receipt of future bills. If your service is disconnected and you disagree with the reason of termination, call us at 800-887-0800.

Please return only this portion with your payment. Make checks payable to KU and write your account number on your check.

Delinquent Amount Due **5/21/16** **\$155.13**

**\$155.13**

**Total Amount Enclosed:**

a PPL company  
PO Box 9001954  
Louisville, KY 40290-1954

Account # 3000-0000-0001  
Service Address: 100 Deer Crossing Way

#52000001 60

JOHN SMITH  
100 DEER CROSSING WAY  
LEXINGTON, KY 40509-0000

020300000000000100000000155130000000155130000000000000010

**Planting a tree?  
Building a fence?  
Installing a swimming pool?  
Know what's below.  
Contact 811 before you dig.**



You are **required by state law** to contact **Kentucky 811** (dial **811** or online at **811now.com**) before you perform any excavation activity. Excavation is defined as any activity that results in the movement of dirt. **Kentucky 811** will coordinate with member utilities (LG&E and, in some areas, KU) to have them mark the location of any underground natural gas and/or electric lines in the area. The line location is performed at no cost to you.

Once marked, you'll know what's below and be able to dig safely. Different colored markings or flags indicate what lies beneath your dig site. Submit your request at least two business days before you dig to allow time for the lines to be marked.



### **Pipeline marker information**

Since pipelines are buried underground, pipeline markers are used to help in their identification. They are often found where a pipeline intersects a street, highway or railway. Be aware of any pipeline markers in your neighborhood. Markers provide the approximate location of the pipelines, the type of product transported, and the natural gas operator's name and emergency number. Write this information down in case of emergency.

### **Recognizing a suspected leak**

Damage to pipelines may cause a leak. Report any damage to our facilities, even if it appears to be minor. In cases where physical damage is not obvious, your senses of sight, smell and sound will help you recognize a suspected leak:



#### **Sight**

Discolored vegetation, bubbling in water or blowing dust.



#### **Sound**

Hissing, whistling or roaring noise.



#### **Smell**

Unusual odor such as gasoline, oil, sulfur or rotten egg smell.

### **If you suspect a natural gas leak,**

**evacuate immediately and contact LG&E:**

**Dial 502-589-1444**

(outside Louisville 800-331-7370)

then **Press 1-1-1**



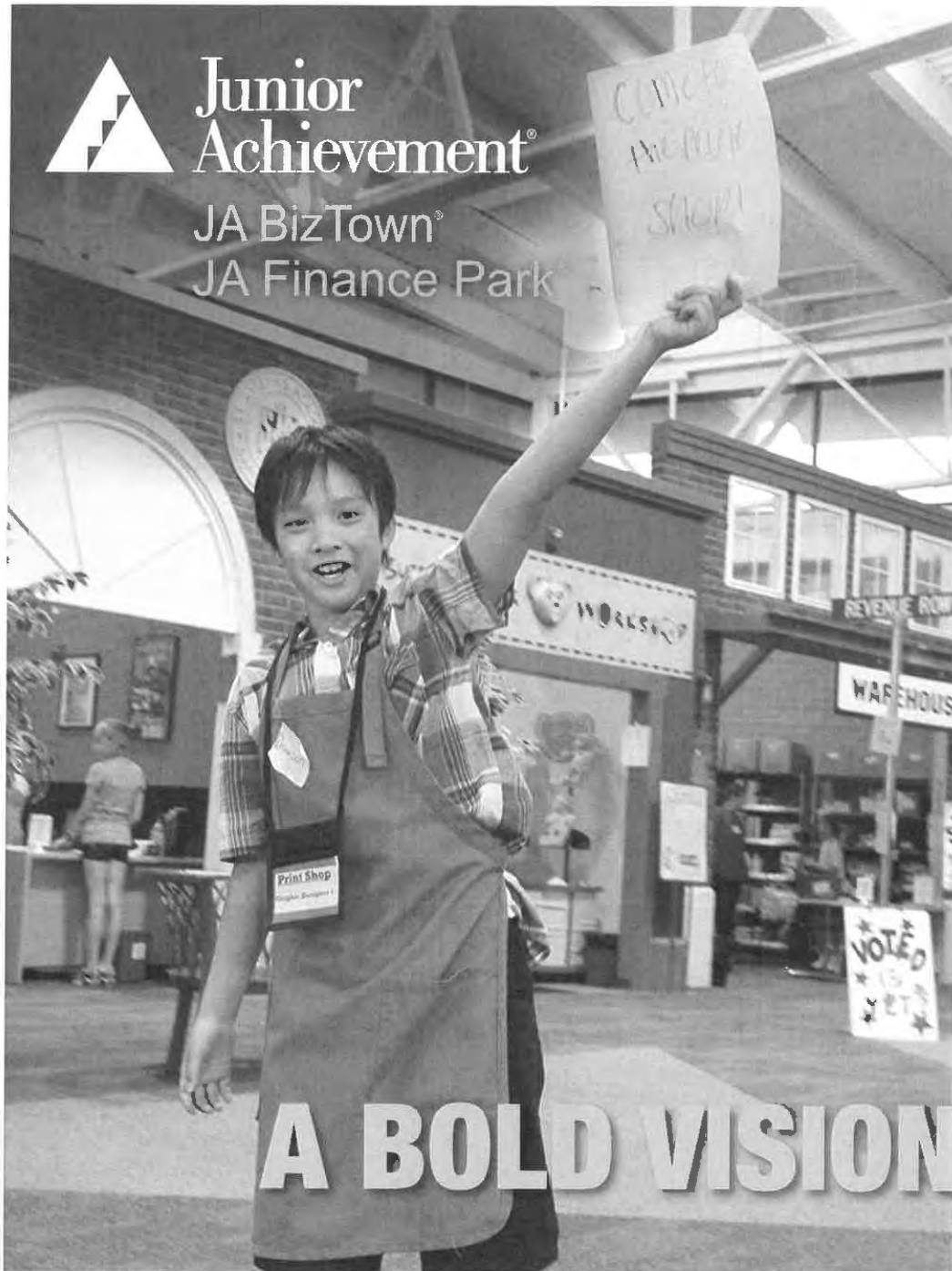
**PPL companies**

For more information, visit:

**[lge-ku.com/gassafety](http://lge-ku.com/gassafety)**

Page 1 of 1



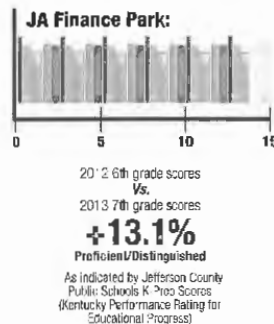
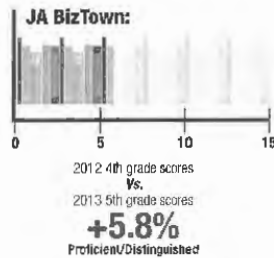


## The Campaign for JA BizTown and JA Finance Park

**A BOLD VISION**

In a powerful program evaluation published by the University of Louisville's Department of Urban and Public Affairs, JA BizTown and JA Finance Park programs get results. Some statistics include:

## Increased Math Scores\*



Dear Friends,

Student success is central to Junior Achievement's mission to provide volunteer-driven learning that fosters workforce readiness, entrepreneurship and financial literacy. Under the guidance of local community volunteers, students apply real world skills required in the 21st Century global marketplace. To date, JA of the Bluegrass has harnessed the talents of 11,500 community business leaders to impact the economic education of 430,000 students from 18 counties in Central Kentucky. JA of the Bluegrass has impact!

The Campaign for JA BizTown and JA Finance Park provides the funds necessary to fulfill **our bold, strategic vision for the future**. This fundraising effort will bring the next level of experiential education to our children in the Bluegrass.

In partnership with Fayette County Public Schools, we are working to apply our experiential curriculum to core educational standards in the context of our local economy. This learning experience—presented in a fun, hands-on atmosphere—will inspire students to dream big about their future and understand what skills they will need to reach their potential.

Building on over 50 years of service in Central Kentucky, we are confident that now is the time for our organization to **think BIG, be BOLD** and **share our VISION** of the future with the larger community. With a goal to raise \$3 million in cash gifts, our aspirations go beyond the financial component as we take this opportunity to raise JA's profile and connections in our community as well. We embark upon this endeavor not just focused on the immediate goal of building an exceptional physical environment for learning but more importantly of building a sustainable organization over the long-term with a legacy beyond our imagination.

Consider joining us in this worthwhile endeavor, we look forward to creating our vision together!

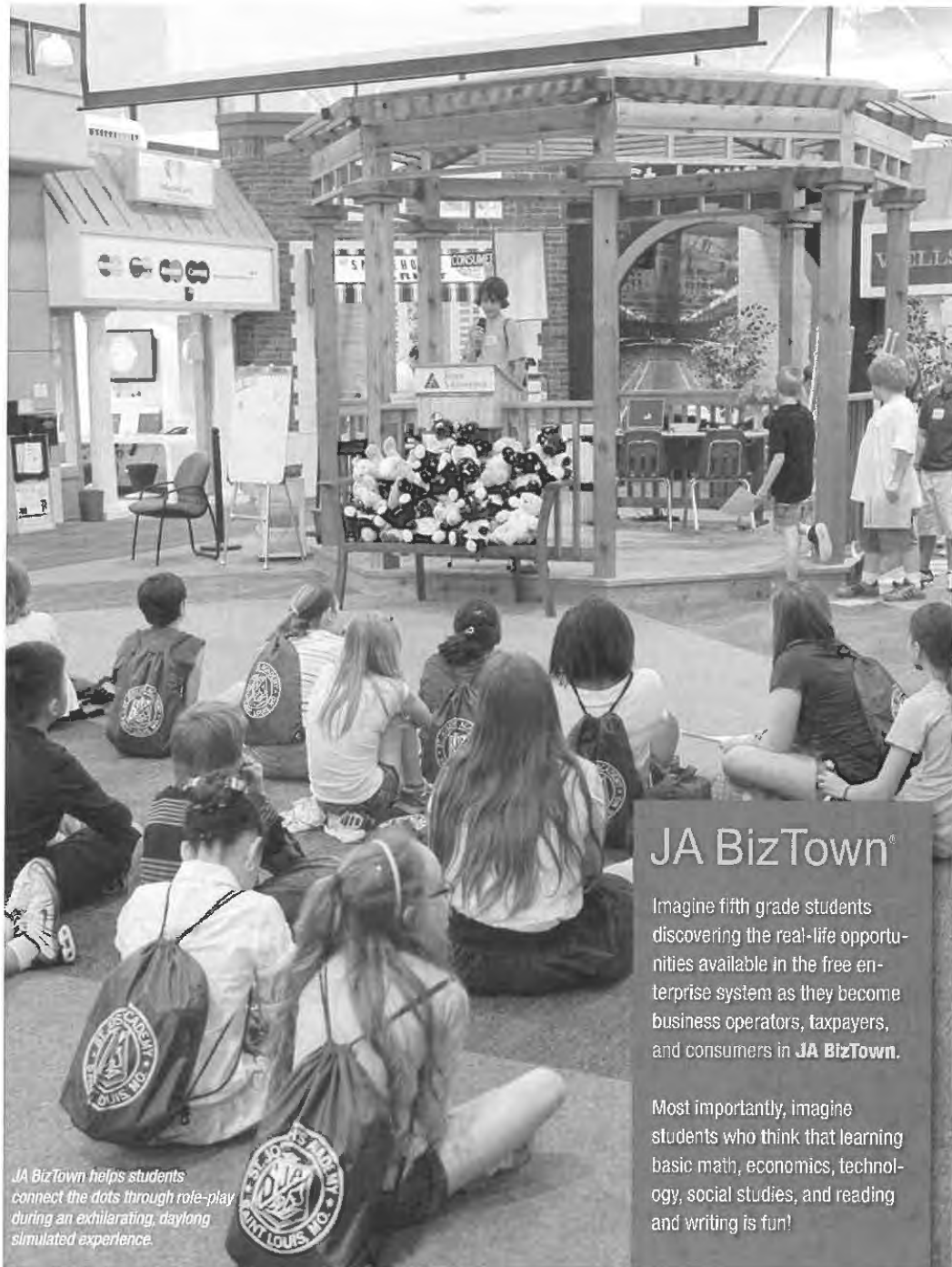
*Lynn Hudgins*

Lynn Hudgins  
President, JA of the Bluegrass

*Ed Skaton*

Ed Skaton  
Campaign Chair, JA BizTown and JA Finance Park

Cover photo: In the JA BizTown experience students assume various roles, including CEO, CFO, utility worker, restaurant owner, reporter, disc jockey, lawyer, and postal carrier.



*JA BizTown helps students connect the dots through role-play during an exhilarating, daylong simulated experience.*

## JA BizTown®

Imagine fifth grade students discovering the real-life opportunities available in the free enterprise system as they become business operators, taxpayers, and consumers in **JA BizTown**.

Most importantly, imagine students who think that learning basic math, economics, technology, social studies, and reading and writing is fun!

## HOW IT WORKS

"NEARLY  
60%  
OF TEENS SAID  
THEY DON'T EXPECT  
TO BE READY TO  
FINANCIALLY SUPPORT  
THEMSELVES BY AGE 24.  
ONLY  
25%  
OF TEENS SAID THEY  
WOULD BE PREPARED  
BY AGE 27."  
Business Insider 2013

Why experiential learning? Nine out of ten teachers believe that experiential learning is effective in getting students interested in higher education and careers.  
(Source: JA Experiential Learning in Education Poll)

Throughout the semester, teachers may invite business leaders to visit their classroom to teach economic principles and reinforce class curricula through the lens of their own professional experiences.

At the end of the set of lessons, **elementary students will visit JA Biztown** to apply what they've learned in a simulated business community complete with storefronts, roadways and other civic amenities while **middle school students visit JA Finance Park** to apply the knowledge they've learned in order to make smart personal and career-minded decisions for the future.

Imagine willing volunteers jumping into this fun, real world atmosphere to teach, armed with their enthusiasm and life experience.

*"I learned that running a business isn't just about making money. You have to repay loans, pay workers, and pay for supplies!"*

– 5th grade student

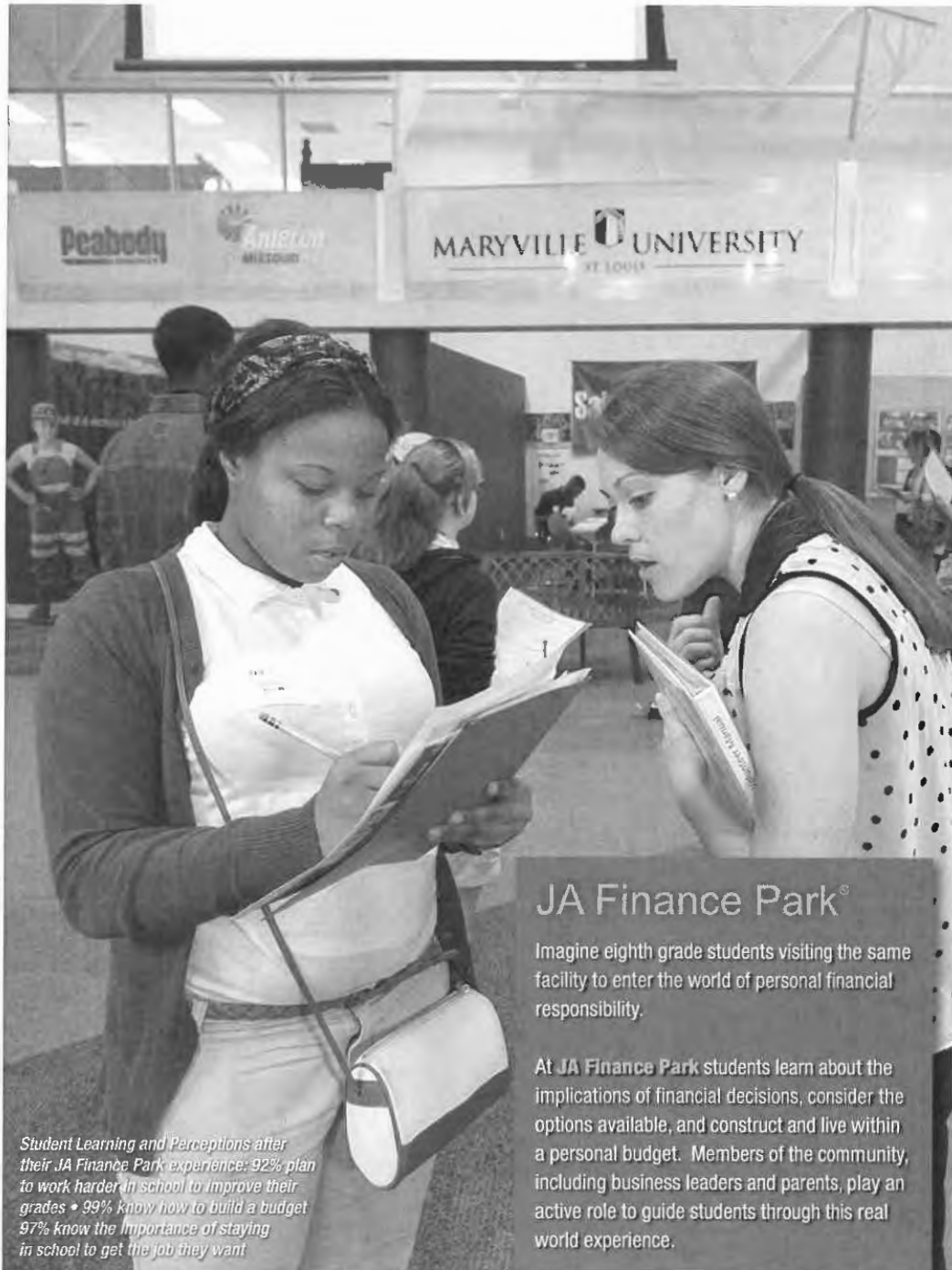
*"Spend money on the things you need first, and then spend on the things you want"*

– 5th grade student

**JA BizTown®** serves upper elementary classes with operating "businesses" such as a bank, City Hall, utilities center, realty office, restaurant, retail businesses and more. Students discover the real-life opportunities available in the free enterprise system as they become business operators, taxpayers and consumers for a day. The curriculum is designed to correlate to Kentucky's Core Content for Assessment in Math, Social Studies, and Practical Living while focusing on 21st century job skills.

**JA Finance Park®** provides a practical, hands-on personal budgeting simulation for middle school students. The classroom curriculum is complemented by a visit to the Park, where students will immerse themselves in a reality-based decision-making process addressing individual and family budget considerations such as housing, transportation, food, utilities, health care, investments, philanthropy and banking.

*A day at JA BizTown or JA Finance Park is always preceded by a series of lessons in the classroom.*

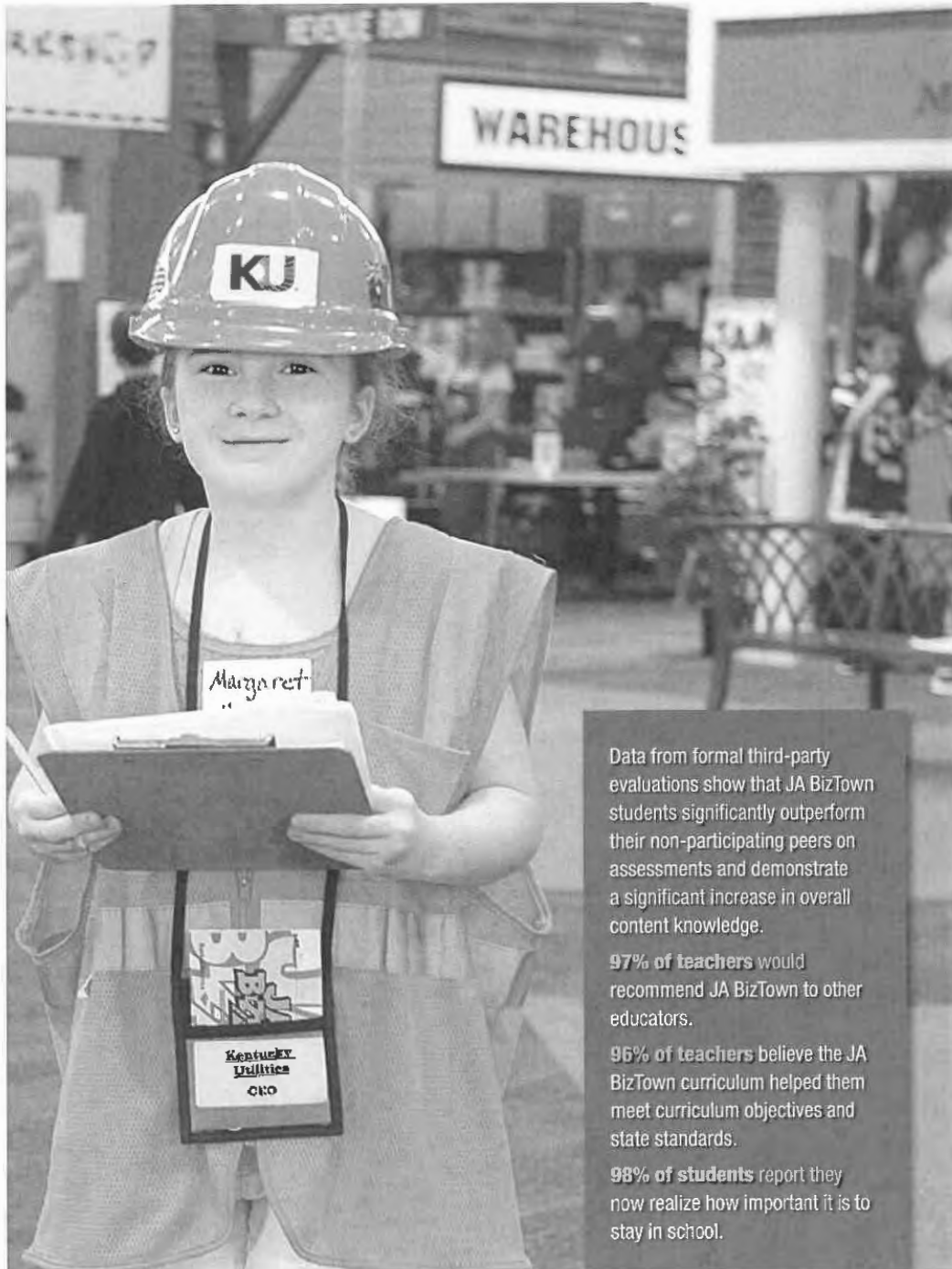


**JA Finance Park®**

Imagine eighth grade students visiting the same facility to enter the world of personal financial responsibility.

At **JA Finance Park** students learn about the implications of financial decisions, consider the options available, and construct and live within a personal budget. Members of the community, including business leaders and parents, play an active role to guide students through this real world experience.

*Student Learning and Perceptions after their JA Finance Park experience: 92% plan to work harder in school to improve their grades • 99% know how to build a budget 97% know the importance of staying in school to get the job they want*



## OUR GOALS

The health of the economy, and nation, depend on our workforce. The recent economic recession caused a number of employers to downsize personnel. As the economy recovers, former positions are being filled by individuals who possess more technical skills or greater education. New labor market entrants are finding themselves unprepared to enter the current workforce and as a result companies are now struggling to fill open positions.

**More than half of U.S. companies report a major challenge in recruiting non-managerial employees with the skills and knowledge needed.** (Source: *A Solution to the Workforce Skills Gap*) The skills gap has been identified in both leadership and executive-level skills (e.g. supervision, goal setting and motivation) or in basic skills (including reading, writing, creative thinking, problem solving, honesty and adaptability). This skills gap is expected to intensify as the Baby Boomers exit the workplace.

**Now is the time to invest in workplace learning and teaching the skills needed in the 21st Century.** JA of the Bluegrass inspires and prepares young people to compete in our global economy. We believe the outcomes of experiential learning via the JA Biztown and JA Finance Park models are part of the solution to this challenge.

JA of the Bluegrass is uniquely positioned as a proven and relevant provider of necessary skills development in our community and in our country.

**It's not about the dollars, it's about the impact.** When we reach our goal, JA of the Bluegrass will increase not only the number of students who participate in our programs, but will also add to the quality of their experience. Through greater involvement from our business leaders, our partners in the community will have an active role in delivering the vital curriculum and outcomes that ultimately impact their bottom line.

As an organization, we aspire to improve our financial sustainability by strengthening our endowment, increasing the income it generates and expanding philanthropic support while also attending to our dual bottom line by leveraging our resources to create greater mission impact.

The JA BizTown/JA Finance Park facility will be available to students throughout Central Kentucky. Counties located within a 30- to 90-mile radius will be invited to participate. This encompasses more than 48 school districts.



**Projected Number of Schools Served**

*"UK HealthCare is excited to be part of JA BizTown/JA Finance Park. This innovative facility and curriculum will give our students the tools to make good financial decisions and navigate the many challenges they will face as contributing members to our communities and our society. We look forward to working with Junior Achievement on this important education project."*

*– Michael Karpf, MD,  
Executive Vice President  
for Health Affairs*

## Benefits of INVESTMENT

*"Keeneland and the equine industry have a rich history in the Bluegrass. Through our participation in JA BizTown/JA Finance Park, we look forward to sharing with our young people the industry's unique traditions as well as showcasing our vast economic impact throughout this region. Partnering with Junior Achievement in this endeavor gives us a wonderful opportunity to develop the youth of our community and enhance their educational experience."*

– Bill Thomason  
President and CEO  
Keeneland

Your financial support is an investment in the future of our local, regional and national economy. **As a campaign supporter, you will be recognized as a leader in this pace-setting project that will bring this curriculum and experience to the smallest geographic area to be approved for this program by JA USA.** In the facility, donors will benefit from the physical interaction with the students as they soak up the experience in this uniquely Bluegrass space.

Donors, you will also have the opportunity to incorporate your brand and values into the applied curriculum. Not only will students recognize your brand, likewise teachers, parents and community business leaders will be exposed to it while volunteering on-site. These visits to the facility create memories that last well beyond the daylong experience and trickle home through take-away materials and conversations about their experiences over the kitchen table.

As good stewards of your investment, we strive to tailor recognition that is most meaningful to you. In general, we will acknowledge all donors through media and press communications, our website and campaign report listings as well as events. Permanent and termed naming opportunities are available.



*"JA and the Fayette County Public Schools have enjoyed a strong partnership for many years. Since its inception in 1963, over 430,000 of our students have been inspired by the volunteers who teach JA's curriculum."*

*To that end, we are pleased to have the opportunity to enhance our commitment to JA and its mission of empowering students to own their future economic success. JA BizTown/JA Finance Park is a very focused experience that we believe will be a "game-changer" for our students and the entire Central Kentucky community. Our kids will enjoy an opportunity of a lifetime in which they can truly make adult decisions and actually learn first-hand how an economy works."*

– Melissa Bacon, Board Chair, Fayette County Public Schools

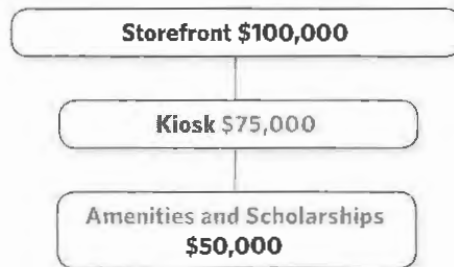
# OPPORTUNITIES

to Invest

Permanent Naming Opportunities (Solid Green Boxes)



Naming Opportunities (White Boxes) for five years with option to renew.  
70% directed to capital and 30% directed to operating.



Personalized opportunities are also available.

*Storefront funding options are either \$100,000 for a five-year term with a right of first refusal for \$10,000 annual renewal, or \$300,000 permanent storefront right for life of the facility. Funding amounts do not include customized build out expenditures beyond the standard model.*

## Early Investors



Saint Joseph Hospital  
Saint Joseph East



## Individual Partners

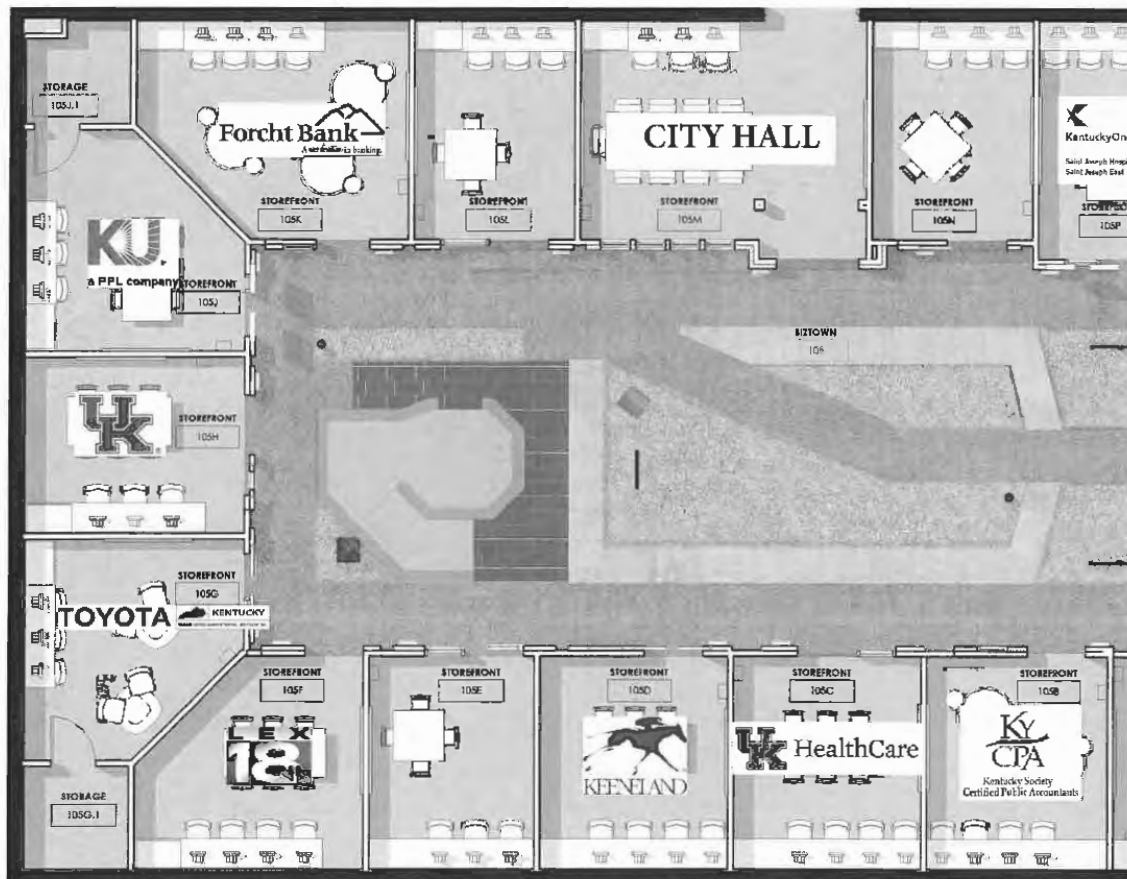
Gary and Sheila Bello

Mike Scanlon

Andy Shea – Lexington Legends

# FLOOR PLAN

JA BizTown/JA Finance Park will be a dual implementation facility—meaning that both programs will be housed in the same structure—optimizing our efforts to reach more students. Though the facility will have the look and feel of JA BizTown, the curriculum will be changed to accommodate JA Finance Park middle school students during certain weeks of the year.



## Business Sectors for Storefronts

- |                                                                                                       |                                                                                                       |                                                                                                        |                                                                                                    |
|-------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|  Bank                |  Higher Education    |  Media Center         |  Retail         |
|  City Hall           |  Housing/Real Estate |  Philanthropy         |  Television     |
|  Distribution Center |  Insurance           |  Professional Offices |  Transportation |
|  Equine Center       |  Investments         |  Restaurant           |  Utilities      |
|  Health Care         |                                                                                                       |                                                                                                        |                                                                                                    |



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**Campaign for**

**JA BizTown/JA Finance Park  
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David Royse  
Mike Scanlon  
Dave Sevigny  
Andy Shea  
Todd Ziegler

**JA of the Bluegrass Staff**

Lynn Hudgins – President  
Ron Wigglesworth – Senior Program Manager  
Sheila Vaughn – Development Manager  
Erin Warren – Program Manager  
Callie Tincher – Program Manager

**For more information,**  
please contact Lynn Hudgins:  
859-219-2423 office  
859-333-6269 mobile  
[lhudgins@jalexington.org](mailto:lhudgins@jalexington.org)

**Help us fulfill our  
bold, strategic  
vision for the future.**



**Junior  
Achievement®**

**JA BizTown®  
JA Finance Park®**



## BUSINESS SERVICE CENTER

Customer Service for Kentucky Businesses

### Business Service Center

*Customer Service  
for Kentucky Businesses*

LG&E: **502-627-3313**

KU: **859-367-1200**  
**800-383-5582** (outside Lexington)

Hours of Operation:  
Monday – Friday, 8 a.m. to 6 p.m. (Eastern Time)

Email: **[bsc@lge-ku.com](mailto:bsc@lge-ku.com)**





**T**he Business Service Center provides quick, accurate and courteous service to commercial and industrial businesses. Utility-related matters, such as billing questions and orders for new or changed services, can be handled quickly by phone or email.

**Online Services for Business Customers:**  
[lge-ku.com/bsc](http://lge-ku.com/bsc)

- Establish/cancel gas or electric services
- Review and pay bills
- Request summary billing, automatic banking, online billing or a free energy audit
- View electric or gas rates

**Property Managers/Landlords**

Property managers and landlords with multiple LG&E and/or KU accounts can access enhanced online options by registering online.

Landlords can register all of their properties using a single email address and can access the information online at any time, day or night. Additional functionality includes the ability to:

- create or update landlord agreements;
- check status of your registered accounts;
- update account information, including telephone numbers and mailing addresses of multiple accounts;
- pay bills online; and
- submit "move-out" or "move-in" requests.



Interested? Register online at [my.lge-ku.com](http://my.lge-ku.com). Be sure to have a copy of your bill when registering, since some information found on the bill is needed during the registration process. User guides can be found at [lge-ku.com/bsc](http://lge-ku.com/bsc).

**Business Service Center**

**LG&E**

820 W. Broadway  
 Louisville, KY 40202  
 502-627-3313

**KU**

One Quality Street  
 Lexington, KY 40507  
 859-367-1200  
 (outside Lexington: 800-383-5582)

**Questions & Answers**

**Q. What is the Business Service Center?**

A. It's a customer service center just for business customers. The Business Service Center (BSC) helps business customers a number of ways — ranging from fast phone responses to onsite support.

**Q. When is the BSC open?**

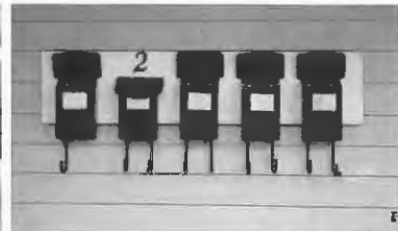
A. Normal hours of operation are 8 a.m. to 6 p.m. (Eastern Time), Monday through Friday.

**Q. What is the best way to contact the BSC?**

A. Phone: 502-627-3313 (LG&E)  
 859-367-1200 (KU)  
 or 800-383-5582 (KU outside Lexington)

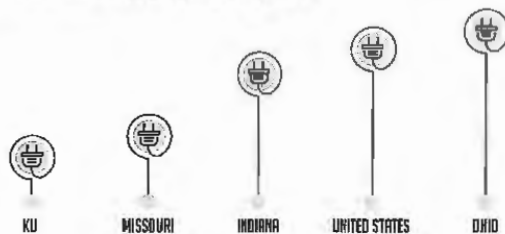
Email: [bsc@lge-ku.com](mailto:bsc@lge-ku.com). The email will be routed to your provider.

Internet: [lge-ku.com/bsc](http://lge-ku.com/bsc). On this page, you select your provider: KU or LG&E.





## WHEN IT COMES TO PROVIDING LOW-COST ENERGY, WE'RE HARD TO BEAT



We work 24/7 to provide you with safe and reliable energy, at a good value for your money. In fact, when it comes to cost, the Edison Electric Institute reports that the KU service area's average residential electric rate more than holds its own compared to some of our neighboring states and even the U.S. as a whole.

The data shows that KU's average rate is:

- 8 percent lower than Missouri
- 22 percent lower than Indiana
- 38 percent lower than the U.S.
- 44 percent lower than Ohio

And businesses take note, too.

Thanks in large part to low-cost energy, *Site Selection* magazine ranked Kentucky third in the nation in 2015 on its list of Top State Business Climates.

Rest assured that as we continue to invest and improve how we produce and deliver energy, keeping costs low remains a top priority.

**THERE'S MORE**

Go to [lge-ku.com](http://lge-ku.com) to:

- Enroll in auto-pay, paperless billing and more
- Learn about career opportunities for veterans
- Watch "Our Energy Matters" videos highlighting our commitment to safe, reliable, low-cost energy

## SCAM ALERT: KEEPING AN EYE OUT FOR THE BAD GUYS



KU will NEVER call or email you to demand payment or ask you for a credit card number or debit card number. Unfortunately, some scammers pose as KU representatives and demand payment over the phone or in person – and even threaten to cut off service if the payment is not made. If you receive such a call or email claiming to be

from us, DO NOT provide any information and report it to local authorities. If you are in doubt, call us at 800-981-0600.

A representative will confirm your account status and let you know if a payment is due.

Also, be aware of possible scammers who may come to your door claiming to be one of our employees. Our employees always wear official badges with the KU logo. Also, request a second form of identification and check to see if their vehicle features our logo. Nothing is more important to us than your safety and your comfort with our employees and the services we provide.

## TO AVOID THE HURT, DON'T TURN THE DIRT ... UNTIL YOU CALL 811

Coming soon: National Call Before You Dig Day. Held every year on August 11 (8/11), it is a day set aside to focus on the need to call 811 before you turn any dirt for an outdoor home improvement or repair project. The first and most important tool for any such project is your phone. When you call 811 a few days before putting a shovel or spade into the ground, it gives time for local utilities, including KU, to mark any underground lines – whether electric, cable or water – they have on



your property. And here's a scoop – they'll mark those lines for FREE. Knowing where those lines are can save you some big trouble. If you were to hit one while digging, it could cause serious damage or, worse, a serious injury.

If you live in an area where your KU service is not covered by Kentucky 811, call us at 800-981-0600 to request to have your underground electric lines marked. If you are unsure, visit our website at [lge-ku.com](http://lge-ku.com) to find out if you should call us directly or can call 811.

## FOR YOUR OLD FRIDGE OR FREEZER THIS DEAL IS A PLEASER



It could be that you're ready for a big energy-efficiency upgrade for your kitchen. Maybe you plan to replace some older appliances that have just about reached the end of their life spans and simply are not nearly as energy-efficient as today's newer models. And if one of those appliances is a refrigerator or freezer, you should know about our Fridge and Freezer Recycling program.

We'll pay you \$50 for your old refrigerator or freezer, plus we'll haul it away as long as it meets the following requirements:

- It must be operational.
- It must be full size.
- It must be empty.
- It must be accessible for removal.

That's all there is to it. So, it's the proverbial win-win. We'll give you 50 bucks to help stock your new, more energy-efficient refrigerator or freezer (or spend however you like) and take your old energy-eating appliance away to recycle. You might say it's a really cool deal. Call 800-356-5467 or visit [lge-ku.com/recycle](http://lge-ku.com/recycle) to learn more.

## YOU DON'T NEED A GPS TO FIND US WHEN YOU'RE ON THE ROAD

Since it's the middle of summer, you're probably a little more on the go than at other times of the year. And that's one reason we've made sure our website, [lge-ku.com](http://lge-ku.com), fits your lifestyle – your mobile lifestyle, that is. No need to be at your desk or carry a laptop with you. Because our website is optimized for your mobile devices, you can use your tablet or phone to access bill-paying information, to learn some energy-saving tips or to learn more about what we're doing to improve the infrastructure and service we provide to you. On the road or at the pool, it's just a few clicks away.

You can also use your device to sign up for My Notifications to receive timely reminders about your monthly bill. You choose whether you want to be notified by email, text, phone call or a combination of all three. Plus, you tell us when you want to be

reminded – when your bill is available to view, five days before it's due or one day past its due date. Sign up via your online account (or easily create one at [my.lge-ku.com](http://my.lge-ku.com)).

So be as mobile as you want. We're right there when you need us.



## COOKING UP A FEW SUGGESTIONS FOR COOLING DOWN THE KITCHEN

You're probably familiar with the old saying, "If you can't stand the heat, get out of the kitchen." Well, since it's the middle of summer, we're modifying that just a bit to say, "If you can't stand the heat, keep it out of the kitchen." To help you do that, here are a few tips for reducing heat and saving energy:

### Refrigerators

- Locate your refrigerator away from the oven and other heat-producing appliances.
- Keep the refrigerator full, but don't overstuff it.
- Partially thaw food in the fridge before putting it in the oven.
- Vacuum the condenser coils to remove dust.

### Dishwashers

- Use the energy-saving or light-wash cycle.
- Use the "no heat" setting if there is one; otherwise, turn off after final rinse and open the door to let dishes dry.

### Cooking

- Use your microwave or slow cooker during hot weather.
- Keep the stove's burners and reflectors clean.
- Cover pans and match the size of the pan to the burner.
- Cook double batches and freeze the extra for a later meal.

### Slow Cooker Sweet and Sour Chicken

(Courtesy: [myrecipes.com](http://myrecipes.com))

#### Ingredients

- 1 cup chopped onion
- 1/3 cup sugar
- 1/3 cup ketchup
- 1/4 cup orange juice
- 3 tbsp. cornstarch
- 3 tbsp. cider vinegar
- 2 tbsp. soy sauce
- 1 tbsp. grated peeled fresh ginger
- 1 lb. skinless, boneless chicken thighs, cut into 1-inch pieces
- 2 8-oz. cans pineapple chunks in juice, drained
- 1 large green bell pepper, cut into 3/4-inch pieces
- 1 large red bell pepper, cut into 3/4-inch pieces
- 3 cups cooked white rice

#### Preparation

Combine all ingredients except the rice in a slow cooker. Cook on LOW for 6 hours or HIGH for 4 hours. Serve over prepared rice.

### KU Contact Information



**By Phone**  
800-981-0600  
Monday–Friday  
7 a.m.–7 p.m. (Eastern Time)

**Self-Service by touch-tone phone or web:**  
Anytime day or night

**For Hearing- or Speech-Impaired**  
Dial 711

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859-367-1200  
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**In-Person**  
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**Editor**  
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**Visit our website:**  
[lge-ku.com](http://lge-ku.com)





## TAKE A FEW MINUTES FOR SAFETY'S SAKE

### SAFETY FIRST!



June is National Safety Month. So, here are a few simple things to make note of around your home to help ensure the safety of you and your family:

- Test the Ground Fault Circuit Interrupters (GFCI) and Arc Fault Circuit Interrupters (AFCI) on electrical outlets. Pressing "test" should cut off power to the outlet. Press "reset" to restore power.
- Check appliance wires and cords for damage. Reduce the risk of fire by replacing any that are frayed.
- Check furnace/air conditioner filters. If they are dirty, clean them or replace with new ones.
- Avoid leaving engines running in attached garages. This includes not only cars, but also other things with internal combustion engines, such as lawn mowers.
- Avoid overloading outlets with too many appliance plugs.

Safety is a core value at KU. We want to do what we can to promote good safety habits and reduce the likelihood of accidents. Check out the National Safety Council's website at [nsc.org](http://nsc.org) for more safety tips.

### THERE'S MORE

Go to [lge-ku.com](http://lge-ku.com) to:

- Find out how to start or stop service
- Sign up for paperless billing and bill reminders
- Enroll in Demand Conservation to receive summer energy bill credits

## WHEN IT COMES TO WASTING ENERGY, YOUR WASHING MACHINE CAN BE AGITATING

When your clothes are in the washer getting a good soaking, your bank account doesn't need to take a soaking, too. These tips will cut down on laundry energy use and let you keep more of your hard-earned money:

- Wash clothes in cold water whenever you can. 90 percent of the energy used by washing machines goes to heating water.
- Reduce the temperature on your water heater to save energy when you do have to wash in hot or warm water.
- Wash full loads. Whether you fill up the machine or wash a single item, older machines use about the same amount of water.

- If your machine has one, use the suds-saving feature for lightly soiled clothes. You can reuse the wash water when you follow with a second load.

If you're in the market for a new washing machine, buy an ENERGY STAR® certified model. This type of washing machine uses about half the water and electricity of older models, plus you can apply for a \$75 rebate through our Home Energy Rebates Program. Visit [lge-ku.com/rebate](http://lge-ku.com/rebate) to learn more.



## YOU MIGHT BE SURPRISED WHAT YOU FIND WHEN YOU GIVE YOUR HOUSE AN ENERGY CHECKUP



You may already be doing a number of things to make your home more energy efficient, but it's a near certainty there are even more steps you can take to reduce your energy usage – and,

therefore, the amount you spend on energy. The first step is to determine which parts of your home use the most energy. And the quickest and easiest way to do that is to use our Online Home Energy Analysis. In just a few minutes you'll learn how to save energy and money.

To get started, go to [lge-ku.com/analysis](http://lge-ku.com/analysis) and then follow the instructions. The Online Home Energy Analysis is available for customers who have at least one year of active service in their current home.

## "OUR ENERGY MATTERS" SERIES PROFILES PROJECTS THAT ENHANCE SERVICE, RELIABILITY AND OUR ENVIRONMENTAL COMMITMENT

Providing safe, reliable, low-cost energy for all our customers is part of how our energies go to serving you. We are constantly striving to make sure we deliver on that promise. And one way we do so is by making investments in our infrastructure. Our large-scale solar facility near Harrodsburg is an example of one such investment.

We invite you to visit our website at [lge-ku.com/investments](http://lge-ku.com/investments) and check out new videos – titled "Our Energy Matters" –

highlighting investments we are making and the employees who are working on them to ensure we meet the energy demands of the future. From infrastructure improvements supporting continued environmental compliance to major projects that further enhance safety and reliability for our customers, our employees are dedicated to keeping the lights on – now and for generations to come.

## GREEN ENERGY: AN EMPOWERING CHOICE



Every time you flip a switch, brew a pot of coffee or adjust your thermostat, electricity is drawn from the "grid." This grid is made up of electricity created from a variety of fuel sources, including coal, natural gas and renewables like wind, solar and hydroelectric. While the majority of electricity generated in Kentucky comes from fossil fuel sources, there

is a way to directly influence renewable energy in our region. It's called the Green Energy program, and here's how it works.

For \$5 a month, you can directly support the growth and long-term viability of regional renewable energy operators and the broader renewable energy industry. The Green Energy program will use your monetary contribution to purchase

Renewable Energy Certificates (RECs) on your behalf. One REC represents the property rights to the environmental, social and other nonpower benefits of 1,000 kilowatt hours (kWh) of renewable electricity. The Green Energy program provides an easy way for you to obtain RECs and their associated benefits, as well as show your support for renewable generators and the industry.

Renewable energy has significant up-front costs, and voluntary purchases of Renewable Energy Certificates play an essential role in helping operators recover these costs more quickly, encouraging reinvestment in the renewable energy economy.

The program is completely self-funded, wherein every dollar you contribute goes directly toward purchasing RECs or promoting the program. We work hard to get the most value out of your contributions, and 2015 was no exception. On average, every \$5 contributed purchased 1.8 RECs. So what are you waiting for? Call us or visit our website at [lge-ku.com/green](http://lge-ku.com/green) today to learn more.

## WHETHER YOU'RE HOME OR AWAY, IT'S STILL EASY TO PAY

If you're planning to be on the go this summer, you can easily pay your KU bill without worry while you are away. Just use one of the options below to help simplify your life:

- **Auto Pay** – your monthly payment will be automatically deducted from your bank account on the payment due date. You will continue to receive a monthly billing statement with ample time to verify the information and record the amount and date of the automatic withdrawal. Simply sign in to your online account – or easily create one – at [my.lge-ku.com](http://my.lge-ku.com) or call us at 800-981-0600.
- **Online payment** – through your account at [my.lge-ku.com](http://my.lge-ku.com) you can easily and securely pay with an electronic check, credit card or debit card. And, remember, we're completely mobile, so you can access our website and your account on

any of your mobile devices.

- **Pay by phone** – our automated bill payment system is available 24 hours a day. Call us and press 1-2-3 to make a payment with an electronic check, credit card or debit card.



**NOTE:** To avoid the online payment processing fee, select the "electronic check" option. All other online and pay-by-phone options are subject to a fee charged by the third-party vendor that processes those payments for us.

### KU Contact Information



**By Phone**  
800-981-0600  
Monday–Friday  
7 a.m.–7 p.m. (Eastern Time)

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Like us on Facebook ([facebook.com/lgeku](https://facebook.com/lgeku)) and follow us on Twitter (@lgeku) and Instagram (lge\_ku).

# KU POWER SOURCE

MAY 2016

## YOUR NEW BILL: MORE INFORMATIVE, MORE HELPFUL



It's here! By now, you've most likely seen your new, more informative KU billing statement, which was previewed in last month's issue of *Power Source*. The new design comes after extensive research and feedback from customers like you – through focus groups and an online customer panel.

The new bill has lots of helpful features, like an easy-to-read chart showing how your energy usage over the past 13 months compares on a month-to-month and yearly basis. You'll even find the average amount you're

spending on energy each day.

It's all info you can use – in a new format – to help you manage your energy usage, especially when you combine the new features and information with our energy-efficiency tips and programs.

Be sure to learn more about your new bill by visiting our website at [lge-ku.com/mynewbill](http://lge-ku.com/mynewbill) and reading the insert included with this month's statement.

**THERE'S MORE**

Go to [lge-ku.com](http://lge-ku.com) to:

- To learn how to avoid being scammed
- Read about our Green Energy Program
- View job opportunities for military personnel

## BE SMART AND BE SAFE AROUND ELECTRICITY

Electricity has the power to keep us out of the dark, keep our computers running and make sure our appliances come to life when we need them. But it also has the power to cause harm – including serious injury and house fires – if we don't respect it or don't practice good safety habits. Here are a few tips to make sure using electricity remains a positive experience:

- **Water is a no-no** – do not touch light switches, appliances or anything that uses electricity if your hands are wet or you are standing on a wet surface.
- **Plugs only, please** – do not stick metal objects into outlets. If there are small children in the house, use safety caps in outlets that are not being used.
- **It's getting too crowded** – do not plug multiple appliances into a single outlet.
- **Don't be a "frayed" to be safe** – cracked or frayed wires can be a fire risk. Replace any you find.

It's always a good rule of thumb to stay away from power lines when working or playing outdoors. If you are carrying a tall ladder, hold it parallel to the ground and make sure to check for overhead power lines before setting it upright.

NEVER let children climb or play around trees close to power lines. NEVER touch a downed power line – always assume it is energized. If you see a downed power line, call us at 800-981-0600.

Bonus safety tip: If someone who comes to your door identifies himself or herself as one of our employees, ask to see a company identification card, which will include the employee's name and photo and the company logo. Also check for a company logo on the vehicle they're driving. Still not sure? Call us, and we can confirm if the person is one of our employees. And be mindful of scams related to your bill. Don't hesitate to call us and the police if you ever receive a phone call demanding payment of your KU bill. Your safety and peace of mind are among our top priorities.



## HELP US HELP YOU



You may not think about your meter too often, but it's important for our technicians to have easy access to it so they can get accurate monthly readings. Basically there should be at least six feet of clearance in front of the meter and two feet on either side.

For purposes of getting an accurate reading, meters must be accessible Monday through Friday between the hours of 8 a.m. and 5 p.m. In addition, our

technicians must have access any time to deal with any type of emergency – such as a power outage – to assess and repair equipment damage or to address a safety hazard.

Please do not block access to your meter when you do any landscaping or outdoor building projects. If you are planning any such projects in the vicinity of your meter, call us at 800-981-0600, and we'll work with you to make sure meter access is maintained. View the customer handbook on [lge-ku.com](http://lge-ku.com) to learn more about meter access and clearance restrictions.

Sign up for My Notifications and receive timely reminders about the due date of your bill by text, email and/or phone. Visit [my.lge-ku.com](http://my.lge-ku.com) for more information.

## TEAMING WITH YOU TO KEEP THE POWER FLOWING

Getting electricity safely into your home so you have the power you and your family need for daily life is a shared responsibility. When it comes to maintaining the electrical connection that brings the power into your home, some of it is our job and some of it is yours. The accompanying diagram shows which items **customers are responsible for**:

1. Weatherhead/masthead – the vertical pipe-like structure attached to the top of the meter box.
2. Meter base – the box and the wiring inside, as well as the meter socket.
3. Cables or other items that secure the masthead and/or box to your home.
4. The attachment point (eyebolt, etc.) that secures the electric service drop.

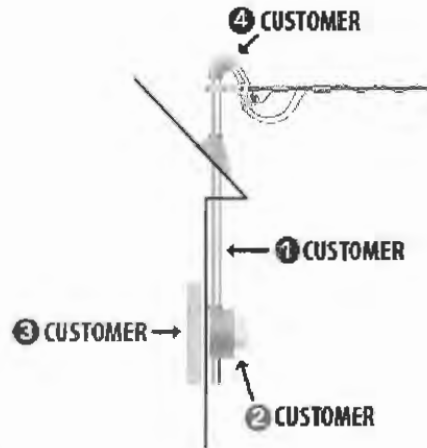
If any of these items become damaged, you will need to call a licensed electrician to make the necessary repairs.

### KU is responsible for:

- The service drop – this is the cable from the utility pole to your home.
- The meter – the glass-enclosed meter inside the meter box.
- The electric lines within the right of way.
- The utility poles and transformers.

If repairs are needed to any of these items, call us at 800-981-0600. We'll send a crew to make the repairs.

Transformers for underground service are provided by KU, but installed by the customer. Customers are also responsible for the wiring from the transformer to the masthead.



## CASH IN HAND AND HELP DEMAND



Heat and humidity are right around the corner. So, of course, during this "peak energy demand" season, air conditioners will be running ... a lot. To meet energy demand in the most efficient and cost-effective way possible, we're asking you to help by signing up for our Demand Conservation program ... and you'll receive up to a \$5 monthly credit on your KU bill for the months of June, July, August and September.

Once you sign up, a load-control device is installed on your home and connected to your central air conditioning unit or heat pump. On select peak energy demand days, the device cycles the

compressor on and off for just a few minutes at a time, typically between the hours of 2 p.m. and 6 p.m. when energy demand is at its highest. While the compressor is off, your home's air conditioner fan can continue to run, circulating the cool air already in your home. Most customers feel little-to-no difference in their homes' temperatures. We are limited to a maximum of 20 cycle events per summer – and we will not cycle on weekends or holidays unless there is an extreme system emergency.

***If you are already a Demand Conservation participant, thank you for your support, and enjoy those summer energy bill credits!***

More than 170,000 customers are already part of the program. If you haven't signed up yet, please visit [lge-ku.com/dc](http://lge-ku.com/dc) or call 800-356-5467 to sign up today.

### KU Contact Information



**By Phone**  
800-981-0600  
Monday–Friday  
7 a.m.–7 p.m. (Eastern Time)

**Self-Service by touch-tone phone or web:**  
Anytime day or night

**For Hearing- or Speech-Impaired**  
Dial 711

**Business Service Center**  
859-367-1200  
800-383-5582  
Monday–Friday  
8 a.m.–6 p.m. (Eastern Time)

**In-Person**  
**Customer Service Walk-in Centers**  
Monday–Friday  
9 a.m.–5 p.m. (Eastern Time)  
Lexington Office: 8 a.m.–5 p.m. (ET)

**Editor**  
[Cheryl.Williams@lge-ku.com](mailto:Cheryl.Williams@lge-ku.com)

**Visit our website:**  
[lge-ku.com](http://lge-ku.com)



Like us on Facebook ([facebook.com/lgeku](https://facebook.com/lgeku)) and follow us on Twitter (@lgeku) and Instagram (lge\_ku).



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## WHY KENTUCKY IS A GREAT PLACE TO LIVE AND TO GROW A BUSINESS

Picturesque and world-famous horse farms, the bourbon industry, beautiful state parks and a little horse race every spring. (Maybe you've heard of it.) These are some of the things that have brought national accolades to Kentucky and some of the main reasons people love calling the Bluegrass State home.

However, a lesser-known fact helps contribute to a higher quality of life and business-friendly climate: electric rates that are among the lowest in the nation and compare quite favorably to surrounding states.

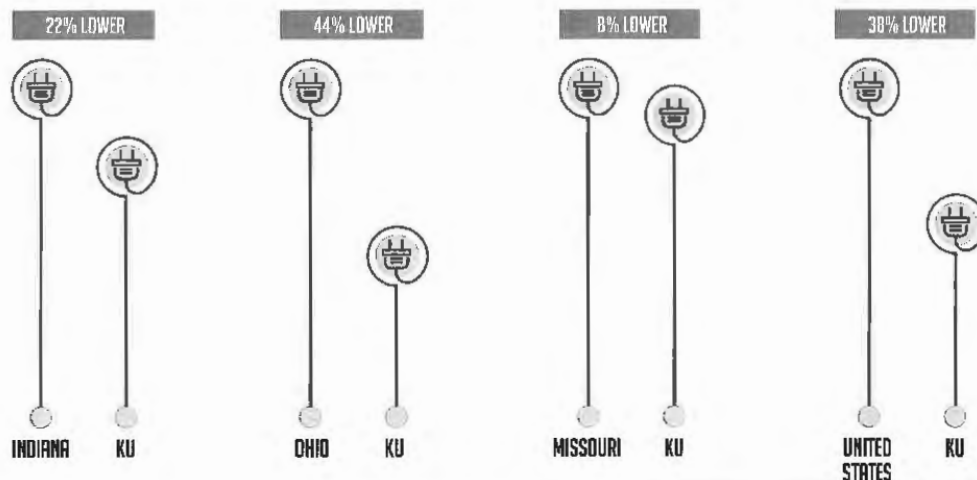
## HOW KU'S ELECTRIC RATES STACK UP

According to data from the Edison Electric Institute, the KU service area's average residential electric rate shines compared to the U.S. average and is favorable to neighboring states.

Here's how the average residential electric rates compare to the averages of neighboring states and the U.S. as a whole.

KU's rates are:

- 22 percent lower than our neighbor to the north.
- 44 percent lower than the Buckeye State.
- 8 percent lower than the Show-Me State.
- 38 percent lower than the national average.



Sign up for My Notifications and receive timely reminders about the due date of your bill by text, email and/or phone. Visit [my.lge-ku.com](http://my.lge-ku.com) for more information.

## BUSINESS IS JUST EASIER HERE

According to *Site Selection* magazine, utility infrastructure also makes powering businesses easier. In fact, it's among the top four criteria considered by corporate real estate executives when deciding where to locate or expand projects, according to an October 2015 *Site Selection* survey.

Findings show this factor ranks higher than the criteria of land/building prices and supply, ease of permitting and regulatory procedures and availability of incentives. The survey's conclusions bode well for KU's service area. Numerous projects are underway to enhance the safety and reliability of the area's electric systems, as well as further reduce emissions from electric generation.



## DID YOU KNOW?

Kentucky is ranked third in *Site Selection's* 2015 Top State Business Climates.\*

*Site Selection* magazine's annual Governor's Cup ranking has placed Kentucky among the top 15 states for the last five years in a row for new and expanded industrial activity.

Exports from Kentucky reached a record \$27.5 billion last year, with projects and services going to nearly 200 countries across the globe.

Kentucky's three largest cities (Louisville, Lexington and Bowling Green) all ranked among Forbes' Best Places for Business.

In 2015, 43 new companies and 420 expansion projects were announced, resulting in more than 16,000 jobs and \$5.1 billion in investment.

\*Georgia placed first; North Carolina was second.

### KU Contact Information



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Lexington Office: 8 a.m.–5 p.m. (ET)

**Editor**  
Cheryl.Williams@lge-ku.com

**Visit our website:**  
lge-ku.com



Like us on Facebook ([facebook.com/lgeku](https://www.facebook.com/lgeku)), and follow us on Twitter (@lgeku) and Instagram (lge\_ku).

## OUR CUSTOMERS HAVE:



*Program enrollment data is representative of January 2008 to April 2016.*

*<sup>1</sup>Assumes average residential energy usage of 12,000 kilowatt hours per year.*

*<sup>2</sup>Totals reflect the number of LG&E and KU residential customers participating in each program.*

**THANK YOU**  
**FOR JOINING YOUR NEIGHBORS**  
**IN MAKING A DIFFERENCE.**

Celebrating your energy savings.

**KU**  
a PPL company



## ENERGY EFFICIENCY PROGRAMS FOR YOUR HOME

**Advanced Meter Service** provides detailed information that helps give you a better understanding of electricity usage in your home. This voluntary service comes at no additional cost.

**Demand Conservation** helps manage the energy needs of the entire community during peak electricity demand days from June through September. A device is placed between your home and connected to your central air conditioner or heat pump that allows us to safely cycle it off and on for brief periods – but only when absolutely necessary to control the community's summer energy demand. We'll credit your summer energy bills up to \$5 per device for each summer month.

The **Fridge and Freezer Recycling** program helps you haul away and properly recycle your old, inefficient (but still working) refrigerators and freezers. In return, you receive \$50 per recycled appliance.

The Online and On-Site **Home Energy Analysis** programs help you identify ways to reduce energy use and make energy-saving improvements around your home.

- **Online Analysis** - Answer a few questions about your home and a customized list of tips is generated. This program is offered at no additional cost.
- **On-Site Analysis** - For a one-time fee of \$25, you'll receive an on-site home inspection with a certified energy analyst. After the visit, a customized report will help you identify areas for improvement in your home and help you qualify for monetary incentives.

**Home Energy Rebates** from \$50 to \$750 are available when you purchase qualifying ENERGY STAR® certified appliances, HVAC systems, window film and high-efficiency replacement windows. If you're planning to make upgrades in any of these areas, this program can help you offset the costs.

**WeCare** (Weatherization, Conservation Advice and Recycling Energy) provides education and weatherization for income-eligible customers. Visit our website for eligibility details.

Visit [lge-ku.com/savingenergy](http://lge-ku.com/savingenergy) for more details and eligibility requirements, plus information on ways your business can save too. Click **Savings Finder** for an easy way to get started!



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A free electronic newsletter from William DiOrio.

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## POWERLINES newsletter

Designed to energize businesses.

Spring 2016

Take a look at our online *Powerlines* newsletter. We hope it provides you with useful news and information to help you improve your performance.

We are dedicated to excellence and ready to assist you with your particular needs. Please let us know if you have any questions or comments about this issue of *Powerlines* or any other issue. We remain committed to providing you with safe, reliable service; an exceptional customer experience; and the best value for your energy dollar.



*William DiOrio*  
*Account Manager*

**Online Account Management** Access your usage history in graph or table format.

### Major investment planned to meet environmental requirements

Work set to begin this year

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[Read more](#)

### **Healthy growth in new business and expansions**

Announcements show continued economic growth

[Read more](#)

### **A construction update**

Major projects help reduce emissions

[Read more](#)

### **Moving closer to solar offering for business and industrial customers**

RFP issued for solar design and construction

[Read more](#)

### **Construction underway on solar facility**

Tapping into the power of the sun

[Read more](#)

### **Fast and simple power outage reporting: just text us**

It's easier than ever to tell us when your power goes out

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### **Providing power beyond electricity**

Employee giving benefits communities

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### **Construction underway on solar facility**

Tapping into the power of the sun

[Read more](#)

### **Rebates available for LEED-certified new construction**

Significant cash is available for upgrades

[Read more](#)

### **Conserve energy with demand-side management options**

Reduce energy demand, increase efficiency

[Read more](#)

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### Fast and simple power outage reporting: just text us

It's easier than ever to tell us when your power goes out

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### It's safe to say we're sticklers for safety

A little time can save big headaches

[Read more](#)

### Providing power beyond electricity

Employee giving benefits communities

[Read more](#)



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**“Our energy matters” series profiles projects that enhance service, reliability and our environmental commitment**

Energy for today, and for the years ahead

[Read more](#)

**Letting the sun shine in**

New solar facility makes its debut

[Read more](#)

**Commercial rebates offer opportunity for savings**

Energy conservation leads to financial reward

[Read more](#)

**Natural gas flexes its muscles**

Cold weather, favorable price drove increased usage

[Read more](#)

**Protecting the power: clearing trees to help avoid outages**

Overgrown trees can threaten power lines

[Read more](#)

**Green energy: an empowering choice**

Renewable Energy Certificates help support natural energy providers

[Read more](#)

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Mark White  
Account Manager

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### Shining the spotlight on our line technicians

Commitment and dedication keep the power flowing

[Read more](#)

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[Read more](#)



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*Our **Business Service Center** is your reliable source of information and service. Learn more about the services we offer by visiting the [Business Service Center website](#).*





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### Shining the spotlight on our line technicians

Commitment and dedication keep the power flowing

[Read more](#)

### Register your account online for more power

Take a little time, get a lot of convenience

[Read more](#)

### Green energy: an empowering choice

Renewable Energy Certificates help support natural energy providers

[Read more](#)



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Planting a tree?  
Building a fence?  
Installing a swimming pool?



Know what's **below.**

|                       |
|-----------------------|
| Electric              |
| Gas, Oil, or Steam    |
| Water                 |
| Sewer                 |
| Telephone or Cable TV |
| Survey Mark           |
| Proposed Excavation   |

**Call before  
you dig.**



Even if you're doing something as simple as landscaping, ***you're required by state law*** to call the ***One-Call Notification Center*** by dialing ***811*** before any excavation activity.

KU will mark the location of any underground electric lines in the area at no cost to you, so you'll know what's below and be able to dig safely. Different colored markings or flags indicate what lies beneath your dig site. Wait at least two business days before you dig to allow time for marking the lines.



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#### What happens when I call?

When you call the **One-Call Notification Center** at **811**, a "locate request" goes out to member utilities, including those who provide electric, telephone, cable, gas and water service. Crews either mark their underground utilities or notify you they have no underground lines in the area. This work is performed at no cost to you.

#### What if I hire a contractor?

If you hire a contractor to do excavation work, it is the contractor's responsibility to call before digging. Be sure to insist on this because you are the one who will be endangered or inconvenienced if the contractor hits an underground utility.

For more information, visit [1ge-ku.com](http://1ge-ku.com)





# Call KU at 800-981-0600

## What happens when I call?

When you call **811**, a "locate request" goes out to member utilities in your area, including those who provide telephone, cable, gas and water service. Some KU customers live in areas where their underground electric service is not covered by Kentucky 811. In those areas, **call KU directly at 800-981-0600** and request to have your underground electric lines marked. Crews either mark their underground utilities or notify you they have no underground lines in the area.

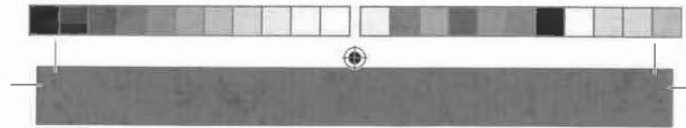
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For more information, visit [lge-ku.com](http://lge-ku.com)







## REGISTER FOR 'MY ACCOUNT'

One of the easiest ways to stay on top of your KU account and do business with us any time day or night is through My Account. This safe and secure online tool — at **my.lge-ku.com** — gives you 24/7 access to your account, making it easier and more convenient for you to do all of these things.

- View your current bill
- Enroll in My Notifications — Sign up to receive convenient bill reminders by text, email and/or voice call
- Make a payment
- Submit a request to start, stop or transfer your KU service
- Report an outage
- Sign up for energy efficiency programs
- Find out when your meter is scheduled to be read each month
- Submit a service request to have us drop a power line or cover them so you can make home repairs
- View your billing and payment history
- Review and update your account information, such as your phone number or email address
- Sign up for paperless billing (receive your bill via email) and/or AutoPay (have your monthly payment automatically deducted from your bank account on your payment due date each month)
- Landlords and Property Managers: Manage your landlord agreement(s) and make updates to your account information

Visit **my.lge-ku.com** to register your account today. You can find the information you need to register your account on your billing statement, so you may want to have your current bill handy when you register.

Once registered, sign in using your email address and password wherever and whenever you want.





## Report Power Outages

From time to time, power outages can occur in our service territory.

In most cases, power is restored in a short amount of time. However, tornadoes, thunderstorms, ice storms, fierce winds or extreme heat can cause more serious outages.

When the power goes out, our personnel are well trained and well prepared to handle such events as quickly and safely as possible. **You can help by letting us know about outages as soon as they occur.** There are a couple of ways to do this:



### Online

A quick and easy way to let us know about your power outage is by signing into your account at **my.lge-ku.com**. If you don't already have an online account with us, register your account today so you're ready if the power does go out.

#### To Register Your Account

- Go to **my.lge-ku.com** and select **Register Now**.
- Choose **Residential Customer** or **Company or Organization**.
- Fill out the **New User Registration Form**. (Have a previous bill handy as you will be asked to enter your ODP account number and other information you can find on your bill.)
- Review the verification page and click the **submit** button.
- Congratulations! You are registered.



### By Phone

To report an outage or hazardous condition, such as a downed power line, call **800-981-0600**, then

**PRESS 1-1** (Business customers, **PRESS 2-1**).

## Why Isn't My Power Restored Yet?

Sometimes storm damage can be extensive, and repairing all the damage can take hours and even days. **Our employees work around the clock** to make sure everyone's power is restored as quickly as possible. Of course, we have to go about this in a way that is safe and fair to all customers.

This **Priority List** will help you understand what happens after a storm and why it may take more time to restore your power after a major event:

- 1 The main high-voltage transmission lines which supply energy to a large area. We must fix these lines first so electricity can reach our substations, which in turn supply everything else.
- 2 Emergency and life-sustaining agencies, such as hospitals, nursing homes, fire departments and police stations receive top priority after main transmission lines.
- 3 Critical businesses that are vital to a large number of people, such as airports, schools and large manufacturing facilities.
- 4 We now turn our attention to restoring the power to the rest of our substations and tap lines. Repairing the substations allows us to restore power to large numbers of customers at one time, such as subdivisions. The same with tap lines, which might affect half a dozen customers or so. By this point, the majority of customers will probably have their power restored.
- 5 If your power is still out but your neighbor's power is on, you probably require individual repairs to the service line that runs from the pole to the meter. Crews can only make these repairs after the main transmission lines and the substation lines have been repaired. Repairing individual lines can take a considerable amount of time. In some cases, you may need to hire a licensed electrician to make repairs to your equipment before our crews can turn your service back on.



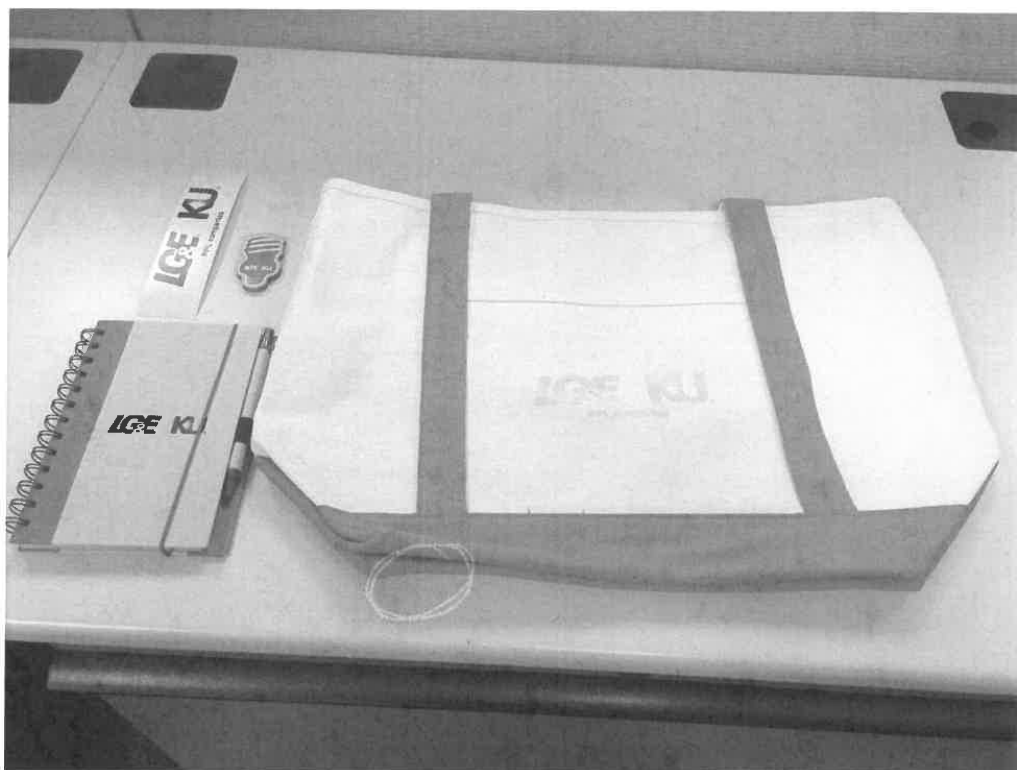


1-1-2

Report a power outage or hazardous condition.

POWER OUTAGE  
502-589-1444  
Outside Louisville  
1-800-331-7370  
Press 1-1  
(Business Customers, Press 2-1)

NATURAL GAS LEAK/EMERGENCY  
Press 1-1-1  
(Business Customers press 2-1-1)  
[my.LGE-KU.com](http://my.LGE-KU.com)







to size

**LGE & KU.**  
PPL companies

INSECT BITE RELIEF SWABS  
ADDED TO EACH KIT





## EN SPRAY W/CAP



TRANSLUCENT  
GREEN

TRANSLUCENT  
BLUE

## Pen Shape Bug Repellent - USA Made

AR411

Share     

Pen shape bug repellent-USA made. Keep the outdoor pests away with our L 2" pen-shaped container is filled with highly effective bug repellent liquid and Made of 30% recycled material, the eco-friendly 0.352 oz. (10 ml.) package is US material and liquid. Makes a great giveaway at outdoor-themed trade sho

**Additional Information:** Add your logo and "de-bug" your campaign today!

Request Info

[More from this line](#)

195  
8TASI-62007A









## KU: SECTION 1

### Payment Information



Mailed 3/7/16 for Account # 0000-0000-0000

AMOUNT DUE  
**\$133.66**

DUE DATE  
**3/31/16**

Account Name: John Doe  
Service Address: 1234 Main St  
Versailles KY 40383

- 1 **ALT TAG:** Read logo as “KU bill.”
- 2 **ALT TEXT:** Read “3/16/16” (reads March seventh, sixteen) to read, “March seventh two thousand sixteen.”
- 3 **ALT TEXT:** Read due date (reads March thirty-one, sixteen) to read, “March thirty-one two thousand sixteen.”
- 4 **DOCUMENT STRUCTURE TAG:** After “Due Date,” read “After due date, pay <insert amount>.”

## KU: SECTION 2

### Account Information

|                  |                                     |
|------------------|-------------------------------------|
| Account Name:    | John Doe                            |
| Service Address: | 1234 Main St<br>Versailles KY 40383 |

- 5     **DOCUMENT STRUCTURE TAG:** After "Service Address," read:
- 6     **ALT TEXT:** "Next meter reading will occur between April second two thousand sixteen and April seventh two thousand sixteen."

Next read will occur 4/2/16 - 4/7/16 (Meter Read Portion 02)

---

## KU: SECTION 3

### Billing Summary

#### BILLING SUMMARY

|                                    |                 |
|------------------------------------|-----------------|
| Previous Balance                   | 137.30          |
| Payment(s) Received                | -137.30         |
| Balance as of 3/4/16               | \$0.00          |
| Current Electric Charges           | 129.77          |
| Current Taxes and Fees             | 3.89            |
| Total Current Charges as of 3/4/16 | <b>\$133.66</b> |
| Total Amount Due                   | <b>\$133.66</b> |

- 7 **ALT TAG (DOLLAR SIGN)/TEXT:** Previous Balance: 137.30 (reads one hundred thirty-seven point three zero) should read as "one hundred thirty-seven dollars and thirty cents."
- 8 **ALT TAG:** Payments Received: Suppress the "S" for plural and the word "minus."
- 9 **ALT TEXT:** Balance as of 3/4/16: Read as "March fourth two thousand sixteen."
- 10 **ALT TAG (DOLLAR SIGN)/TEXT:** Current Electric Charges: 129.77 (reads as one hundred twenty-nine point seven seven) should read as "one hundred twenty-nine dollars and seventy-seven cents)
- 11 **ALT TAG (DOLLAR SIGN)/TEXT:** Current Taxes and Fees: 3.89 (reads as three point eight nine) should read as "three dollars and eighty-nine cents)
- 12 **ALT TEXT:** Total Current Charges as of 3/4/16: Read as "Total Current Charges as of March fourth two thousand sixteen."
- 13 **VARIABLE:** If customer is on Auto Pay, read ALT TEXT: "This amount <VARIABLE – INSERT TOTAL AMOUNT DUE> will be deducted from your bank account on <VARIABLE – INSERT PAYMENT DUE DATE>."
- 14 **ALT TEXT:** "Please contact <VARIABLE – INSERT UTILITY COMPANY NAME> by phone at <VARIABLE – INSERT CORRESPONDING COMPANY CUSTOMER SERVICE PHONE NUMBER> if you would like to donate to <VARIABLE – INSERT COMMUNITY WINTERHELP for LG&E; WINTERCARE ENERGY ASSISTANCE FUND for KU; WINTERSHARE ENERGY ASSISTANCE FUND for ODP>."

## KU: SECTION 4

### Payment Information

Online Payments: lge-ku.com  
Telephone Payments: 800-981-0600, press 1-2-3  
24 hours a day; \$2.25 fee  
Customer Service: 800-981-0600  
M-F, 7am-7pm ET  
Walk-in Center: Address of Business Office  
City, State, Zip Code  
M-F, 8am-5pm ET



### VARIABLE: DO NOT READ THIS SECTION IF CUSTOMER IS ON AUTO-PAY

- 15 **DOCUMENT STRUCTURE TAG:** Online Payments: URL reads as, “L G E dash coo dot com.” **ALT TAG:** “KU should read as K U.”
- 16 **VARIABLE:** Phone number <VARIABLE CONTENT BASED ON UTILITY AND LOCAL VERSUS TOLL-FREE NUMBER FOR LG&E OR KU>
- 17 **ALT TAG:** Customer Service and Walk-In Center: “M-F” reads as “M F.” Should read as, “Monday through Friday.”
- 18 **ALT TAG:** “am” reads as “am.” Should read as, “A M.”
- 19 **ALT TAG:** “ET” reads as “E T.” Should read as “Eastern Time.”
- 20 **VARIABLE:** Walk-in Customer Service Center is located at <VARIABLE CONTENT BASED ON BUSINESS OFFICE ASSIGNMENT>
- 21 **DOCUMENT STRUCTURE TAG:** Mail payments to **ALT TAG** (Logo should read as K U) at P O Box 9001960 Louisville Kentucky 40290 dash 1960.
- 22 **ALT TEXT:** “Please return stub if paying by mail. Make checks payable to <VARIABLE – INSERT UTILITY COMPANY NAME> and write your account number on your check.”

## KU: SECTION 5

### Current Electric Usage

---

#### CURRENT USAGE

| ⚡ ELECTRIC                     |                 |
|--------------------------------|-----------------|
| Meter Reading Information      | Meter # 0000000 |
| Actual (R) Reading on 3/4/16   | 65285           |
| Previous (R) Reading on 2/3/16 | 63888           |
| Current kWh Usage              | 1397            |
| Meter Multiplier               | 1               |
| Metered kWh Usage              | 1397            |

- 23     **ALT TAG/TEXT:** Actual ( R ) Reading on 3/13/16: Suppress the “R” in parentheses; date should read, “March fourth two thousand sixteen.”
- 24     **ALT TAG/TEXT:** Previous ( R ) Reading on 2/3/16: Suppress the “R” in parentheses; date should read, “February third two thousand sixteen.”
- 25     **VARIABLE:** Meter Multiplier <INSERT VARIABLE NUMBER>

## KU: SECTION 6

### Current Electric Charges

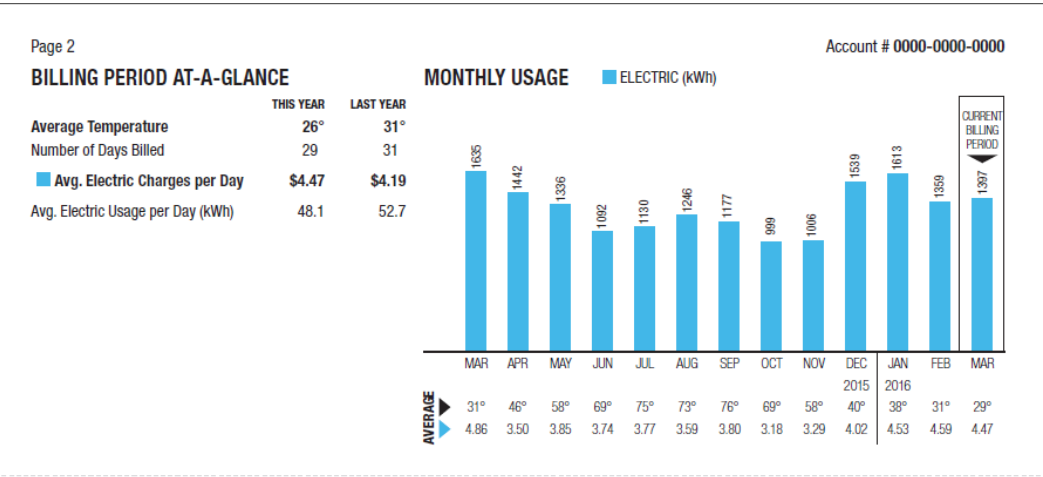
#### CURRENT CHARGES

|  ELECTRIC | Rate: Residential Service |
|--------------------------------------------------------------------------------------------|---------------------------|
| Basic Service Charge                                                                       | 10.75                     |
| Energy Charge (\$0.07744 x 1397 kWh)                                                       | 108.18                    |
| Electric DSM (\$0.00423 x 1397 kWh)                                                        | 5.91                      |
| Fuel Adjustment (-\$0.00020 x 1397 kWh)                                                    | -0.28                     |
| Environmental Surcharge (3.980% x \$124.56)                                                | 4.96                      |
| Home Energy Assistance Fund Charge                                                         | 0.25                      |
| <b>Total Charges</b>                                                                       | <b>\$129.77</b>           |

- 26 **VARIABLE:** Rate Type: <INSERT RATE TYPE>
- 27 **ALT TAG (DOLLAR SIGN)/TEXT:** Basic Service Charge reads ten point seven five.  
Read as “ten dollars and seventy-five cents.”
- 28 **ALT TAG/TEXT:** Energy Charge: Reads “point zero seven seven four four dollars ex one three nine seven KWH, one zero eight point one eight.” Read as “zero point zero seven seven four four dollars **TIMES** one three nine seven KWH **EQUALS** one hundred eight dollars and eighteen cents.”
- 29 **ALT TAG/TEXT:** Electric DSM: Reads “point zero zero four two three dollars ex one three nine seven KWH, five point nine one.” Read as “zero point zero zero four two three dollars **TIMES** one three nine seven KWH **EQUALS** five dollars and ninety one cents.”
- 30 **ALT TAG/TEXT:** Fuel Adjustment: Reads “minus zero zero two zero dollars ex one three nine seven KWH, minus zero point two eight.” Read as “minus zero point zero zero two zero dollars **TIMES** one three nine seven KWH **EQUALS** minus twenty eight cents.”
- 31 **ALT TAG/TEXT:** Environmental Surcharge: Reads “three point nine eight zero percent ex one hundred twenty four dollars and fifty six cents, four point nine six.” Read as “three point nine eight zero percent **TIMES** one hundred twenty four dollars and fifty six cents **EQUALS** four dollars and ninety-six cents.”
- 32 **ALT TEXT:** Total Charge: Read as “Total Electric Charges.”

KU: SECTION 7

Billing Period At-a-Glance



- 33 DOCUMENT STRUCTURE TAG: Most readers are set up to read right to left; need DOCUMENT STRUCTURE TAG for Billing Period At-a-Glance.
- 34 ALT TAG: Read “Average Temperature This Year <NUMBER WILL READ> degrees; last year <NUMBER WILL READ> degrees.”
- 35 ALT TAG: Read “Number of Days Billed This Year <NUMBER WILL READ>; last year <NUMBER WILL READ>.”
- 36 ALT TAG: Read “Average Electric Charges per Day <AMOUNT WILL READ> this year; last year <AMOUNT WILL READ>.”
- 37 ALT TAG: Read “Average Electric Usage per day in kilowatt hours <AMOUNT WILL READ> this year; last year <AMOUNT WILL READ>.”
- 38 CHART: Disregard chart. Extensive programming required as screen readers are set up to read right to left.

KU: SECTION 8

Taxes and Fees

| TAXES & FEES                                    |        |
|-------------------------------------------------|--------|
| Rate Increase For School Tax (3.00% x \$129.52) | 3.89   |
| Total Taxes and Fees                            | \$3.89 |

39     **ALT TEXT:** Rate Increase for School Tax: Reads as three point zero zero percent ex one hundred twenty-nine dollars and fifty two cents, three point eight nine. Should read as, “Three point zero zero percent **TIMES** one hundred twenty-nine dollars and fifty-two cents **EQUALS** three dollars and eighty-nine cents.”



Attachment to Response to Question No. 9(b)  
Page 7 of 170  
1/1/17

## Constructing LG&E and KU's Solar Share Facility

LG&E and KU plan to build, own and operate the Solar Share Facility that will be built in 500 kilowatt sections based on customer interest.

Construction will begin once a 500 kilowatt section is 100 percent subscribed. Likewise, construction on the next section and those following will require 100 percent subscription before each section is built.

The 35-acre site, located near Conner Station Road, is large enough to accommodate a 4-megawatt (DC) solar field, which would total about 12,000 panels.

### ***What can you expect during the construction process?***

- Each construction phase is expected to take between 1-4 months.
- Once construction begins, heavy equipment such as mini excavators, skid steers and telehandlers, as well as work vehicles, will be traveling in and out of the area during the construction phases.
- An RBI hydraulic impact hammer post-driving machine will be used during normal business hours for about one week per construction phase to install the posts used to mount the solar panels. The machine noise is estimated to reach a level of 80 decibels from about 300 feet away, which is comparable to city traffic from inside a car.
- We will take precautions to minimize road restrictions or traffic disruptions.
- Depending on weather conditions, steps will be taken to mitigate potential dust, dirt and mud along the roadways.
- We have included plans in the project to enhance the landscaping and aesthetics to help blend the facility into the beauty of the surrounding area.
- We will have onsite measures to deter theft and vandalism.



## LG&E and KU Solar Share Facility — Simpsonville, Ky.



***Louisville Gas and Electric Company and Kentucky Utilities Company have requested permission from the Kentucky Public Service Commission to develop a "community" solar facility in Shelby County.***



## SITE PLANS

Your site plan (sketch or computer-generated design document) should include:

- ▶ Proposed electrical route
- ▶ Building site
- ▶ Existing buildings
- ▶ Landmarks
- ▶ Septic systems and other existing utility services
- ▶ Existing roads
- ▶ Driveway(s)
- ▶ Address of each unit on site
- ▶ Placement of the addressed unit on the site

## WHY DOES KU/ODP NEED A SITE PLAN?

KU/ODP representatives will refer to the site plan you provide when they visit the site to connect the service. Incorrect information on the site plan may result in a delay in connecting service, incorrect billing to you and/or your customers, and safety concerns with improper addressing of electrical service.

---

*Avoid delays. Submit a detailed site plan and notify KU/ODP of any changes you make along the way.*

---



## CONTACT US

### Business Service Center

 KU/ODP -- 859-367-1200

(800-383-5582 if outside Lexington)

Representatives are available Monday through Friday from 8 a.m. until 6 p.m.

 [bsc@lge-ku.com](mailto:bsc@lge-ku.com)

[lge-ku.com/business-services](http://lge-ku.com/business-services)

Visit the builder/developer section of our website for detailed information about the process for completing your service request.

## IMPORTANT INFORMATION FOR BUILDERS AND DEVELOPERS

For more information, contact your KU/ODP service locator.



*Whether you're a builder or developer building a single-family home or developing an apartment complex, office building or retail space, you are focused on deadlines. Your project has a start date and an anticipated completion date. Electric service is critical to your project's success. A detailed and accurate load information sheet and site plan are extremely important to provide safe and reliable service to both you and your clients. Let's work together to ensure you get the service you need, when you need it, so you can complete your project on time and on budget.*

## **A APPLY FOR NEW SERVICE**

In any new construction project, it is important to contact the KU/ODP Business Service Center (see the back panel of this brochure for contact information) at the beginning of your project. The critical step of applying for service starts the work we need to do to ensure your customers are satisfied with their electrical service when you hand over the keys.

You will be asked to provide a valid address for the location where you need service and the date when you would like service to start. Please provide ALL available address information, such as street name, house number, lot number, etc., as it is available.

KU/ODP's Business Service Center representative will provide you with an account and/or order number, which you should retain for future reference. You will also be given the name and contact information for the service locator assigned to your project. The service locator will serve as your dedicated contact for all your electrical construction needs. Please see the "Connecting You" information above for more information.

Your service locator will request that you provide a detailed load information sheet and a copy of the site plan for your project. KU/ODP cannot connect your service without this important safety and planning information.



## **B BUILD**

Once you have successfully completed the application for service process, provided all of the required information, including a detailed load information sheet and copy of the site plan, to your KU/ODP service locator, as well as obtained all necessary permits and easements, you can begin the construction phase of your project.

Keep in mind, your service locator will be available to you throughout construction to answer any questions or address any concerns about your energy service.

---

*We are aware that sometimes construction plans change. If that occurs on your project, you must contact your KU/ODP service locator when a change affects the electric load or the site information, or when it affects KU/ODP's service arrangements or ability to connect the service.*

---

## **CONNECTING YOU**

We have exciting news! To provide an improved Customer Experience, we have created a new central phone number – **502-364-8744** – and a dedicated email address – [new.biz@lge-ku.com](mailto:new.biz@lge-ku.com) – for you to request updates, locator names and numbers, and to submit necessary documents. Having this centralized contact will expedite the overall process and make it easier to do business with us.

## **C CONNECT YOUR SERVICE**

Before KU/ODP can connect your permanent electric service, the Kentucky Uniform Building Code requires an electrical inspection. You (or your electrical contractor or other responsible party) should contact the appropriate inspection authority for your area to arrange for an inspection. After the authorized inspection authority has approved all electrical work, a green approval sticker will be posted at the job site.

---

*KU/ODP must be notified—by the authorized inspection authority—before the work to energize the service can be scheduled.*

*We can only energize your service when the approval sticker is in place.*

---

The process for designing and installing new utility services takes time and planning. By contacting KU/ODP early in the process, working with your dedicated service locator, and providing detailed, accurate information, you can be sure to receive the safe, reliable energy and service you expect and deserve.

# THE BUDGET PAYMENT PLAN KEEPS YOUR BILL STEADY

VISIT  
**LGE-KU.COM/BUDGET**  
TO SIGN UP!

VISIT **LGE-KU.COM/BUDGET**  
TO SIGN UP TODAY.

Register or sign in to My Account at [lge-ku.com/budget](http://lge-ku.com/budget) or call LG&E or KU's Customer Service Department and speak with a customer service representative. You can also sign up at your local Business Office. Find out what your initial Budget Payment Plan amount will be before making the decision to sign up.

## CUSTOMER SERVICE

Did you know you can go to My Account at [lge-ku.com](http://lge-ku.com) and pay your bill online anytime?

You can also call 24 hours a day, 7 days a week to learn your account balance, pay by phone or find out when your bill is due. Use our fast path option to take advantage of our automated system anytime, day or night. Just call customer service and press 1-2-3.

**LG&E**  
502-589-1444  
outside Louisville, call 800-331-7370

**KU**  
800-981-0600

[lge-ku.com](http://lge-ku.com)



## PLAN FOR MORE PREDICTABLE UTILITY PAYMENTS.

Join the Budget Payment Plan



# PLAN FOR PREDICTABILITY

## NOW YOU CAN AVOID SEASONAL HIGHS AND LOWS.

Very cold winters and hot, humid summers often lead to high monthly energy use that can wreak havoc on your monthly budget. With our Budget Payment Plan, you can avoid seasonal peaks in your utility bills by leveling your payments out over the course of the entire year. This plan makes it easier for you to budget and pay your energy bill each month.

Your initial Budget Payment Plan Amount is the average of the previous 12 months of bills at your current address.

Your account is reviewed in the fourth and the eighth months of your Budget Payment Plan period. Any necessary adjustments are made at those times to reduce the chance of a large settlement amount at the end of your Budget Payment Plan year in your settlement month.

- ⊕ If you used **more energy** than you paid for, your monthly Budget Payment Plan **amount will increase**.
- ⊖ If you used **less energy** than you paid for, your monthly Budget Payment Plan **amount will decrease**.

Find out what your Budget Payment Plan Amount will be before you enroll. Just sign in to My Account or call to speak with a customer service representative. You can also sign up at your local Business Office.

## WHEN IS THE BEST MONTH OF THE YEAR TO SIGN UP?

You can sign up for the Budget Payment Plan at anytime, but we recommend signing up in lower usage months like May, June, September or October. This helps avoid the chance of a larger settlement amount at the end of your Budget Payment Plan.

## LET'S LOOK AT AN EXAMPLE



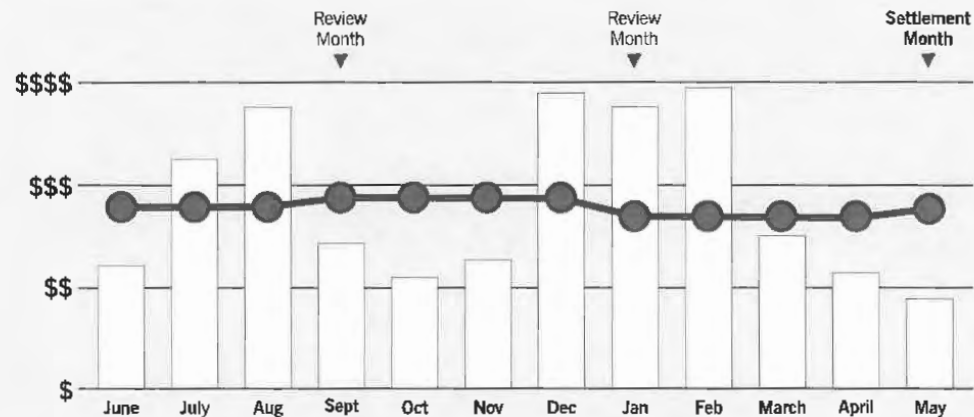
### Regular Monthly Payments

The white bars show the monthly payments of someone who is not on the Budget Payment Plan. Payments can change drastically from month to month as they use more or less energy.



### Budget Payment Plan

The blue line shows the monthly payments of a customer on the Budget Payment Plan. Their payments remain predictable throughout the year.



Billing amounts represent usage from the prior month.



## ***MY NOTIFICATIONS***

**Sign up for My Notifications**

[lge-ku.com/notifications](http://lge-ku.com/notifications)

# **National Safe Digging Month**



**Know what's below.**

**Call before you dig.**

Visit [lge-ku.com](http://lge-ku.com) for details.



Know what's below.  
**Call 811** before you dig.  
[kentucky811.org](http://kentucky811.org)

*Feel the NEED  
for SPEED?*



**589-1444 or 800-331-7370**

**[lge-ku.com/fastpath](http://lge-ku.com/fastpath)**

***BRIGHT IDEA!***



CFL bulbs save energy,  
money and the environment.

**lge-ku.com**

***CUSTOMER  
COMMITMENT  
MONTH!***



Highlighting ways we focus on you.

**lge-ku.com**

## ***HOME ENERGY REBATES***



Earn cash rebates on qualifying  
energy-efficient Energy Star® appliances.

Visit [lge-ku.com/rebates](http://lge-ku.com/rebates)

## ***HIGH EFFICIENCY APPLIANCES***



Earn cash for efficiency.

**lge-ku.com**

***KEEP SOMEONE SNUG  
WITH A H.U.G.***



Home Utility Gift certificates are a unique, convenient and practical gift for anyone. Give the gift of a H.U.G. today.

**[lge-ku.com/hug](http://lge-ku.com/hug)**

***COLD CASH  
FOR YOUR COOLER***



Fridge and Freezer Recycling Program  
**\$50 per appliance**

Visit **[lge-ku.com/recycle](http://lge-ku.com/recycle)** for **eligibility requirements**.

***STAY COOL  
USING FANS***



Fans use about 5% of the energy  
it takes to power your air conditioner.  
Stay cool and save using fans.

**lge-ku.com**

## ***ENERGY SAVING TIPS***



Wash clothes in cold or warm water;  
rinse in cold water. Wash full loads  
or adjust water level for smaller loads.

For more energy saving tips, visit **[lge-ku.com](http://lge-ku.com)**

*REPORT POWER OUTAGES  
WITH **OUTAGE TEXTING!***



Text **OUTAGE** to 4LGEKU

Text **STATUS** for updates

Visit [lge-ku.com/text](https://lge-ku.com/text) for more info.

*HOW CAN YOU*  
***SAVE ENERGY & MONEY***  
*IN YOUR HOME?*



Answer a few simple questions for some tips!

**[lge-ku.com/savings-finder](http://lge-ku.com/savings-finder)**



## Enhance the Customer Experience

Focus on and exceed customer expectations every day.

**Customer Experience: Go BEYOND the obvious.**

- Who is the customer that will be impacted?
- How will this impact the customer?
- How do I want our customer to feel when the work is done?
- What can I do to make this a positive experience for the customer?
- How does my decision fit into the rest of the customer service process?

502-627-2202

[customer.experience@lge-ku.com](mailto:customer.experience@lge-ku.com)

<https://teams.sp.lgeenergy.int/sites/CustExp>

*Safety First!*



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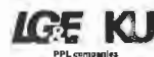
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[customer.experience@lge-ku.com](mailto:customer.experience@lge-ku.com)

<https://teams.sp.lgeenergy.int/sites/CustExp>

*Safety First!*



Customer Experience:

# Go **BEYOND**

**B**e positive  
**E**nvision yourself as the customer  
**Y**es, you make a difference  
**O**wn the interaction  
**N**ow is the time  
**D**o more

**LGE KU**  
PPL companies

Customer Experience:

# Go **BEYOND**

**B**e positive  
**E**nvision yourself as the customer  
**Y**es, you make a difference  
**O**wn the interaction  
**N**ow is the time  
**D**o more

**LGE KU**  
PPL companies

Customer Experience:

# Go **BEYOND**

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**LGE KU**  
PPL companies

Customer Experience:

# Go **BEYOND**

**B**e positive  
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**Y**es, you make a difference  
**O**wn the interaction  
**N**ow is the time  
**D**o more

**LGE KU**  
PPL companies

August is National Call Before You Dig Month.



**[lge-ku.com/recycle](http://lge-ku.com/recycle)**



## **Fridge and Freezer Recycling Program**

*(See inside for details.)*

Printed On  
  
100% Recyclable Paper  
*We Care...We Recycle*

June is National **Safety** Month.



Protect Yourself from **SCAMS.**

Visit [lge-ku.com](http://lge-ku.com) for important information  
about scams and ways to avoid them.



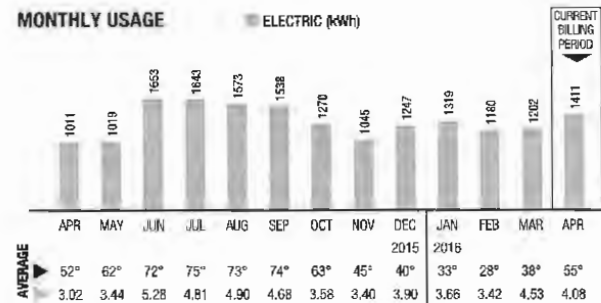
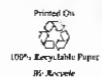
Your redesigned bill is enclosed.



### DESIGNED BY CUSTOMERS FOR CUSTOMERS

*With easy to read information and graphs,  
your new energy bill will help you better  
manage your energy usage.*

*Visit [ge-ku.com/mynewbill](http://ge-ku.com/mynewbill) for more information.*



**lge-ku.com**



Printed On  
100% Recyclable Paper  
We Care... We Recycle

# **10** Ways to cut your energy bill **for \$10 or less.**

*Learn more in this month's Power Source.*

**lge-ku.com**



Printed On  
100% Recyclable Paper  
We Care...We Recycle



## **Proper use of fans for energy efficiency.**

*Read more in this month's Power Source.*



*Give a HUG for the Holidays.*

**A HOME UTILITY GIFT (HUG) IS GREAT FOR ANYONE.**

It's easy, too. Just provide the name and address of the recipient, along with the amount you want to give (\$25 minimum), and you'll receive a gift certificate to present to them indicating the amount that will be automatically deducted from their next bill.

Visit one of our business offices or our website at [lge-ku.com/hug](http://lge-ku.com/hug) for more information, or simply complete the HUG order form on the back.

### Home Utility Gift (HUG) Certificate

#### RECIPIENT INFORMATION *(Please Print)*

Name on LG&E, KU or ODP Account: \_\_\_\_\_

LG&E, KU or ODP Account No. (if known): \_\_\_\_\_

Street Address: \_\_\_\_\_

City, State, ZIP: \_\_\_\_\_

Name you want to appear in the "To" field of the HUG Certificate: \_\_\_\_\_

#### PURCHASER INFORMATION *(Please Print)*

Name: \_\_\_\_\_

Street Address: \_\_\_\_\_

City, State, ZIP: \_\_\_\_\_

Phone (required): \_\_\_\_\_

Name you want to appear in the "From" field of the HUG Certificate: \_\_\_\_\_

Amount of your HUG purchase: \_\_\_\_\_ *(Minimum HUG Certificate purchase is \$25.)*

IMPORTANT: Please allow 10 days for processing if you mail your HUG request form and payment. We will credit the recipient's account and make every effort to ensure you receive your HUG certificate by Christmas. For orders received after Dec. 15, we will credit the recipient's account; however, we cannot guarantee delivery of your HUG certificate before Christmas. For HUG purchases after Dec. 15, visit one of our business offices. Check our website ([lge-ku.com](http://lge-ku.com)) or call Customer Service at the phone number on your bill for the location and holiday hours of an office near you.

Mail the completed form and your check or money order to: LG&E and KU  
HUG Program - 5th Floor  
One Quality Street  
Lexington, KY 40507

\*Do not enclose this form with your bill payment

## Attention, property managers!

### *Renew your landlord agreement online*

Make your life easier by using LG&E and KU's Online Property Management Tool, especially designed for property managers. It's fast, free and user-friendly — 24 hours a day, 7 days a week.

Here are some of the basic transactions you can use to manage your accounts.

- Set up and renew landlord agreements
- Update phone numbers and addresses
- Set up and modify auto pay/bank details
- Update existing agreements
- Remove accounts

To sign up, go to [lge-ku.com/bsc](http://lge-ku.com/bsc)

**LG&E KU OHP**  
PPL companies



Landlord\_Agreement\_email\_ku\_VERT.indd 1

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**LG&E KU OHP**  
PPL companies



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## NATURAL GAS SAFETY

Natural gas makes our lives more comfortable and efficient, and it's environmentally-friendly. We use natural gas to heat our homes, produce hot water, cook our meals and dry our clothes.

LG&E continuously maintains and monitors more than 4,300 miles of distribution mains and nearly 400 miles of transmission pipelines. Your safety is important to us; therefore, we want to make you aware of safety measures related to our natural gas system in the event you come in contact with any of our gas lines.

## ELECTRIC SAFETY

With the flick of a switch, you can heat, cool and light your surroundings with electricity. It's so easy. However, you must use caution when you are around or using this energy source. Safe use of electricity can prevent fires in your home and injuries to your family. Here are some tips for all members of your household to follow when using electricity.

## RECOGNIZING A NATURAL GAS LEAK



### Sight

Discolored vegetation, bubbling in water or blowing dust.



### Smell

A distinct odor, much like rotten eggs.



### Sound

Hissing, whistling or roaring noise.

If you suspect a natural gas emergency, evacuate immediately and contact LG&E. Also warn others to stay away. You may call 24 hours a day, 7 days a week.

For more information, visit us at [lge-ku.com/gassafety](http://lge-ku.com/gassafety).



## CUSTOMER SERVICE

To report an electric emergency, call LG&E or KU.

To report a natural gas issue, call LG&E. Warn others to stay away. Call us 24 hours a day, 7 days a week.

### LG&E Residential

502-589-1444

800-331-7370

### LG&E Business

502-627-3313

800-331-7370  
(outside Louisville)

[lge-ku.com](http://lge-ku.com)

### KU Residential

800-981-0600

### KU Business

859-367-1200

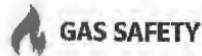
800-981-0600  
(outside Lexington)

**LG&E KU**  
PPL companies



# NATURAL GAS AND ELECTRIC SAFETY INFORMATION

**LG&E KU**  
PPL companies



## GAS SAFETY

### The smell of rotten eggs can be a sign of a natural gas leak.

If the smell is faint, check the pilot lights on your gas appliances. If the odor is strong or comes on suddenly, have everyone leave the house. Do not try to find the source of the leak yourself.



### Don't call for help from inside the home since your telephone can be an ignition source.

Get to an area where you do not smell the odor, such as a neighbor's home and use their phone or a cell phone to call LG&E at 502-589-1444 (outside Louisville, call 800-331-7370).



### Keep paints, papers, aerosol sprays and other flammables away from gas appliances.

Never store or stack boxes, laundry or other materials around the base of a gas appliance.

### Make sure the vent hood, pipes and flues are not blocked, cracked or corroded.

Don't allow children to play on or around the gas meter or any gas appliance, and don't allow them to hang or swing from indoor gas pipes.

If a gas leak occurs outside your home, the grass and/or any vegetation in your yard along the path of the leak may die as a result of displaced oxygen in the soil.

### When using a gas range, keep towels, potholders and clothing away from the open flame.

### Never use a gas oven or range to heat a room.

The appliance will "suck" all of the oxygen out of the air (which can lead to asphyxiation) or may cause carbon monoxide poisoning or death.



## ELECTRIC SAFETY

### Cover all electrical outlets and wall switches with cover plates and replace any that are damaged.

Don't yank electrical cords from the wall. This can damage both the plug and the outlet.

### Don't use damaged or brittle electrical cords, even if bare wires aren't visible.



Use extension cords only on a temporary basis, don't plug one extension cord into another.

### Don't run electrical cords under carpets.

This can cause them to overheat and catch fire. Also, avoid running cords under furniture, which can damage the insulating cover.

All outdoor outlets, including those in garages, should have waterproof covers and ground fault circuit interrupters (GFCI).



If you'll be using a ladder or pole or working on the roof, always look up for powerlines.

### Even wooden ladders can conduct electricity through their metal screws.

Stay at least 10 feet away from overhead powerlines.

### Keep flying toys, such as kites, balloons & model airplanes, away from powerlines.

### Teach children to stay away from substations and explain what the warning signs mean.

If a toy or pet accidentally gets inside a substation, give us a call. We'll be happy to retrieve it for you.

Don't hang signs on utility poles. Nails, staples or tacks can pose a hazard to our workers and their protective clothing when they climb the poles.

### Do not plant shrubs around electric transformers or trees under overhead electric powerlines.



### Call 811 to have underground utilities marked before digging.

Stay away from and don't handle downed powerlines. Just because they are down, does not mean they are not energized. **Always assume any downed wire is an energized electric line.**

**Zone 1: Edge trees**

| Species       | Drained Soil | Moist Soil | Sun | Shade | Mature Height (ft.) | Value and Remarks                 |
|---------------|--------------|------------|-----|-------|---------------------|-----------------------------------|
| Red maple     | +            | +          | +   | +     | 80                  | Choose patented varieties         |
| Sugar maple   | +            | +          | +   | +     | 100                 | Yellow-orange fall color          |
| River birch   | +            | +          | +   | +     | 90                  | Multi-trunk specimen              |
| Ginkgo        | +            | +          | +   | +     | 100                 | Choose named varieties            |
| Tulip poplar  | +            | +          | +   | +     | 150                 | Slender leaves, yellow fall color |
| Sweetgum      | +            | +          | +   | +     | 125                 | Maroon-purple fall color          |
| Blackgum      | +            | +          | +   | +     | 90                  | Brilliant red fall color          |
| White oak     | +            | +          | +   | +     | 100                 | Wide-spreading, slow grower       |
| Bald cypress  | +            | +          | +   | +     | 150                 | Pretty needle-like foliage        |
| Yellow        | +            | +          | +   | +     | 70                  | Choose patented varieties         |
| American elm  | +            | +          | +   | +     | 100                 | New disease-resistant varieties   |
| Pin oak       | +            | +          | +   | +     | 100                 | Sensitive to high pH              |
| Willow oak    | +            | +          | +   | +     | 75                  | Excellent shade tree              |
| Red oak       | +            | +          | +   | +     | 100                 | Rapid grower of the oaks          |
| White pine    | +            | +          | +   | +     | 150                 | Problems in heavy clay soils      |
| Norway spruce | +            | +          | +   | +     | 150                 | Short, dark green needles         |
| Hemlock       | +            | +          | +   | +     | 150                 | Can withstand shearing            |

Sponsored by:  
University of Kentucky  
Lexington-Fayette Urban County Government  
Kentucky Division of Forestry  
U.S. Forest Service



♻️ Printed on recycled paper.

03/15

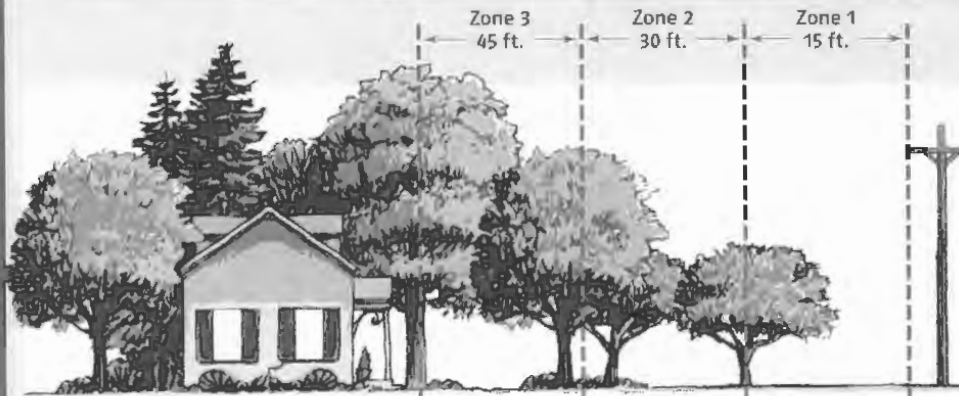
**Plan**  
*before you*  
**plant**



The **right tree** —  
the **right place**



## Consider the tree being planted...



On these pages, we have compiled a list of tree and shrub varieties and classified them — based on their height at maturity — into three zones. This information will prove valuable in helping you select the right tree for the right space.

These are only suggested varieties. There are many other good varieties available, but two important things to keep in mind when deciding on tree species are knowing the mature height and the mature width of the variety before you plant.

**Zone 3:**  
Large shade trees with mature heights of 75 feet or more. Plant these trees at least 45 feet away from the nearest power line.

**Zone 2:**  
Intermediate-height trees with mature heights ranging from 35 to 75 feet. Plant these trees at least 30 feet away from the nearest power line. These varieties could be considered small shade trees or large ornamentals. Their width and height can be nearly equal.

**Zone 1:**  
Large shrubs or small evergreens and hardwood trees with mature heights ranging from 15 to 30 feet.

### Zone 1: Shrubs

| Species            | Drained Soil | Moist Soil | Sun  | Shade | Mature Height (ft.) | Value and Remarks                 |
|--------------------|--------------|------------|------|-------|---------------------|-----------------------------------|
| Winterberry        | +            | +          | +    |       | 30                  | Red berries in winter             |
| Viburnum Species   | +            | +          | Semi |       | 25                  | Fragrant flowers                  |
| Winter Honeysuckle | +            | +          | Semi |       | 10                  | Good hedge, fragrant flowers      |
| Weigela            | +            | +          |      |       | 8                   | Red or pink flowers               |
| Forsythia          | +            | Semi       | +    | Semi  | 10                  | Yellow blooms                     |
| Elac               | +            | +          | Semi |       | 10                  | Fragrant blooms                   |
| Muck Orange        | +            | Semi       | +    | Semi  | 8                   | Choose fragrant varieties         |
| Deutzia            | +            | Semi       | +    | Semi  | 8                   | Graceful, white pendulous flowers |
| Flowering Quince   | +            | Semi       | +    | Semi  | 6                   | Orange, pink or white blooms      |
| Burning Bush       | +            | +          | Semi |       | 6                   | Red fall color                    |
| Hydrangea          | +            | Semi       | +    | Semi  | 8                   | Many varieties, summer blooms     |
| Taxus Yew          | +            | +          | +    |       | 20                  | Many shapes and forms             |
| Calycanthus        | +            | Semi       | +    | Semi  | 8                   | Unique, fruity fragrance          |

### Zone 2: Small Trees

| Species                    | Drained Soil | Moist Soil | Sun  | Shade | Mature Height (ft.) | Value and Remarks                     |
|----------------------------|--------------|------------|------|-------|---------------------|---------------------------------------|
| Juniopsis                  | +            | +          | +    |       | 30                  | Katsuki, Canari, Columbian            |
| Alberville                 | +            | +          | +    |       | 20                  | Techy, American, Emerald              |
| Paperbark Maple            | +            | +          | +    |       | 25                  | Exfoliating bark                      |
| Servicelberry              | +            | +          | Semi |       | 30                  | White flowers, orange-red fall color  |
| Rudbeckia                  | +            | +          | Semi |       | 35                  | Purple flowers in spring              |
| Pringetree                 | +            | +          | Semi |       | 30                  | White blooms in spring                |
| Dogwoods                   | +            | +          | Semi |       | 40                  | White or pink blooms                  |
| Kousa Dogwoods             | +            | +          | Semi |       | 20                  | Good resistance                       |
| Coronilla cherry dogwood   | +            | +          | Semi |       | 20                  | Yellow flowers—early spring           |
| Shower tree                | +            | +          | +    |       | 30                  | Green and red-leafed varieties        |
| Winter King Hawthorn       | +            | Semi       | +    | Semi  | 35                  | Red berries in winter                 |
| Royal star magnolia        | +            | Semi       | +    | Semi  | 20                  | White blooms in spring                |
| Sweetbay magnolia          | +            | Semi       | +    | Semi  | 30                  | Tulip-like blossoms in spring         |
| Ann Magnolia               | +            | Semi       | +    | Semi  | 25                  | Pinkish-white tulip flowers in spring |
| Flowering Cnids            | +            | Semi       | +    |       | 25                  | Choose disease-resistant              |
| Japanese tree lilac        | +            | +          | +    |       | 30                  | White blooms late spring              |
| Red buckeye                | +            | Semi       | +    | Semi  | 25                  | Red blooms                            |
| Alabastro flowering cherry | +            | +          | +    |       | 25                  | Pinkish-white flowers in spring       |
| Carolina silverbell        | +            | +          | +    |       | 25                  | White bell-like flowers in spring     |
| American hollyhock         | +            | +          | +    |       | 35                  | Native, beech-like foliage            |
| Paw paw                    | +            | +          | +    |       | 20                  | Tropical-like foliage, edible fruit   |
| Witch hazel                | +            | +          | Semi |       | 35                  | Winter bloomer                        |
| Hop-hornbeam               | +            | Semi       | +    | Semi  | 15                  | Good native ornamental tree           |
| Crape Myrtle               | +            | +          | +    |       | 15                  | Train into multi-trunk flowering tree |

### Zone 3: Medium Trees

| Species         | Drained Soil | Moist Soil | Sun  | Shade | Mature Height (ft.) | Value and Remarks                 |
|-----------------|--------------|------------|------|-------|---------------------|-----------------------------------|
| Katsura         | +            | Semi       | +    |       | 75                  | Good yellow fall color            |
| Yellowwood      | +            | +          | Semi |       | 60                  | Native, white, pea-like blooms    |
| Aristocrat Pear | +            | Semi       | +    |       | 85                  | Best of the ornamental pears      |
| Sawtooth Oak    | +            | +          | +    |       | 60                  | Yellow fall color                 |
| Honeylocust     | +            | Semi       | +    |       | 50                  | Choose patented varieties         |
| Foster Holly    | +            | +          | Semi |       | 35                  | Avoid exposure to windy locations |
| Sourwood        | +            | +          | Semi |       | 75                  | Beautiful mid-summer bloomer      |
| American Holly  | +            | Semi       | +    | Semi  | 45                  | Barnes range from red to yellow   |

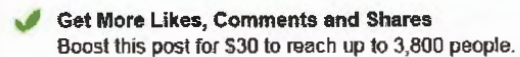
Don't forget to call before you dig. Call 811. Some KU customers live in areas where the underground electric service is not covered by 811. In those areas, customers need to call KU at 800-981-0600 to request to have their underground electric service marked.

Reported stats may be delayed from what appears on posts.



Published by Katie Delaune ? February 24, 2016

**SCAM ALERT:** This latest scheme uses a recording of our automated phone system to make the scam sound more authentic. Details at: <https://goo.gl/xP7qLL>



129,226 people reached

**Boost Post**

662

47 Comments 1K Shares 

Like Comment Share

**2,061** Reactions Comments & Shares

 Like

On Post

On Shares

 Love

**1**  
On Post!

**1**  
On Shares

😂 Haha

0  
On Post

**1**  
On Shares

 View

**16**  
On Post

### 3 On Shares

☹ Sad

**2**  
On Post

**1**  
On Shares

 Angry

**52**  
On Post

**5**  
On Shares

Comments

64  
On Post

**38**  
On Shares

Shares

**1,061**  
On Post

**37**  
On Shares

**1,308**  
Photo Views

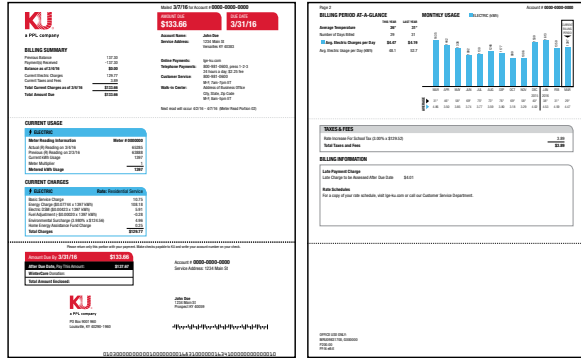
**1,742**  
Link Clicks

**2,335**  
Other Clicks *i*

### NEGATIVE FEEDBACK



## COMING SOON: YOUR NEW AND IMPROVED BILL STATEMENT



great suggestions helped us keep everything you like and incorporate new features to make it better.

Your new bill will contain plenty of detailed information that is easy to find and easy to understand – from specific breakdowns of your energy usage to an easy-to-read chart showing how your usage compares on a month-to-month and yearly basis. You'll even see your average daily energy cost. It's all information you can use to become an even better energy manager, especially when you participate in one or more of our energy-saving programs.



### THERE'S MORE

Go to [lge-ku.com](http://lge-ku.com) to:

- Get info on our major projects to enhance safety and reliability
- View our real-time falcon cam
- Find easy ways to prepare now for warmer weather

Designed by our customers for our customers: we're excited to welcome you to your new and improved utility bill, arriving next month. The final design is the result of feedback we received from customer focus groups and an online customer panel, whose

We're confident you'll find the improvements to your KU bill to be helpful and informative. Visit [lge-ku.com/mynewbill](http://lge-ku.com/mynewbill) to learn more about the new bill design.

## HERE'S TO THE TREE-PLANTING WINNERS

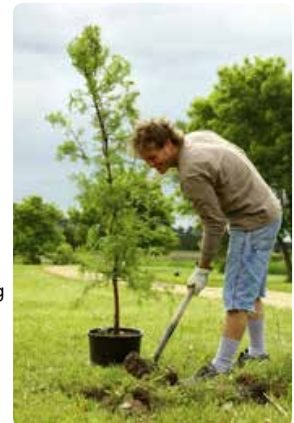
With April featuring both Earth Day (April 22) and Arbor Day (April 29), it's the perfect time for KU to announce the newest Plant for the Planet grant recipients in our service area. These nonprofit and local government organizations – with a history of successful tree plantings – will each receive a matching grant ranging from \$500 to \$5,000 to help fund their tree-planting programs:

- Shakertown at Pleasant Hill, KY, Inc. – Mercer County
- Morehead State University – Rowan County
- Campbellsville University – Taylor County
- Friends of the Parks in Fayette County
- Diamond Point Foundation and Harrodsburg Tree Board – Mercer County
- The Arboretum, State Botanical Garden of KY – Fayette County

- Henderson County Parks and Programs

Not only are trees a beautiful part of the landscape and vital to the ecosystem, they also play an important role in conserving energy. In the summer, trees provide shade. In the winter, they help provide warmth and protection from the cold winter wind.

Applications for next year's Plant for the Planet grants will be accepted beginning in November. Mark your calendar now. Visit [lge-ku.com/plantfortheplanet](http://lge-ku.com/plantfortheplanet) to learn more about the program.



## PICK UP THE PHONE BEFORE GRABBING THE SHOVEL



Spring has sprung, and you can't wait to get out in the yard to start planting ... flowers, shrubs, trees. Or maybe you're going for a bigger project, such as building a deck. But wait. Before you dust off that shovel, you need to make a phone call to have your underground

utility lines marked so you know where it's safe to dig. (It's the law.) Visit our website at [lge-ku.com](http://lge-ku.com) to see if you need to call KU

directly or if you can simply call 811. Once you call 811, member companies, including KU, will mark their underground wires or pipelines on your property whether it's electric, cable or water. That gives you peace of mind. You'll know what areas to avoid, and you can save yourself a costly repair or even a serious injury.

So, plan ahead and make the call (at least two business days before you plan on digging). The service is free, and that shovel's not going anywhere.

Sign up for My Notifications and receive timely reminders about the due date of your bill by text, email and/or phone. Visit [my.lge-ku.com](http://my.lge-ku.com) for more information.

# PROTECTING THE POWER: CLEARING TREES TO **HELP** AVOID OUTAGES



don't threaten power lines. Sometimes trees are planted near power lines. Over time, if not maintained, tree growth can cause hazards. Our Power Line Tree Clearance program keeps

Providing safe, reliable energy at some of the lowest costs in the nation is what KU is all about. One of the things that is most critical to reliability is making sure trees are properly trimmed so they

overhead power lines clear of limbs and brush, allowing our crews to detect and repair issues that impact service during storms or other events.

We use only experienced professionals to clear trees, and all work is supervised by our certified arborists. Crews are careful to use proper trimming methods to protect healthy trees. What you will see most often are "V" or "L" cuts, which are the best techniques to maintain tree health and also provide the best chance to keep trees from growing back into the power lines before the next scheduled clearing cycle.

Visit [lge-ku.com](http://lge-ku.com) to learn more about how we work to protect both power lines and trees.

## WE'RE **BIG FANS** OF FANS

Believe it or not, it won't be long before it's time to start thinking about keeping cool and flipping on the air conditioner. When that time comes, it's good to remember that fans, particularly ceiling fans, can help cool you and save you quite a bit of energy. For example, a single ceiling fan takes only about five percent as much energy as is needed to power your air conditioner. That allows you to set your thermostat a little higher and reduce the amount of time your air conditioner is running.



When using a ceiling fan to help stay cool, be sure the blades are set to move counterclockwise to draw cooler air upward. And remember during cool or colder weather, setting the fan in a clockwise direction helps push warm air down.

Look for the Energy Star® label when buying a ceiling fan for even more energy savings. Energy Star models use half as much electricity as standard units. Visit [lge-ku.com](http://lge-ku.com) for more energy-saving tips.

## WANT MORE POWER? REGISTER YOUR ACCOUNT ONLINE

One of the easiest ways to stay on top of your KU account and do business with us is through My Account. The safe and secure online tool gives you 24/7 access to your account, making it easier and more convenient for you to:

- View your current bill and billing history.
- Enroll in My Notifications – convenient bill reminders by text, email and/or voice call.
- Make a payment or view your payment history.
- Report an outage.
- Sign up for our energy-efficiency programs, paperless billing and AutoPay.

- Submit a service request to have us drop your power lines or cover them so you can make home repairs.

It takes just a few minutes to register. Visit [my.lge-ku.com](http://my.lge-ku.com) to sign up today.



### KU Contact Information



#### By Phone

Monday–Friday  
7 a.m.–7 p.m. (Eastern Time)

#### Self-Service by touch-tone phone

or web:  
Anytime day or night

**For Hearing- or Speech-Impaired**  
Dial 711

#### Business Service Center

Monday–Friday  
8 a.m.–6 p.m. (Eastern Time)

**In-Person  
Customer Service Walk-in Centers**

Monday–Friday  
9 a.m.–5 p.m. (Eastern Time)  
Lexington Office: 8 a.m.–5 p.m. (ET)

#### Editor

Visit our website:  
[lge-ku.com](http://lge-ku.com)



Like us on Facebook ([facebook.com/lgeku](https://facebook.com/lgeku)) and follow us on Twitter (@lgeku) and Instagram (lge\_ku).



## SAFE, LOW-COST POWER FOR TODAY, TOMORROW AND BEYOND

The solar facility at the E.W. Brown plant and the natural gas combined-cycle unit at Cane Run are a couple of the major investments you've read and heard about which demonstrate our constant and continuing commitment to meeting the energy demands of the future in a safe, reliable and cost-efficient manner. While those projects have received a lot of attention, there are other – but no less important – investments being made to help us make sure we keep that promise.

For example, we are purchasing a new portable transformer to improve the ability to maintain service during planned or unplanned substation transformer outages. And we continue to explore new technologies to reduce the frequency and duration of outages throughout our service area.

So, whether it's making sure there are backup parts on hand to meet any situation or a project to improve environmental quality, KU will keep making investments to ensure we continue to provide you with the safe, reliable energy you deserve.

Visit [lge-ku.com/investments](http://lge-ku.com/investments) to learn more about some of the investments we're making and the people behind them.

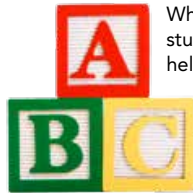


### THERE'S MORE

Go to [lge-ku.com](http://lge-ku.com) to:

- See how we're planning to meet your future energy needs
- Find out how clearing trees improves reliability
- Learn about co-op/internship opportunities for college students

## TIME FOR A LESSON ON SOME ABCs OF ENERGY EFFICIENCY



When it comes to energy efficiency, we're all students in a way. Learning ways to save energy helps us become better stewards of the environment as well as smarter users of our money. So, with school days nearing (or already under way in some cases), maybe a few ABCs of energy efficiency will come in handy, whether you're a homeowner looking for some helpful tips or a teacher working

on a classroom topic:

- **A** – Add additional insulation. Plugging up those drafty areas around doors and windows will help keep cool air from escaping during the warm months and stop cold air from entering during the winter.

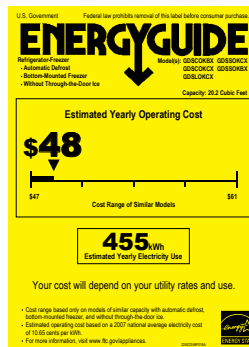
- **B** – Buy better bulbs. LED lights and CFL bulbs last longer and are much more energy efficient than older incandescent bulbs.

- **C** – Compare the cost. When buying a new appliance, there are two costs to consider: 1) the cost of the appliance itself and 2) the cost of the energy to run it. An ENERGY STAR® certified model will use less energy and save you money in the long run.

No homework tonight, but there may be a quiz later. Class dismissed.

## SPEND A LITTLE MORE NOW, SAVE A LOT MORE LATER

As with most things, sooner or later, you'll have to replace your old appliances. When you get to that point – whether it's a new refrigerator, a new stove, a new dishwasher, etc. – there's a key piece of information you'll want to consider before making a purchase: the ENERGY STAR® EnergyGuide label. It gives you an estimate of how much energy the appliance will use each year and how much the energy will cost. There can be wide variances, so it pays to factor the energy cost in along with the price tag on the appliance. The more energy efficient the appliance, the more you save over time.



So, just going with the lowest purchase price may not be the smartest move; you can pay less now but end up paying more in the long run.

You can also get cash back from KU when you buy a more energy-efficient appliance. The Home Energy Rebates program helps defray some of the cost of higher-efficiency products by offering cash rewards. Learn about the program by visiting [lge-ku.com](http://lge-ku.com) and clicking on the **Saving Energy & Money** tab.

Sign up for My Notifications and receive timely reminders about the due date of your bill by text, email and/or phone. Visit [my.lge-ku.com](http://my.lge-ku.com) for more information.

## WE HOPE YOU'RE DIGGING THIS INFORMATION ABOUT DIGGING



No one likes to get hurt. And no one likes to lose any of their utility services.

Those are two good reasons to practice safe digging. That means calling **811** before you start to dig any hole for any reason. Failure to call means you're breaking the law and subjecting yourself to significant fines. And you run the risk of damaging underground lines or pipes, seriously injuring yourself or causing a service interruption. Is that bush or mailbox really worth it? Probably not.

A quick call to **811** (dial 8-1-1) or visit to the 811 website at [811now.com](http://811now.com) to submit your request online notifies member utilities to mark any underground lines or pipes on your property. It'll be done within a few days, and it doesn't cost you a thing. So, make safety a top priority by planning ahead and making your request online or on the phone.

If you live in an area where your KU service is not covered by Kentucky 811, call [REDACTED] to request to have KU mark your underground electric service. Visit [lge-ku.com](http://lge-ku.com) to find out if you need to contact KU or 811.

## KEEPING LANDLORDS PLUGGED IN TO THE DETAILS OF UTILITY BILLING

Keeping track of utility billing can be a bit of a challenge if you are a landlord. KU's Landlord Agreement helps make that job easier. The agreement ensures utility services remain active at rental locations.

Per the agreement, when a tenant requests to have electric service discontinued, future service will be transferred and billed to the account and name listed on the Landlord Agreement, until a new tenant applies for service.

If service to a tenant is cut off due to nonpayment, the service will remain off until the delinquent balance is paid in full by

the tenant or the tenant vacates the property and the landlord authorizes the service to be transferred back into his or her name.

The landlord agrees to notify KU when a tenant vacates the property and to let the company know if a listed property is sold so it can be removed from the agreement.

Finally, the landlord is responsible for payment of any bill that is issued for electric service provided at the rental property until the company is notified of any changes to the account.

## AN EASY WAY TO REPORT A POWER OUTAGE IS RIGHT AT YOUR FINGERTIPS

If you lose power during a storm or as the result of some other emergency situation, send us a text to report the outage. It's as easy as 1-2-3:

1. Add your cellphone number to your KU account. Sign in to your online account and enter your number. If you do not have an online account, visit [my.lge-ku.com](http://my.lge-ku.com) to easily create one.
2. Add LG&E-KU to your contacts. Use 4LGEKU (454358) for the number.
3. If the power goes out, simply text **OUTAGE** to the contact number.

To get updates about the power outage in your area, text the word **STATUS** to the same contact number.

Also, remember you can visit [lge-ku.com](http://lge-ku.com) to check out the Storm & Outage Map for additional information.



### KU Contact Information



#### By Phone

[REDACTED] 0  
Monday-Friday  
7 a.m.-7 p.m. (Eastern Time)

**Self-Service by touch-tone phone or web:**  
Anytime day or night

**For Hearing- or Speech-Impaired**  
Dial 711

#### Business Service Center

[REDACTED]  
Monday-Friday  
8 a.m.-6 p.m. (Eastern Time)

#### In-Person

#### Customer Service Walk-in Centers

Monday-Friday  
9 a.m.-5 p.m. (Eastern Time)  
Lexington Office: 8 a.m.-5 p.m. (ET)

#### Editor

[REDACTED]

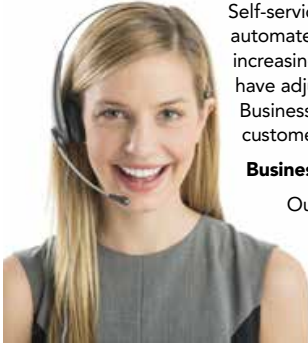
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[lge-ku.com](http://lge-ku.com)



Like us on Facebook ([facebook.com/lgeku](https://facebook.com/lgeku)) and follow us on Twitter (@lgeku) and Instagram (lge\_ku).



## PLEASE NOTE: WE'RE ADJUSTING SOME SERVICE HOURS



Self-service options, such as our website and automated phone system, have become increasingly popular. With that trend in mind, we have adjusted the operating hours for our Business Service Center and the majority of our customer service walk-in centers.

### **Business Service Center (by Phone)**

Our Business Service Center representatives are available by phone from 8 a.m. to 6 p.m. Eastern time Monday–Friday.

### **Customer Service In Person**

Effective March 14, our customer

service walk-in centers (not including Lexington) will open at 9 a.m. Eastern time Monday–Friday.

Providing the best customer service possible is always a top priority for us at KU. From our mobile-friendly website and speed-dial tools, to outage texting and My Notifications, we're focused on making sure you get fast and easy access to the information you need and want.

To learn more about KU's customer service offerings, visit our website at [lge-ku.com](http://lge-ku.com).



### **THERE'S MORE**

#### **Go to [lge-ku.com](http://lge-ku.com) to:**

- Learn about our commitment to protect the environment
- Find energy-saving tips
- Read storm/outage information

## MAJOR INVESTMENT PLANNED TO MEET ENVIRONMENTAL REQUIREMENTS

KU plans to invest \$678 million in environmental projects over the next several years to meet required Environmental Protection Agency regulations, including the Coal Combustion Residuals (CCR) rule, which became effective last year. The funds will go mainly to cap and close the utility's remaining ash ponds at the E.W. Brown and Ghent generating stations as well as the now-retired Green River, Pineville and Tyrone coal-fired power plants – placing a secure cover, or cap, over the ponds as a precursor to full closure. Other projects include additional mercury control systems, construction of process-water facilities and the second phase of the Brown landfill.

The CCR rule established new requirements for the disposal of the byproducts left over after coal is safely burned to make electricity. It also established new standards expected to require – over the next three years – commencing or completing closure of ash ponds and

some other on-site wet storage sites. KU expects to begin these latest investments in the environmental improvements in 2016 and continue through 2023.

The \$678 million plan represents the lowest reasonable cost for KU to meet the latest environmental requirements while continuing to beneficially use byproducts in a safe and practical manner. The utility has filed a request with the Kentucky Public Service Commission to recover the costs for the projects.

The EPA determined that coal combustion residuals are nonhazardous materials and can continue to be beneficially used to make certain authorized products and for specific uses. Byproducts produced at KU plants have been reused off-site to create products such as concrete, wallboard and fertilizers.

## CONSTRUCTION UNDERWAY ON SOLAR FACILITY

Construction is underway on the much-anticipated solar facility at the E.W. Brown Generating Station in Mercer County, Ky. It is expected to be up and running by late spring of 2016. The new 10-megawatt facility, approved by the Kentucky Public Service Commission in December of 2014, will sit on approximately 50 acres of the plant's property and consist of more than 45,000 solar panels on a fixed-tilt rack system. The panels will be positioned to optimize available sunlight for producing energy. The site is projected to produce its full potential approximately 400 hours annually (4.5 percent of the year). The panels are projected to produce 19,000 megawatt hours of energy, enough to provide energy to 1,500 homes based on an average usage of 1,000 kilowatt hours per month.

Thanks to competitive bidding, the final cost to build the facility is expected to be less than the original \$36 million estimate.



*Artist rendering of E.W. Brown solar power facility*

Sign up for My Notifications and receive timely reminders about the due date of your bill by text, email and/or phone. Visit [my.lge-ku.com](http://my.lge-ku.com) for more information.

## HERE'S ANOTHER TYPE OF POWER TO HELP YOU **MANAGE YOUR LIFE**



You already have enough to remember: a trip to the grocery to grab something for dinner, a doctor's appointment, a birthday party, an appointment with the cable guy, and on and on. You don't need the added stress of remembering to pay your utility bill. All you need is My Notifications. Sign up for KU payment reminders and you can choose to be notified by text, email, phone call or a combination of all three. You can even tell us when you want to be

notified – as soon as your bill is available, five days before it's due or one day past its due date.

And to make managing your monthly bill even easier, sign up for paperless billing. It's very easy to do – and once you're signed up, we'll send you a safe and secure email each month letting you know your bill is available for viewing when you sign in to your online account.

Get signed up for My Notifications and paperless billing today at [my.lge-ku.com](http://my.lge-ku.com).

## PAY **CLOSE ATTENTION** TO WHERE AND HOW YOU STORE FLAMMABLE LIQUIDS

Let's be clear: the proper storage of flammable liquids is vital to you and your family's safety. Failure to heed the proper precautions when storing gas, paint thinner, solvents and other potentially dangerous liquids could result in serious injury or even death. These liquids can ignite and burn easily, so be sure to follow these guidelines to avoid any tragedy:

- Keep 'em outside – unless absolutely necessary, store flammable liquids outside rather than inside your home.
- Use correct containers – only approved safety cans should be used, and all containers and cabinets should be properly labeled with the appropriate flammable liquids signs.

- Keep burners and pilot lights elevated – appliances that are near stored flammable liquids must have their main burners and pilot lights elevated by at least 18 inches. Vapors from flammable liquids can travel along the floor and be ignited if those ignition sources are at floor level.
- Keep 'em away from the kids – make sure flammable liquids are not where children can reach them.



## CHANGING “FILL 'ER UP” TO “**CHARGE 'ER UP**”



Charging stations for electric vehicles might become more common sooner than you think. As an energy partner, KU would like to work with business customers by installing and maintaining EV charging stations for them. To start the process, we filed an application with the Kentucky Public Service Commission in November.

The request seeks approval for 20 charging stations in public-access areas such as parking lots, street parking and other outdoor areas.

Since 2010, there have been nearly 700 plug-in capable electric vehicles registered in Kentucky, according to the Electric Power Research Institute. While that's a small percentage of the total number of registered vehicles in the commonwealth, the number is on the rise.

Under the proposal, business customers can choose to host charging stations. Business customers would pay a monthly fee, be asked to commit to a five-year term and be responsible for installation costs. The company would operate and maintain the charging stations. Learn more at [lge-ku.com](http://lge-ku.com).

### KU Contact Information



#### By Phone

Monday–Friday  
7 a.m.–7 p.m. (Eastern Time)

**Self-Service by touch-tone phone  
or web:**

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#### Editor

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[lge-ku.com](http://lge-ku.com)



Like us on Facebook ([facebook.com/lgeku](https://facebook.com/lgeku)) and follow us on Twitter (@lgeku).



## THUNDER, LIGHTNING, WIND AND RAIN: BE READY



The coming of spring means an increased likelihood of severe storms and tornadoes. March is Severe Weather Preparedness Month, so now is a good time to prepare an emergency kit to keep on hand if a storm leaves you in the dark for an extended period of time. Some things you'll need include:

- Nonperishable food
- Water
- A battery-operated radio
- Flashlights
- Extra batteries
- First-aid kit (including prescription medications)

Also, don't forget to take these steps to be prepared if a storm is in the forecast:

- Keep your cellphone charged.
- Fill your car's gas tank.
- Turn off all appliances (but leave a light switch on so you'll know when power is restored).

Never go near a fallen wire or power line. Always assume it's live and call us right away at [REDACTED].

Visit our website at [lge-ku.com](http://lge-ku.com) to see our outage map, report a problem and get more storm preparation tips.



### THERE'S MORE

Go to [lge-ku.com](http://lge-ku.com) to:

- Learn more ways to save energy and money
- Read about the importance of calling before you dig
- Find out how to get billing notification by text, email or phone

## TEXT US TO TELL US WHEN THE POWER GOES OUT

The inevitable spring storms mean potential downed power lines and loss of power. One of the easiest ways to let us know your electricity is out is right in your hand – just use your cellphone to send us a text. Set your phone up today for outage texting. It's fast and simple:

- Sign in to your online account and enter your current mobile number under My Profile/Contact Information. If you do not have an online account, create one at [my.lge-ku.com](http://my.lge-ku.com).
- Once your mobile number is entered, add us to your contacts using the number 454358.



Now you're ready to report a power outage. Simply text OUTAGE to 4LGEKU (454358) and text STATUS for updates. Don't forget you can also visit our website at [lge-ku.com](http://lge-ku.com) to see our outage map, which provides information about outages in our service area by county and ZIP code.

## WE'RE NOT JUST BLOWING HOT AIR: CLEAN YOUR DRYER FILTER FOR ENERGY SAVINGS

Don't laugh. If lint builds up on the lint filter in your dryer between loads, the machine is forced to work a little bit harder to do its job, increasing energy usage and cost. The simple solution is to remember to clean the filter after each load to improve air circulation.

Here are some other tips for making sure you get the most energy efficiency out of your dryer:

- Give the dryer a vacation – hang clothes outside to air-dry when the weather allows or inside when it doesn't.
- Once you get started, keep going – dry several loads back to back.

- Don't ask too much of the dryer – don't try to dry too many items in a single load. In other words, don't overload it.
- Don't ask too little of the dryer – dry full loads whenever possible. The same amount of energy is used for full loads as for loads of just a few items.



Sign up for My Notifications and receive timely reminders about the due date of your bill by text, email and/or phone. Visit [my.lge-ku.com](http://my.lge-ku.com) for more information.

## KEEP THE **OUTSIDE AIR** IN ITS PLACE

Simply put, air leakage means unwanted outside air entering your home through cracks or openings. And that can cause cash leakage in the form of higher utility bills. So, finding those leaks and plugging them up is good for your comfort as well as your bank account.

If you haven't done so in a while, now is a good time to look for places where air may be entering your home. Windows and doors often take a pretty good beating during the worst of winter. A good place to begin your inspection is the caulking around your doors and windows. It should be soft, without cracks. To test for leaks, try lighting a candle and holding it next to the doors and windows. Smoke drifting is a sign air is intruding from the outside.



There are several ways to seal leaks, from caulk and spray foam to weather stripping and door sweeps. A little time and elbow grease can help ensure that you "air" on the side of savings and comfort.

## DON'T LET WARM AIR GO **UP, UP AND AWAY**



While we're on the subject of air leakage, you may be aware of what is called the chimney effect, which basically derives from the principle that warm air rises. During cold and cool weather, air can escape by various means – attic vents, recessed lights, ceiling fans – whether or not your house has a chimney.

Again, where practical, seal the potential escape routes. You can

also mitigate the chimney effect by keeping the damper closed on your chimney when you are not burning a fire and by closing vents.

And don't forget the basement. The space along the top of the basement wall – where the cement or blocks come into contact with the wood frame of your home – is a common area for air to escape.

## **YOUR PATH** TO INFORMATION – THE *FAST* PATH, THAT IS

At KU, we're all about making sure you have quick and easy access to the information you need, when you need it and how you want it – 24 hours a day, seven days a week. Speed Dial provides a fast-path option that allows you to obtain account information – such as the amount due and your payment due date – and quickly make a payment by phone if you want to do so. Just give us a call at **800-981-0600** and then enter a few numbers per the menu below to get the service you want when you want it.

### Speed Dial

- 1-2-1 – learn account balance or payment due date
- 1-2-2 – make payment arrangements

- 1-2-3 – make a payment by phone
- 1-2-4 – find payment options, discover locations where you can pay your bill or request a copy of your current bill
- 1-1-2 – report a power outage or other hazardous condition

If you prefer to speak to a person, enter 1-3 to be connected to the next available representative. Representatives are available Monday–Friday from 7 a.m.–7 p.m. Business customers should enter 2-3 to speak to a representative. Business Service Center specialists are available Monday–Friday from 8 a.m.–6 p.m.

### KU Contact Information



#### By Phone

Monday–Friday  
7 a.m.–7 p.m. (Eastern Time)

#### Self-Service by touch-tone phone or web:

Anytime day or night

#### For Hearing- or Speech-Impaired Dial 711

#### Business Service Center

Monday–Friday  
8 a.m.–6 p.m. (Eastern Time)

#### In-Person

#### Customer Service Walk-in Centers

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9 a.m.–5 p.m. (Eastern Time)  
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#### Editor

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Like us on Facebook ([facebook.com/lgeku](https://facebook.com/lgeku)) and follow us on Twitter (@lgeku).



## SUNNY DAY: TAKING A **BIG STEP** TOWARD CREATING A COMMUNITY SOLAR FACILITY

Last month, KU and its sister utility, Louisville Gas and Electric Company, filed a request with the Kentucky Public Service Commission to develop a “community” solar facility in Shelby County, Ky. The subscription-based Solar Share Program proposes constructing a regional facility for the utilities’ residential, business and industrial customers interested in sharing local solar energy and receiving solar energy credits generated from the facility.

The 35-acre site, along Interstate 64 in the KU service territory, is large enough to accommodate a 4-megawatt solar field. However, Solar Share will be built in 500-kilowatt sections based on customer interest. Construction will begin once a 500-kilowatt section is 100 percent subscribed. Likewise, construction on the next section and those following will require 100 percent

subscription before each section is built.

Interested customers can visit [lge-ku.com/solar](http://lge-ku.com/solar) to learn more about Solar Share and fill out an online interest form to request updates when available. Those completing the form are under no obligation to participate in the program. Once the regulatory process is complete, customers will decide if they would like to complete the enrollment process with the utilities and pay their nonrefundable subscription fee.



### THERE'S MORE

Go to [lge-ku.com](http://lge-ku.com) to:

- Learn about our environmental upgrades and how we're planning for the future
- Find simple energy-saving tips
- Meet some of our employees who help keep the lights on

## CLEANER SKIES AHEAD: \$2.8 BILLION IN ENVIRONMENTAL PROJECTS CUTTING AIR EMISSIONS



KU's commitment to providing our customers with efficient, low-cost energy that is environmentally friendly and complies with federal clean air regulations has never been stronger. In 2011, the company (and its sister utility LG&E) received approval from the Kentucky Public Service Commission for its comprehensive environmental plans to meet the new and more stringent air quality regulations. This multibillion-dollar plan, the largest construction program in the company's history, is nearing completion.

The program included constructing additional environmental controls at the company's E.W. Brown, Ghent, Mill Creek and Trimble County power plants to further reduce sulfur dioxide and nitrogen oxide emissions, as well as installing technology to capture mercury and fine particulates. For example, we installed 10 baghouses across the generating fleet. These massive structures cost more than \$100 million each and contain 17,280 bags – each about 27 feet long – acting like giant vacuum cleaners that trap fine particulates and mercury.

These projects met all performance guarantees while coming in well-below the original \$3.1 billion estimate, producing significant savings for our customers.

“The success of these projects is attributed to our employees and contract partners,” said Scott Straight, director of Project Engineering for LG&E and KU. “It’s a significant feat and huge milestone for the companies to complete construction projects of this magnitude safely, under budget and on time.”

The company's compliance plan also resulted in the retirement of six coal-fired power plants, replacing them with a highly efficient, state-of-the-art natural-gas-fired combined cycle plant – the first one in Kentucky – at LG&E's Cane Run site in Louisville. In addition to significant reductions in sulfur dioxide, nitrogen oxide and fine particulates, the new Cane Run plant decreases carbon dioxide emissions and saved our customers millions of dollars in fuel costs.

Visit [lge-ku.com/investments](http://lge-ku.com/investments) to learn more about these projects, the company's ongoing investments and the people behind them.

Sign up for My Notifications and receive timely reminders about the due date of your bill by text, email and/or phone. Visit [my.lge-ku.com](http://my.lge-ku.com) for more information.

## BASKING IN THE BREEZE KEEPS CASH FROM BLOWING AWAY



Fans are great for helping your energy dollar go a bit further. For example, a breeze from a fan helps keep you cool during warmer weather, which means you can save energy by raising your thermostat a degree or

blades move clockwise. That pushes air upward, where hot air normally is, and dispenses it more evenly throughout the room. In some two-story homes, this helps warm the air on the lower level – where the thermostat usually is.

Finally, choosing the right fan can make a difference. When shopping for a ceiling fan, get an ENERGY STAR® certified model because they use half the energy of a standard unit. By using these American Lighting Association guidelines, you can get the right size fan for the room:

- Up to 75 sq. ft. – 29"–36"
- 76 sq. ft. to 144 sq. ft. – 36"–42"
- 145 sq. ft. to 225 sq. ft. – 44"
- 226 sq. ft. to 400 sq. ft. – 50"–54"

## ONE MAY BE THE LONELIEST NUMBER, BUT IT'S ALSO THE EASIEST

Whether you own a home or a business, we want to make sure doing business with us is easy. One option we offer business owners – also known as commercial customers – who have several meters and facilities, and therefore multiple bills, is our Collective Billing feature. Simply put, all the charges for every account you have with us are included in one bill, rather than several individual bills. This means that only one check – not multiple ones – needs to be written for payment. Or you could skip the check altogether by signing up for Auto Pay. That way your single payment is automatically deducted from your bank account. You still receive a statement in plenty of time to verify the information and record the amount and



date of withdrawal. You may also want to consider enrolling in My Notifications to receive timely reminders about the due date of your bill by text, email and/or phone.

Although there is only one bill, each separate account and its balance is shown on a detail-listing page, so that information is always available. Collective Billing is free and easy. Visit [lge-ku.com](http://lge-ku.com) or call [REDACTED] to find out how to sign up.

With Collective Billing, commercial customers save paper, reduce the time and expense of processing checks, reduce postage costs and improve operating efficiency.

## FOR COLUMBUS DAY, WE'RE SAILING ON A SEA OF SERVICE

KU's Customer Service offices and call centers will be closed on Columbus Day (Monday, Oct. 10) in observance of the federal holiday. Customer Service employees will spend the day in training to discover new ways to serve you.

Remember, your bill is never due on a day the offices are closed. You can still make a payment by phone on that day if you like by calling [REDACTED] and then pressing 1-2-3. Payment can also be made at one of our authorized pay agents or by using your online account. Visit our website at [lge-ku.com](http://lge-ku.com) to find the location of an authorized agent near you, to sign in to or register your online account and to see all the available options for paying your bill.



### KU Contact Information



#### By Phone

[REDACTED]  
Monday–Friday  
7 a.m.–7 p.m. (Eastern Time)

#### Self-Service by touch-tone phone or web:

Anytime day or night

#### For Hearing- or Speech-Impaired

Dial 711

#### Business Service Center

[REDACTED]  
Monday–Friday  
8 a.m.–6 p.m. (Eastern Time)

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#### Editor

[REDACTED]  
Visit our website:  
[lge-ku.com](http://lge-ku.com)



Like us on Facebook ([facebook.com/lgeku](https://facebook.com/lgeku)) and follow us on Twitter (@lgeku) and Instagram (lge\_ku).

**KU**  
a PPL company

**BILLING SUMMARY**

1 Mailed 4/29/16 for Account # 3000-0000-0001

2

|                                     |          |
|-------------------------------------|----------|
| Previous Balance                    | 121.16   |
| Payments Received                   | -121.16  |
| Balance as of 4/21/16               | \$0.00   |
| Current Electric Charges            | 130.63   |
| Current Taxes and Fees              | 5.22     |
| Total Current Charges as of 4/21/16 | \$135.76 |
| Total Amount Due                    | \$135.76 |

3

Account Name: JOHN SMITH  
Service Address: 100 Deer Crossing Way  
LEXINGTON KY

Online Payments: lge-ku.com  
Telephone Payments: (859) 255-0394, press 1-2-3  
24 hours a day; \$2.25 fee  
Customer Service: (859) 255-0394  
M-F, 7am-7pm ET  
1 Quality Street  
Lexington, KY 40507  
M-F, 8am-5pm ET

Next read will occur 5/19/16 - 5/21/16 (Meter Read Portion 14)

**CURRENT USAGE**

**ELECTRIC**

Meter Reading Information Meter # L2000000

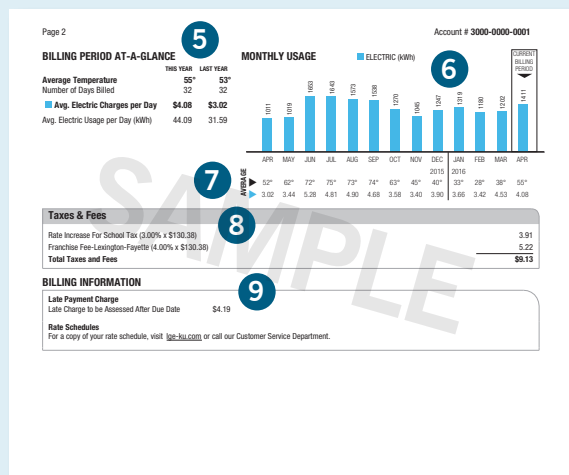
|                                     |       |
|-------------------------------------|-------|
| Actual (R) kWh Reading on 4/21/16   | 10109 |
| Previous (R) kWh Reading on 3/20/16 | 8698  |
| Current kWh Usage                   | 1411  |
| Meter Multiplier                    | 1     |
| Metered kWh Usage                   | 1411  |

4

**CURRENT CHARGES**

**ELECTRIC** Rate: Residential Service

|                                             |          |
|---------------------------------------------|----------|
| Basic Service Charge                        | 10.75    |
| Energy Charge (\$0.07744 x 1,411 kWh)       | 109.27   |
| Electric DSM (\$0.00276 x 1,411 kWh)        | 5.31     |
| Fuel Adjustment (\$0.00007 x 1,411 kWh)     | 0.10     |
| Environmental Surcharge (3.950% x \$125.43) | 4.95     |
| Home Energy Assistance Fund Charge          | 0.25     |
| Total Charges                               | \$130.63 |



## EVERYTHING INCLUDED IN YOUR NEW BILL

- 1 Easy-to-find the Amount Due and Payment Due Date.
- 2 Easy-to-read Billing Summary that shows your previous balance, payments received and your current charges.
- 3 The account name and service address along with **ways to pay** and contact information for Customer Service. We also include the date range for your next meter reading.
- 4 A detailed breakdown of your electric usage and charges.
- 5 Average temperature, usage and charges compared to the same time last year.
- 6 **NEW!** We're now including a chart, so you can see how your monthly usage compares to previous months, as well as for the same time period the previous year.
- 7 **NEW!** Daily average gives you even more information, like a daily average of your monthly cost for energy and the daily average outside temperature.
- 8 A breakdown of taxes and fees included in your bill.
- 9 Billing Information gives you relevant information about your bill, account and service.

### CUSTOMER SERVICE

[lge-ku.com](http://lge-ku.com)



## A CLOSER LOOK AT YOUR NEW BILL.

It's All About You



## NEW FEATURES TO HELP YOU BETTER UNDERSTAND YOUR ENERGY USE

Your new bill is filled with information to give you a clear view of exactly what your monthly balance includes so you can better manage your energy usage.



### CURRENT USAGE

#### ⚡ ELECTRIC

| Meter Reading Information           | Meter # L200000 |
|-------------------------------------|-----------------|
| Actual (R) kWh Reading on 4/21/16   | 10109           |
| Previous (R) kWh Reading on 3/20/16 | 8698            |
| Current kWh Usage                   | 1411            |
| Meter Multiplier                    | 1               |
| <b>Metered kWh Usage</b>            | <b>1411</b>     |

### CURRENT CHARGES

#### ⚡ ELECTRIC

Rate: Residential Service

|                                             |                 |
|---------------------------------------------|-----------------|
| Basic Service Charge                        | 10.75           |
| Energy Charge (\$0.07744 x 1,411 kWh)       | 109.27          |
| Electric DSM (\$0.00376 x 1,411 kWh)        | 5.31            |
| Fuel Adjustment (\$0.00007 x 1,411 kWh)     | 0.10            |
| Environmental Surcharge (3.950% x \$125.43) | 4.95            |
| Home Energy Assistance Fund Charge          | 0.25            |
| <b>Total Charges</b>                        | <b>\$130.63</b> |

The following line items can be found under the **Electric Charges** section of your bill (shown at left).

All of these charges have been reviewed and approved by the Kentucky Public Service Commission.

- **Basic Service Charge** – A fixed charge to help defray the costs for meter reading and processing, meter maintenance, and billing and payment processing.
- **Energy Charge** – The per unit cost (rate) multiplied by the amount of electricity (kilowatt hours – kWh) you used.
- **Electric DSM** – Charges to cover costs associated with energy efficiency programs, including Demand Conservation, Home Energy Analysis, Fridge and Freezer Recycling programs, and weatherization efforts.
- **Electric Fuel Adjustment** – A charge or credit applied to your bill based on rising (charge) or falling (credit) fuel costs associated with generating electricity. The rate can change monthly, and it is calculated as a cost (or credit) per kilowatt hour (kWh) used.
- **Environmental Surcharge** – A charge that pays for government-mandated emission controls, such as the cost of baghouses, scrubbers and other equipment that minimize environmental impact.
- **Home Energy Assistance Fund Charge** – A monthly per meter charge that provides energy assistance to customers in need who meet specified income guidelines and program criteria.

## HERE'S WHAT'S NEW



Daily averages for usage, cost, and temperatures each month.



13-month history so you can compare your usage to previous months.



The address of the walk-in center closest to your home.



Audible PDFs for the visually impaired.



PPL companies

**Power Source  
Readership Study**

03.25.2016

PREPARED BY  
**bellomy research**

|                                         |    |
|-----------------------------------------|----|
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### Background

In 2012, LG&E/KU conducted a *Power Source* readership study with a third party vendor among both paper and paperless bill customers. With the upcoming bill redesign and recent move to a new vendor for the newsletter, LG&E/KU wanted to update this research.

### Objectives

The overall objective of this study is to understand readership of both the paper and electronic newsletter. Specifically, the study evaluates:

- ❖ Overall awareness of the newsletter
- ❖ Frequency of readership
- ❖ Preferred newsletter topics
- ❖ Preferred communication vehicle

LG&E/KU provided customer lists for both paper and paperless bill customers. From these lists sample was pulled proportionally by Utility for surveying.

Paper bill customers were surveyed via telephone and paperless bill customers were sent an email invitation with a link to the internet survey. Data collection for this research was conducted from mid-February through early March 2016. The survey was approximately 5 minutes in length.

Phone data collection, among paper bill customers, was conducted Monday-Friday during the evening from 5pm-9pm and as needed on Saturday 9am-5pm. Paperless bill customers had 24/7 access to the online survey.

Quotas were set in order to achieve a 95% confidence level with a 2% to 3% margin of error. Additionally, phone quotas were set by Utility (LG&E and KU/ODP) to ensure accurate representation.

Statistical testing was conducted at the 95% confidence level, and significant differences are noted.

A breakdown of survey completes by Utility and bill type (paper vs. paperless) is outlined below:

|                                  | Total        | Paper<br>(Phone Survey) | Paperless<br>(Online Survey) |
|----------------------------------|--------------|-------------------------|------------------------------|
| <b>Total Respondents</b>         | <b>3,190</b> | <b>1,000</b>            | <b>2,190</b>                 |
| LG&E                             | 1,604        | 500                     | 1,104                        |
| KU/ODP                           | 1,586        | 500                     | 1,086                        |
| <b>Aware and Read Newsletter</b> | <b>1,634</b> | <b>662</b>              | <b>972</b>                   |
| LG&E                             | 825          | 330                     | 495                          |
| KU/ODP                           | 809          | 332                     | 477                          |



## Executive Summary

More paper bill customers are aware of the *Power Source* newsletter (75%) than paperless (52%), suggesting an opportunity to increase awareness.

- Younger customers are least aware, presenting the greatest opportunity.

Customer satisfaction with the newsletter is 7.5 on a 10pt scale, although paper bill customers are more satisfied (7.9) than paperless bill customers (7.3).

- Paper bill customers are also more likely to read *Power Source*. These customers tend to be older and more satisfied with the newsletter.

Those customers who read the newsletter frequently and in-depth are most satisfied. This is likely because they find the articles interesting and helpful.

- The challenge is providing articles that appeal to more customers in order to improve readership.

Although customers are interested in a wide range of topics, they are primarily interested in learning how to save money on their utility bill. This includes understanding things that impact their bill, energy efficiency programs and renewable energy options.

Most paperless bill customers are familiar with e-newsletters and would be interested in receiving one once a month. Gaining adoption from paper bill customers is less likely due to low familiarity and interest.

Communication preferences vary across the utility customer base.

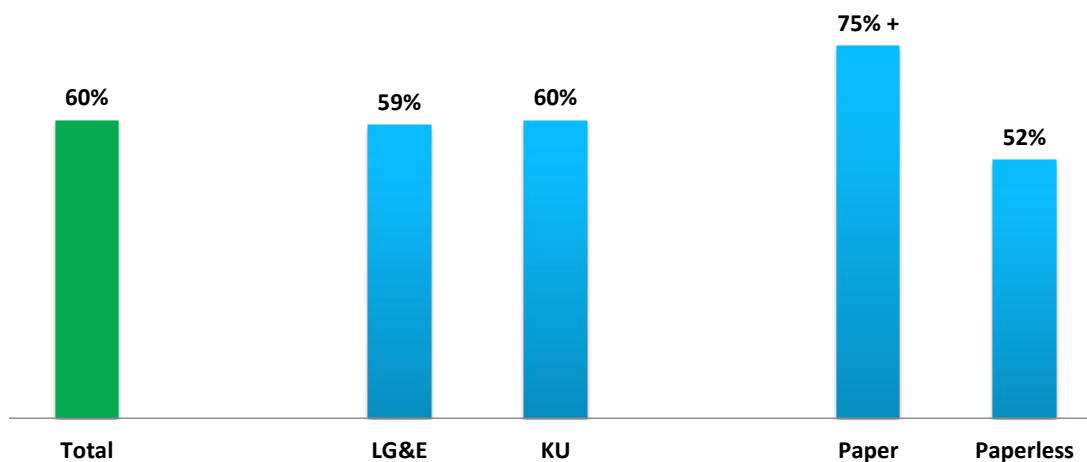
- Paperless bill and younger customers generally prefer email communications.
- Paper bill customers prefer more traditional bill inserts, other mailed communications and automated telephone calls.



## Awareness and Readership

Over half of customers surveyed were aware of the *Power Source* newsletter, similar for both LG&E and KU. However, paper bill customers, who receive *Power Source* by mail, were more aware than paperless bill customers.

### Power Source Awareness



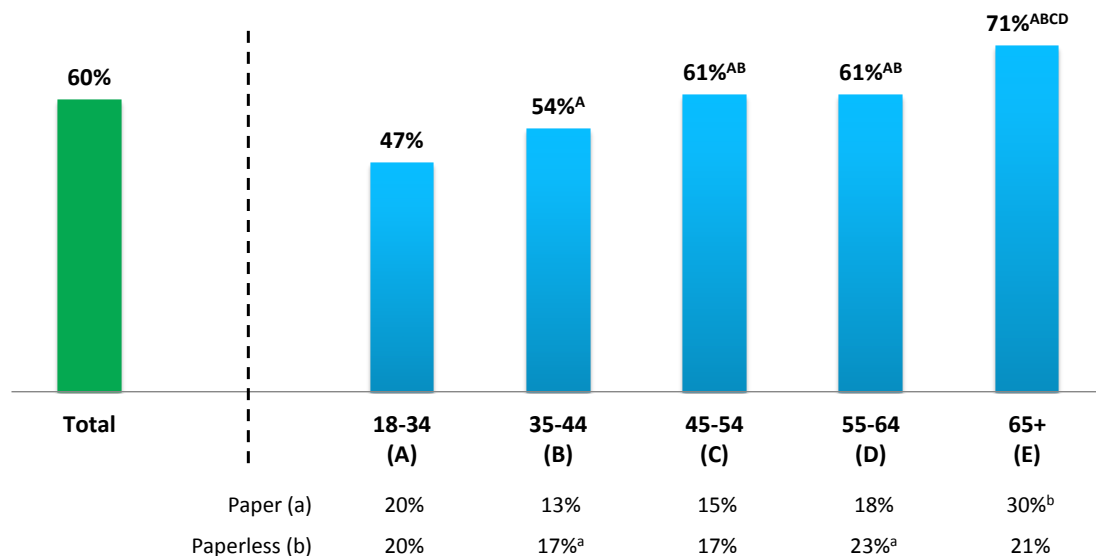
Q1. [IF PHONE] Are you aware of the *Power Source* newsletter that [LG&E, KU] includes with your monthly bill?

[IF ONLINE] Are you aware of the *Power Source* newsletter that [LG&E, KU/ODP] includes as a link with your monthly online bill?

Note: +/- indicates significant difference at 95% confidence level

Older customers were more aware of the *Power Source* newsletter than younger customers. Additionally, these older customers were more likely to receive the paper version of *Power Source*.

**Power Source Awareness – By Age**



Q1. [IF PHONE] Are you aware of the *Power Source* newsletter that [LG&E, KU] includes with your monthly bill?  
 [IF ONLINE] Are you aware of the *Power Source* newsletter that [LG&E, KU/ODP] includes as a link with your monthly online bill?  
 Letters indicate significant difference at 95% confidence level

**Power Source Readership Survey**

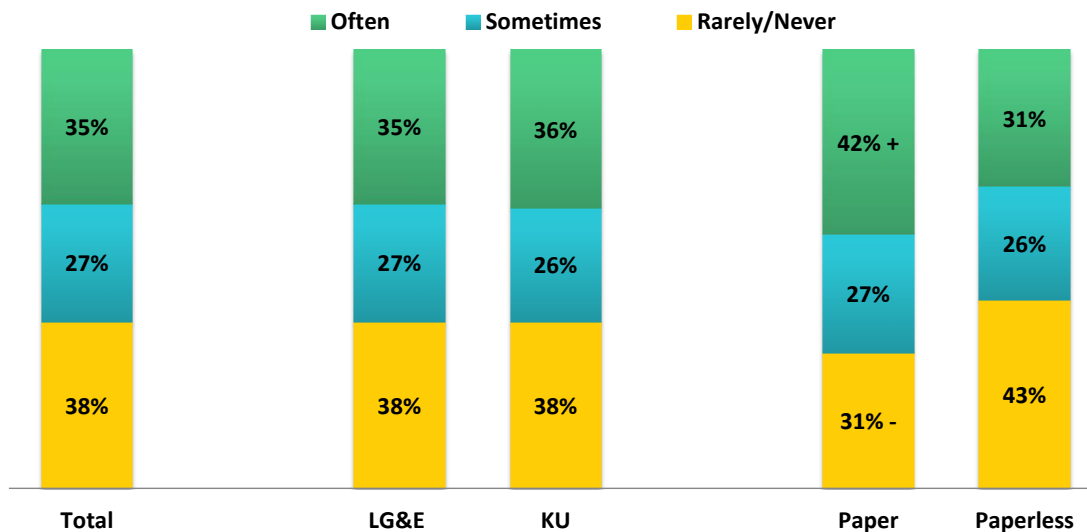
**\*CONFIDENTIAL: FOR INTERNAL USE ONLY**



Just over one-third of customers surveyed reported they read the *Power Source* newsletter often (every month or most months), similar for both LG&E and KU. However, paper bill customers were more likely than paperless to read *Power Source* regularly.

## Frequency of *Power Source* Readership

Among those aware of the newsletter



Q2. How often do you read the *Power Source* newsletter?

Note: +/- indicates significant difference at 95% confidence level

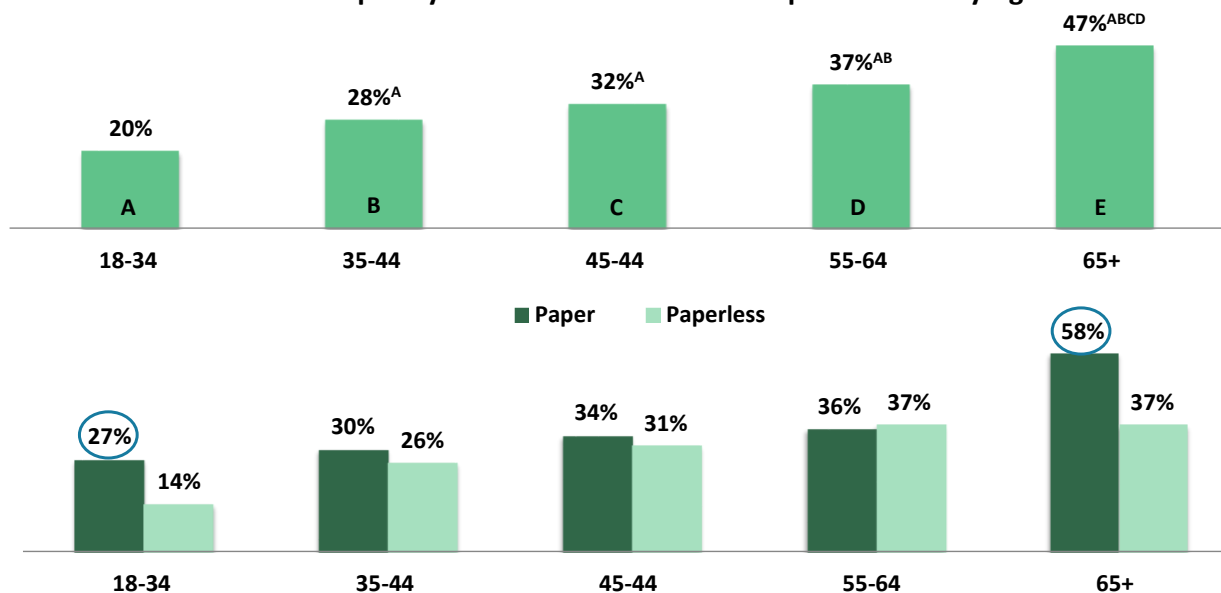
**Power Source Readership Survey**

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Older customers tend to read *Power Source* more frequently, with nearly half reporting they read the newsletter every month or most months. Paper customers in the youngest and oldest age groups were more likely to read *Power Source* than those receiving the online version.

**Frequency of *Power Source* Readership\* - % Often by Age**



Q2. How often do you read the *Power Source* newsletter? \*Among those aware of *Power Source*  
Letters indicate significant difference at 95% confidence level

**Power Source Readership Survey**

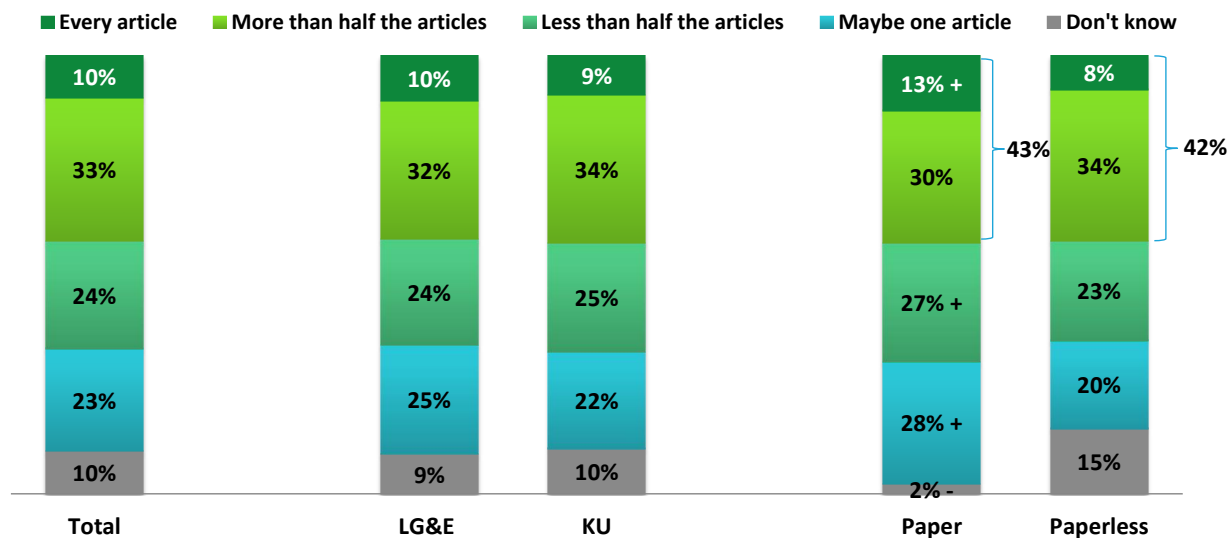
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Very few customers said they read every article in a typical *Power Source* issue, similar between LG&E and KU. Depth of readership for paper and paperless customers was similar with just under half reading the majority of a typical issue; however, paper bill customers were more likely to read every article.

### Depth of *Power Source* Readership

Among those who read the newsletter



Q4. Thinking of a typical *Power Source* issue, how many articles do you read?  
Note: +/- indicates significant difference at 95% confidence level

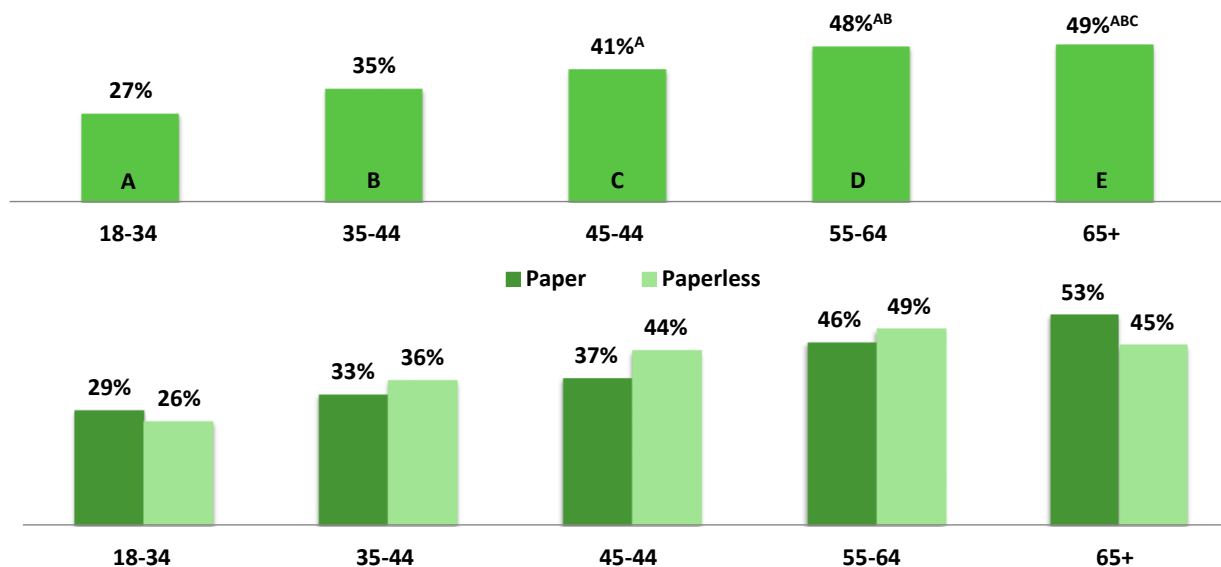
*Power Source* Readership Survey

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Older customers were more likely to read the majority of the articles in a typical *Power Source* issue. Within age groups, depth of readership was similar between the paper and electronic versions of the newsletter.

**Depth of *Power Source* Readership\* - % Read Majority by Age\*\***



Q4. Thinking of a typical *Power Source* issue, how many articles do you read? \*Among those who read *Power Source*

\*\*Majority defined as reading every article or more than half the articles

Letters indicate significant difference at 95% confidence level

**Power Source Readership Survey**

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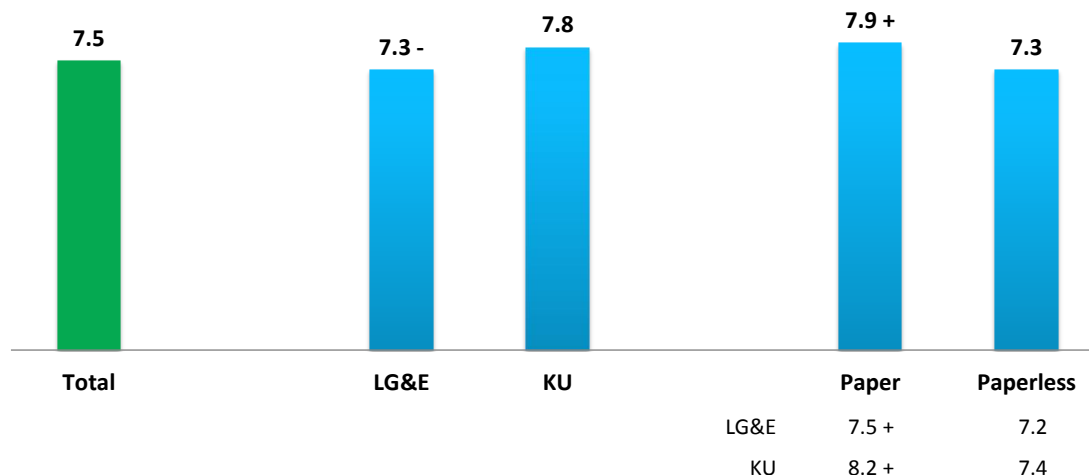
## Satisfaction with *Power Source*

## Overall Satisfaction

In general, customers who read *Power Source* rated their satisfaction with the newsletter at a 7.5 out of 10. KU customers rated their satisfaction higher than LG&E customers, although both were more satisfied with the paper version of the newsletter. Ratings among paperless customers were more similar between LG&E and KU.

### Overall Satisfaction with *Power Source*

Among those who have read the newsletter



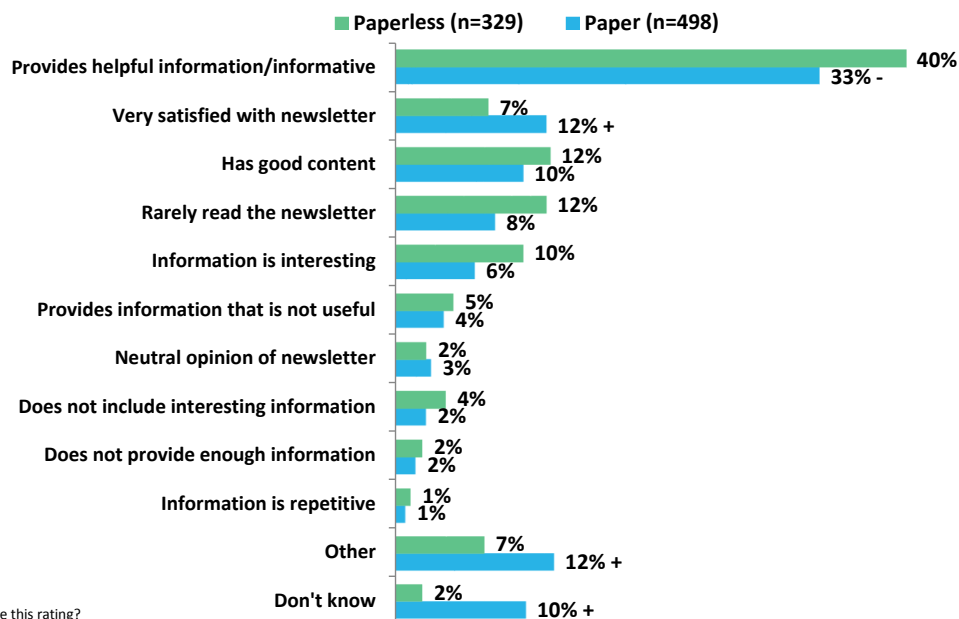
Q3. How satisfied are you overall with the *Power Source* newsletter?  
Note: +/- indicates significant difference at 95% confidence level

## Overall Satisfaction

Customers who were generally satisfied with the newsletter found it to be informative.

### Reason for Overall Satisfaction Rating – Neutral/Satisfied (Rating 6-10)

Among those who have read the newsletter



Q3a. Why did you give this rating?

Note: +/- indicates significant difference at 95% confidence level

Note: Base for percentages excludes refused responses

Power Source Readership Survey

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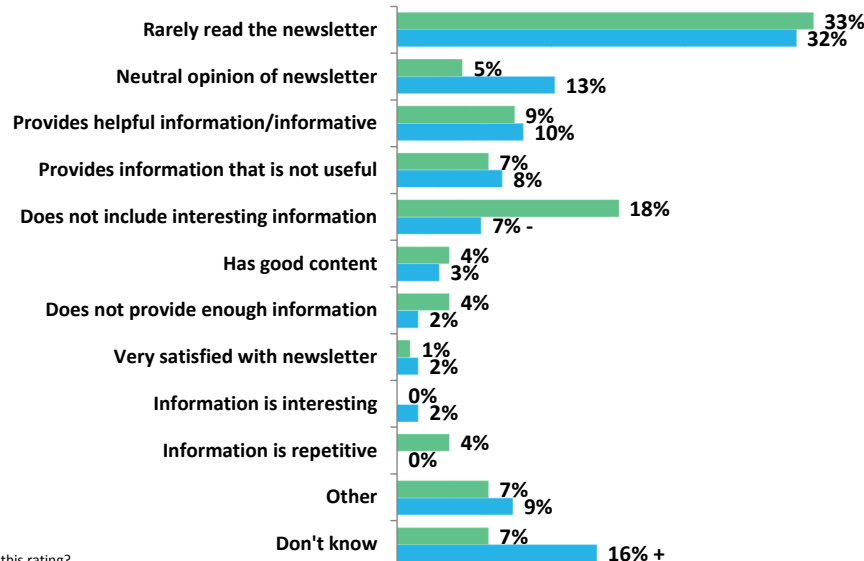


About one-third of both paper and paperless bill customers rated their satisfaction with *Power Source* low because they rarely read it. Paperless bill customers also thought that the newsletter did not include interesting information.

### Reason for Overall Satisfaction Rating – Dissatisfied (Rating 1-5)

Among those who have read the newsletter

■ Paperless (n=96) ■ Paper (n=119)



Q3a. Why did you give this rating?

Note: +/- indicates significant difference at 95% confidence level

Note: Base for percentages excludes refused responses

**Power Source Readership Survey**

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## Overall Satisfaction

As seen on slide 12, readership is lower among paperless bill customers, which aligns with several of the comments provided. Some reference receiving and reading *Power Source* by mail in the past and then forgetting about it when they switched to paperless billing. Paper bill customers provided more positive comments.

### Paperless (n=539)

I seldom read it. When it was enclosed with the paper bill, I always read it. **I simply forget about it.**  
Overall Sat=6  
Code: Rarely read the newsletter

When I received it in the mail I was more apt to look at it than when I received it through the internet. **I fail to look it up.**  
Overall Sat=10  
Code: Rarely read the newsletter

**I used to read it when I got a paper statement** and found it very useful and informative. Since I have switched to paperless billing. I usually forget to read it.  
Overall Sat=8  
Codes: Informative and Rarely read the newsletter

I am interested in my energy bill and supporting topics. I like to see innovations no matter who does them.  
Overall Sat=10  
Code: Information is interesting

### Paper (n=641)

Every time that I read, it is **very informative**. Maybe it could be more interesting. I like the energy saving tips.  
Overall Sat=9  
Code: Informative and Does not include interesting information

I like to see what they are saying every month. I just like to know how much we are spending.  
Overall Sat=9  
Code: Information is interesting

It is **very informative, very educational, and very easy to read**. It's concise and does not take a long time to read.  
Overall Sat=10  
Code: Informative

Well, it think it gives you a lot of ideas of how you can save money and where you stand with everyone else.  
Overall Sat=10  
Code: Has good content

Q3a. Why did you give this rating?

**Power Source Readership Survey**

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## Overall Satisfaction

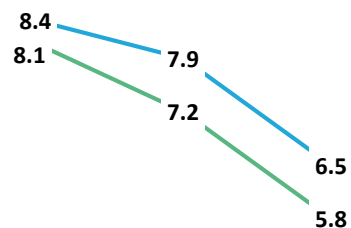
Overall Satisfaction with *Power Source* trends downward as frequency and depth of readership falls off. The gap between paper and paperless ratings is most pronounced for customers reading only one article of the newsletter.

### Overall Satisfaction with *Power Source* by Readership

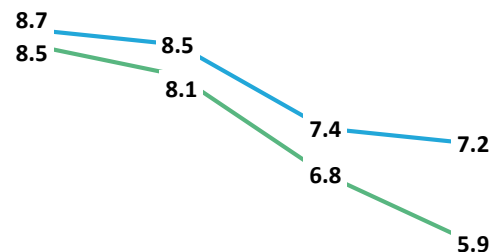
Among those who have read the newsletter

— Paperless — Paper

#### Frequency of Readership



#### Depth of Readership



Often Sometimes Rarely/Never

Every article More than half the articles Less than half the articles Maybe one article

Q3. How satisfied are you overall with the *Power Source* newsletter?

Q2. How often do you read the *Power Source* newsletter?

Q4. Thinking of a typical *Power Source* issue, how many articles do you read?

**Power Source Readership Survey**

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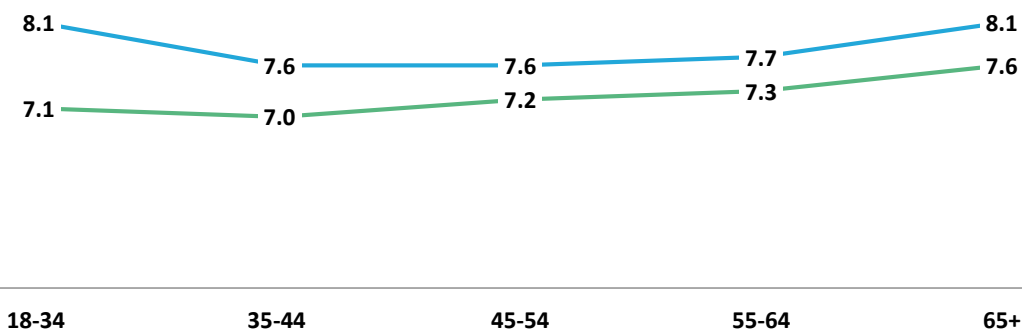
## Overall Satisfaction

Across age groups, customers who receive the paper version of *Power Source* rated their satisfaction higher than those who receive the online version, with the largest gap among younger customers.

### Overall Satisfaction with *Power Source* – by Age

Among those who have read the newsletter

— Paperless — Paper



Q3. How satisfied are you overall with the *Power Source* newsletter?

*Power Source* Readership Survey

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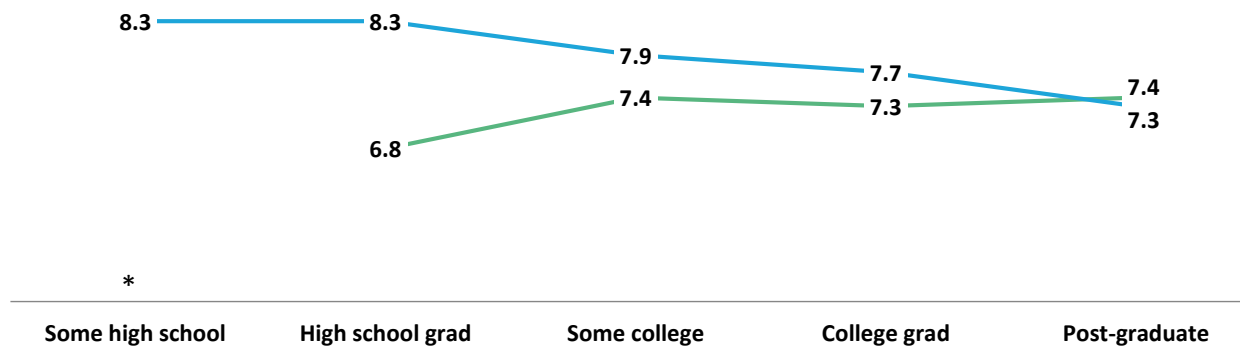
## Overall Satisfaction

Among paper bill customers, higher education tends to correspond with lower satisfaction, suggesting the current *Power Source* newsletter is not meeting their needs. Paperless bill customers without any college rated their Overall Satisfaction much lower than paper customers.

### Overall Satisfaction with *Power Source* – By Education

Among those who have read the newsletter

— Paperless — Paper



Q3. How satisfied are you overall with the *Power Source* newsletter?

\*Base size insufficient to report for Paperless some "Some high school" (n=3)

*Power Source* Readership Survey

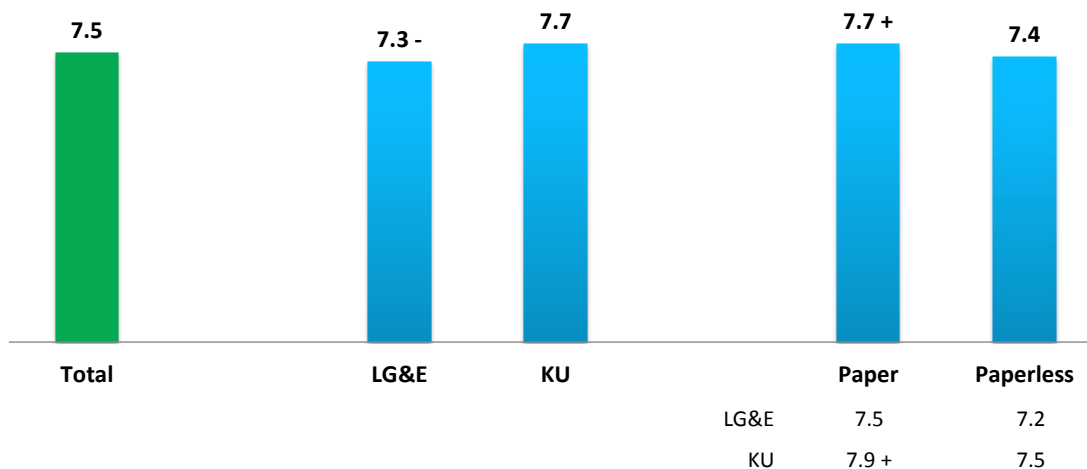
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## Topic Relevance Satisfaction

In general customers who read *Power Source* rated their satisfaction with the relevance of topics included at a 7.5 out of 10, in line with Overall Satisfaction. KU customers rated their satisfaction higher than LG&E customers. Higher ratings among customers receiving the paper version of the newsletter were driven by KU customers.

**Satisfaction with Topic Relevance**  
Among those who have read the newsletter



Q5. How satisfied are you with the relevance of the topics included in the *Power Source* newsletter?

Note: +/- indicates significant difference at 95% confidence level

## Topic Relevance Satisfaction

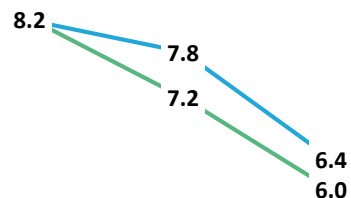
Customers who frequently read *Power Source* rated their satisfaction with the relevance of topics similarly whether they received the paper or electronic version. Similar to Overall Satisfaction, paperless customers who read only one article rated topic relevance lower than those who received the paper version.

### Satisfaction with Topic Relevance by Readership

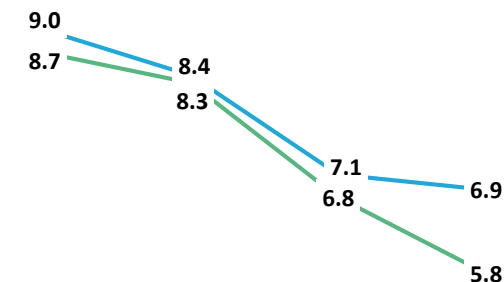
Among those who have read the newsletter

— Paperless — Paper

#### Frequency of Readership



#### Depth of Readership



Often

Sometimes

Rarely/Never

Every article

More than half the articles

Less than half the articles

Maybe one article

Q5. How satisfied are you with the relevance of the topics included in the *Power Source* newsletter

Q2. How often do you read the *Power Source* newsletter?

Q4. Thinking of a typical *Power Source* issue, how many articles do you read?

**Power Source Readership Survey**

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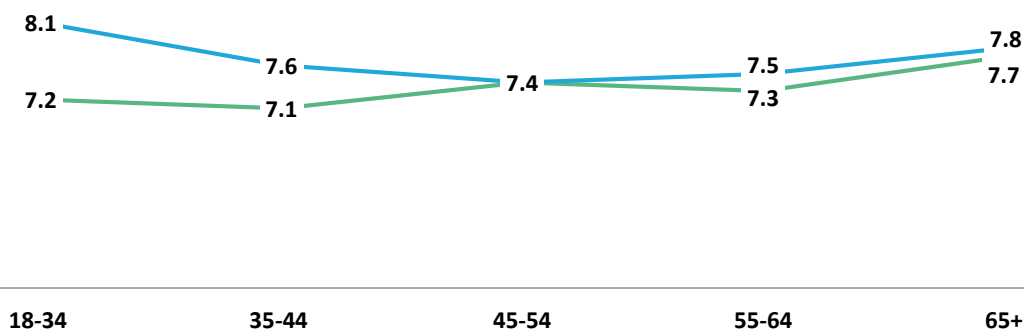
## Topic Relevance Satisfaction

Paper and paperless billing customers in the older age groups tend to rate their satisfaction with topic relevance more similarly than younger customers.

### Satisfaction with Topic Relevance – by Age

Among those who have read the newsletter

— Paperless — Paper



Q5. How satisfied are you with the relevance of the topics included in the *Power Source* newsletter?

*Power Source* Readership Survey

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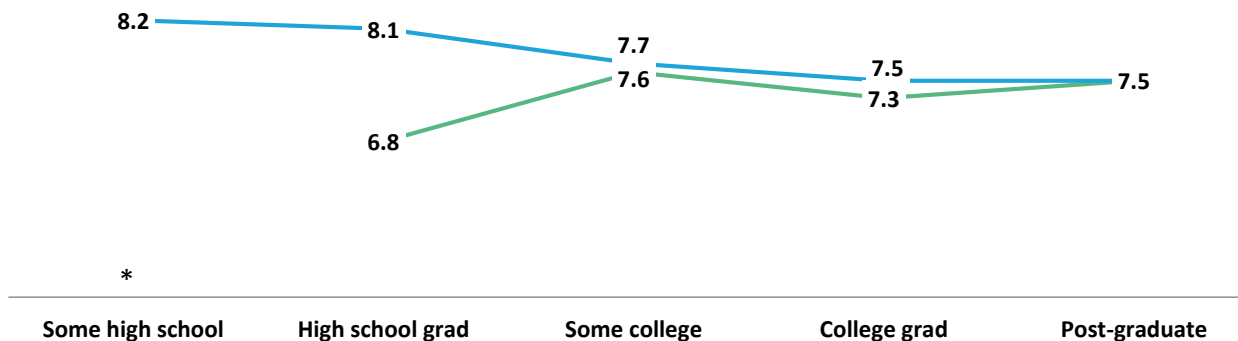
## Topic Relevance Satisfaction

Satisfaction with topic relevance by education level mirrors the trend seen with Overall Satisfaction, with lower satisfaction among paper bill customers corresponding with higher education.

### Satisfaction with Topic Relevance – By Education

Among those who have read the newsletter

— Paperless — Paper



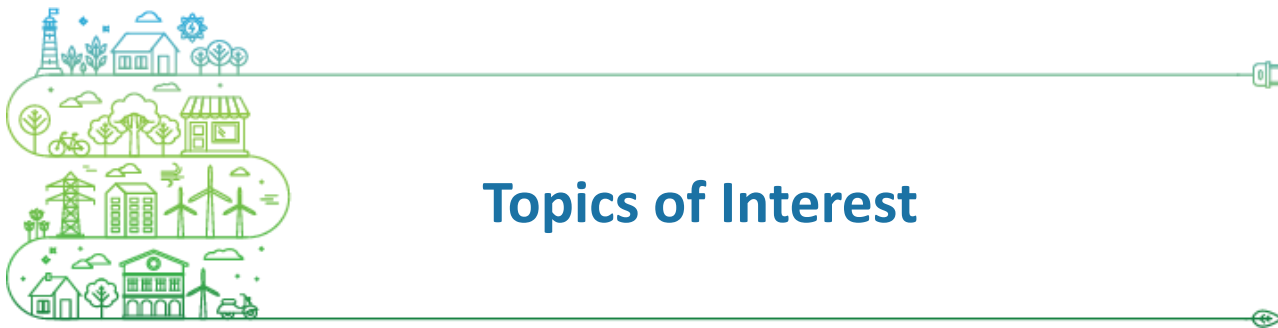
Q5. How satisfied are you with the relevance of the topics included in the *Power Source* newsletter?

\*Base size insufficient to report for Paperless some "Some high school" (n=3)

*Power Source* Readership Survey

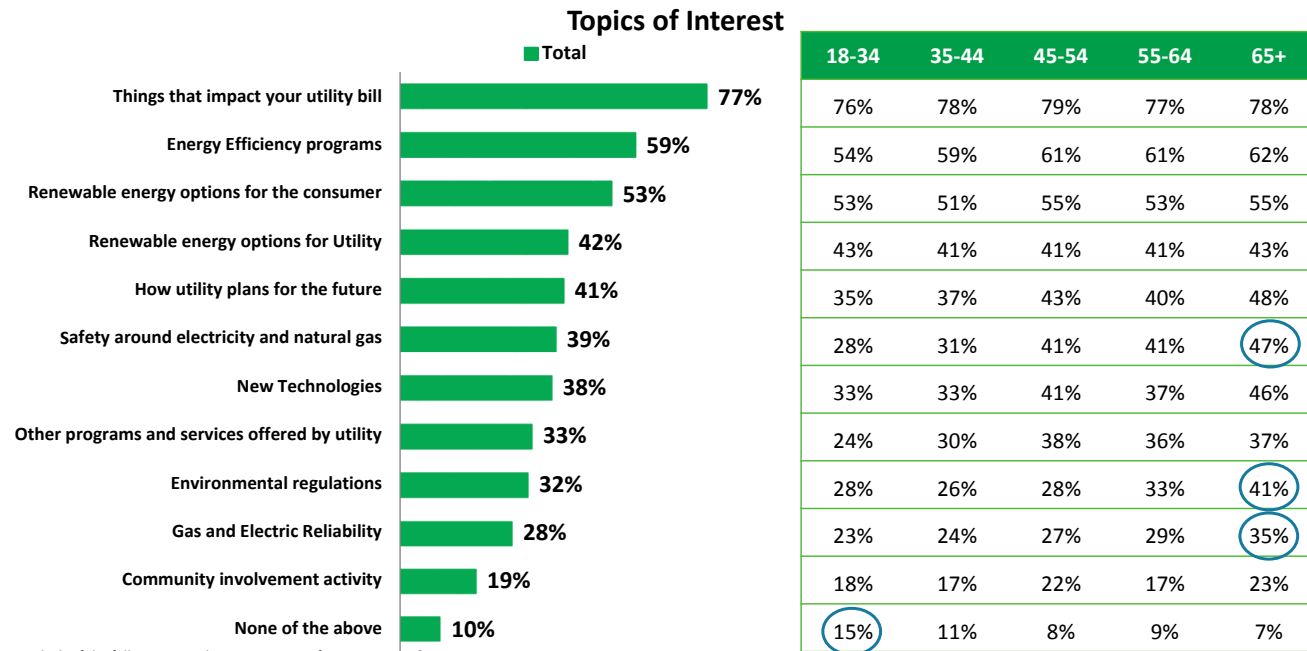
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## Topics of Interest

Over three-fourths of customers surveyed expressed an interest in *Power Source* topics regarding things that impact their utility bill, similar across age groups. Other areas of interest included Energy Efficiency programs and renewable energy options, suggesting customers are most interested in topics that impact their energy costs. Younger customers were more likely to express no interest in any of the topics listed.



Q6. Which of the following newsletter topics are of interest to you?  
Circle indicates significant difference at 95% confidence level versus all other age groups

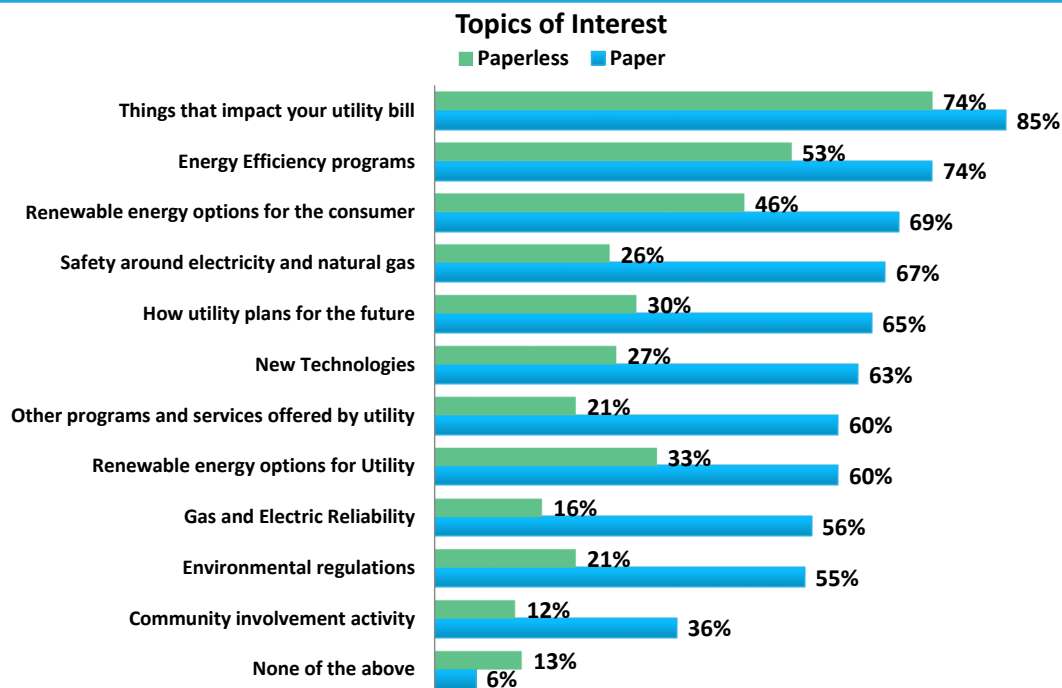
**Power Source Readership Survey**

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## Topics of Interest

Customers who receive a paper bill expressed interest in a greater variety of *Power Source* topics than paperless customers; however, the difference in methodology between the groups (Phone vs. Online) is likely contributing to this.



Q6. Which of the following newsletter topics are of interest to you?

**Power Source Readership Survey**

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## Topics of Interest

When asked for any other newsletter topics of interest, the majority of customers surveyed chose not to provide a response. Among those who did respond, another third provided a comment stating nothing or none. Some customers made valuable suggestions, mostly regarding more detailed information on energy usage, Energy Efficiency and/or ways to better understand their LG&E/KU bill.

| % Refused |     |
|-----------|-----|
| Paper     | 84% |
| Paperless | 86% |

I am interested in energy efficiency measures like energy audits, insulation, air infiltration sealing etc. However, I am unsure of what private contractors are available, nor how much they charge for such services. If LG&E could standardize or approve such services, it would be easier to make decisions about energy efficiency measures.

What to do in the case of an emergency.

It's hard to publish a newsletter with topics that are relevant to all the people all the time. Most folks need specific information when they need specific information. Given the available technology, you might invest your communications dollars better in an interactive website that 'pops' with each monthly bill.

How to access interval and demand data in order to appropriately select from the three current residential rates available.

Political influences on the utility industry, including KU's support of political parties. Curious if KU makes donations to any political organizations.

Q6a. Are there any other newsletter topics that are of interest to you?

**Power Source Readership Survey**

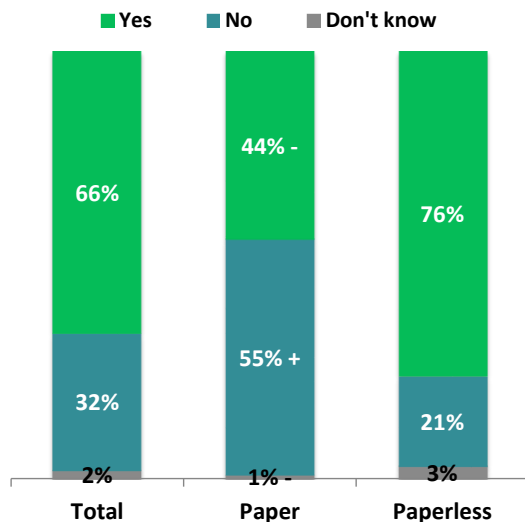
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Nearly two-thirds of customers surveyed were familiar with the concept of an e-newsletter, with paperless customers much more familiar than paper. Many customers familiar with e-newsletters were interested in receiving this format. Not surprisingly, customers who were unfamiliar expressed less interest.

## Are you familiar with e-newsletters?

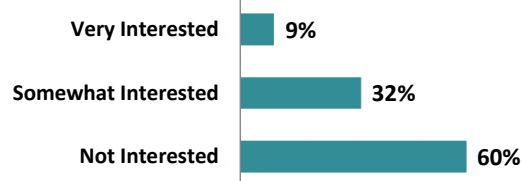


## How interested are you in receiving an e-newsletter from LG&E and KU?

### Familiar with e-newsletters



### Unfamiliar with e-newsletters



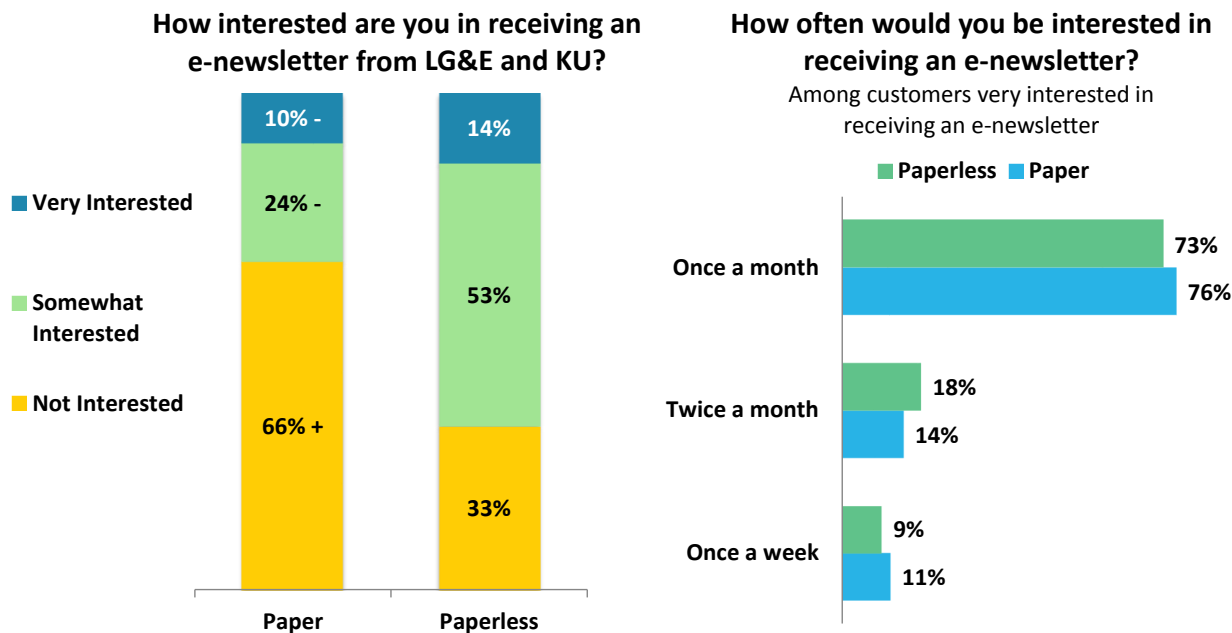
Q7. Are you familiar with e-newsletters?  
Q.8 How interested are you in receiving an e-newsletter from LG&E/KU?  
Note: +/- indicates significant difference at 95% confidence level

Power Source Readership Survey

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Paperless billing customers are significantly more interested in receiving an e-newsletter than paper customers; however, only 14% of paperless customers are very interested. Of those who are very interested, preference towards a monthly e-newsletter is similar for both paper and paperless customers.



Q.8 How interested are you in receiving an e-newsletter from LG&E/KU?

Q.9 How often would you be interested in receiving an e-newsletter?

Note: +/- indicates significant difference at 95% confidence level

Power Source Readership Survey

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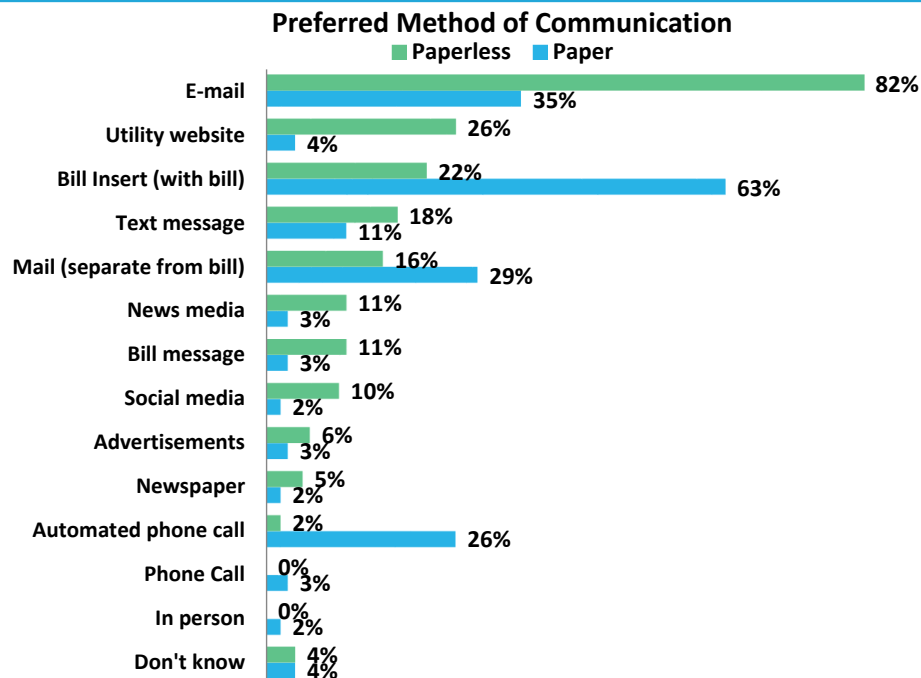




## Communication Preference

## Method of Communication

Preferred method of communication varies between paper and paperless customers. Paperless customers prefer more digital methods of communication, such as e-mail and the utility website, while paper customers like mail and phone communications.



Q.10 How do you prefer to receive information and communications from LG&E and KU?

Power Source Readership Survey

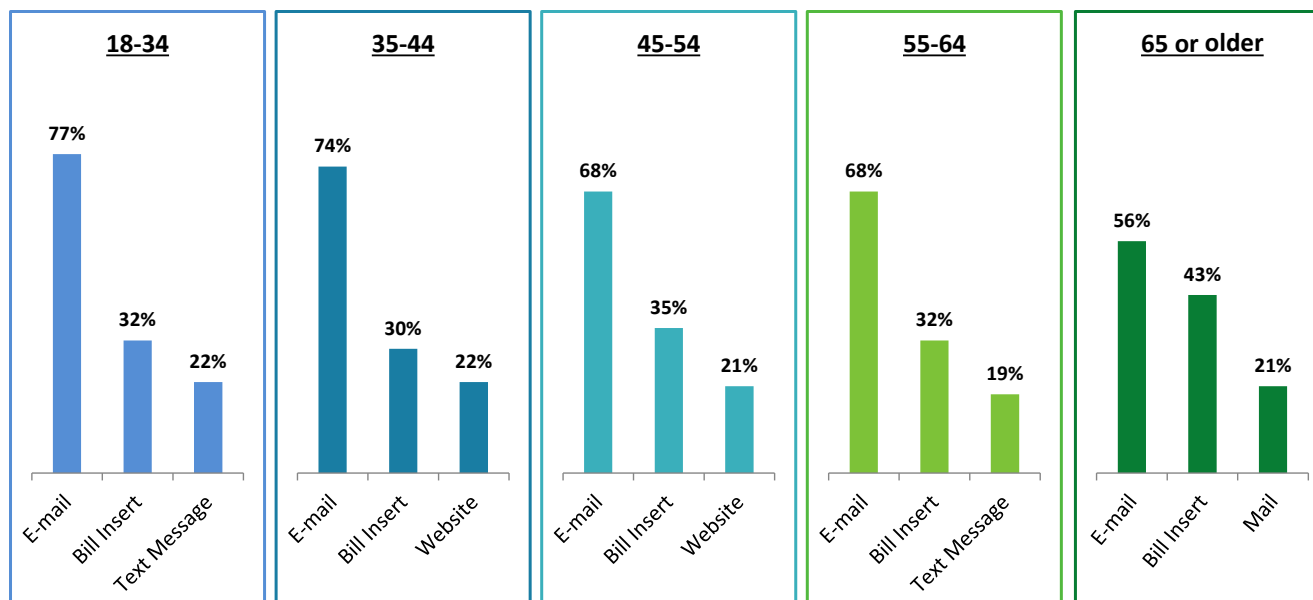
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## Method of Communication

E-mail and Bill Inserts were the top two preferred methods of communication across age groups, although e-mail preference declines with age.

**Top Three Preferred Communication Methods – by Age**



Q.10 How do you prefer to receive information and communications from LG&E and KU?

**Power Source Readership Survey**

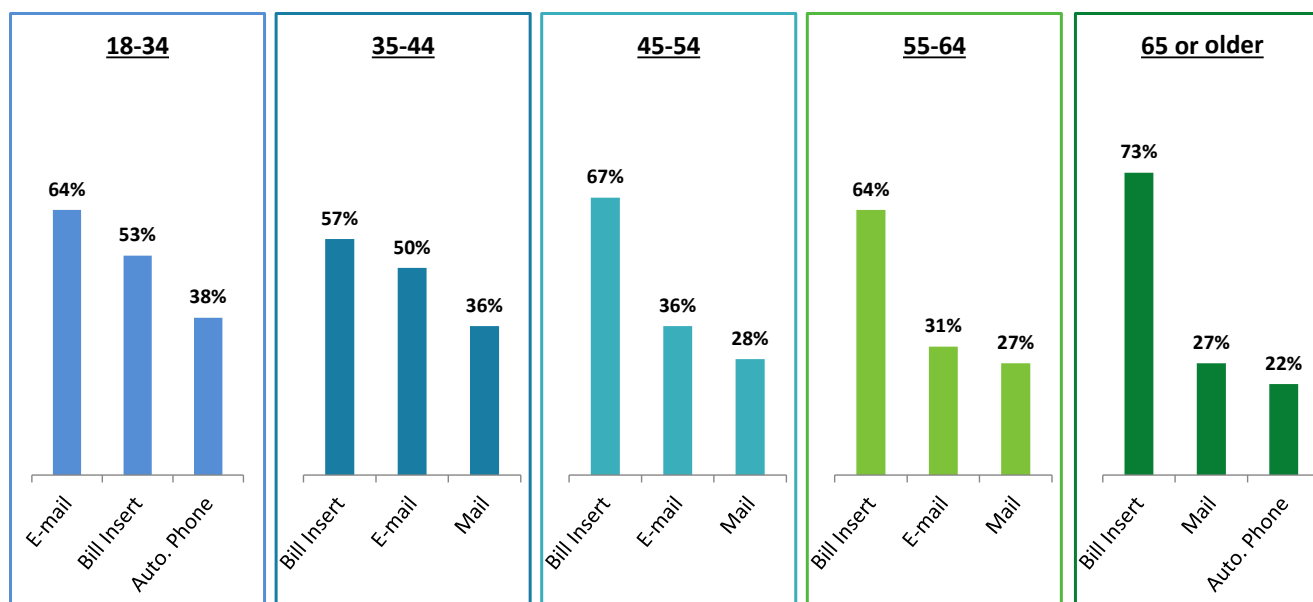
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## Method of Communication

Preferences vary across age groups for paper bill customers, with younger customers expressing a preference towards electronic communications while older customers prefer more traditional bill inserts.

### Top Three Preferred Communication Methods – by Age Paper Bill Customers



Q.10 How do you prefer to receive information and communications from LG&E and KU?

Power Source Readership Survey

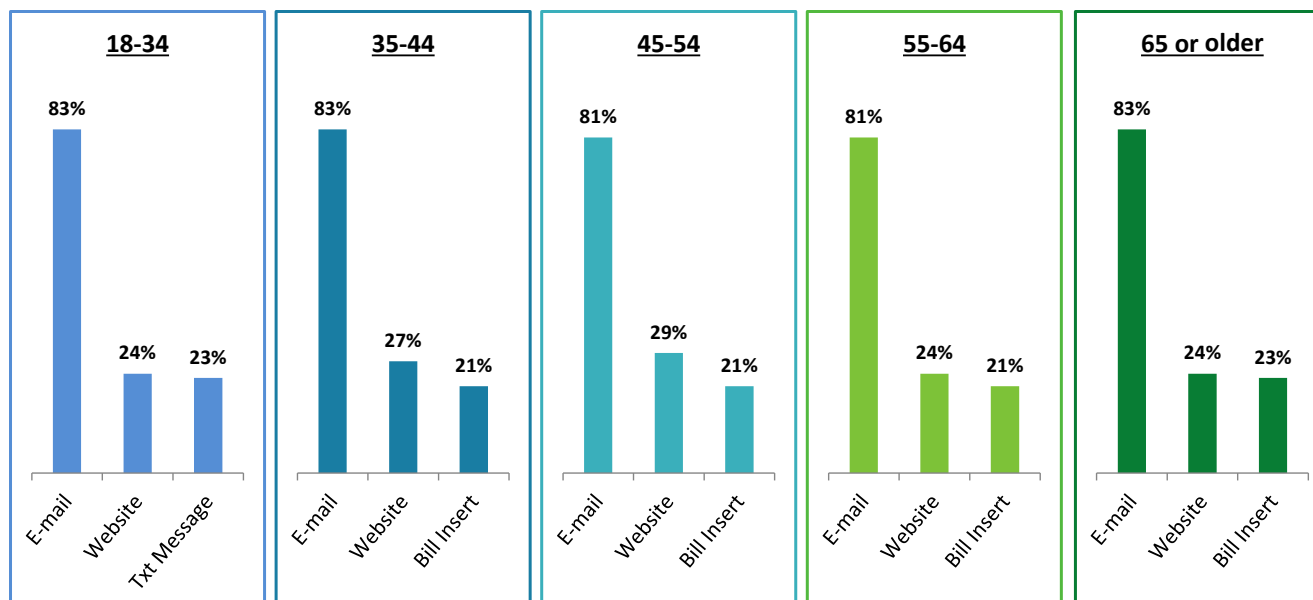
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## Method of Communication

Paperless bill customers across age groups overwhelmingly prefer to receive communications via email.

### Top Three Preferred Communication Methods – by Age Paperless Bill Customers

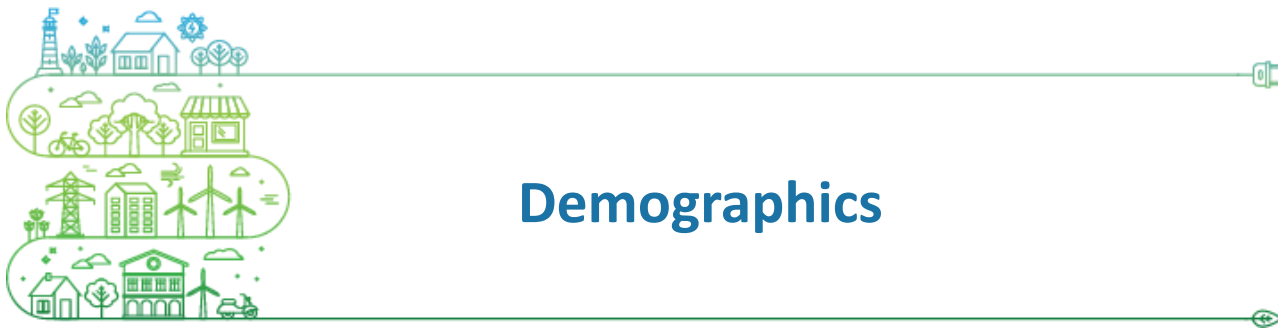


Q.10 How do you prefer to receive information and communications from LG&E and KU?

Power Source Readership Survey

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## Demographics

Customers who choose paperless billing tend to be higher educated with higher income than those choosing to receive a paper bill.

|                                               | LG&E         | KU           | Paper        | Paperless    |
|-----------------------------------------------|--------------|--------------|--------------|--------------|
| <b>Base</b>                                   | <b>1,604</b> | <b>1,586</b> | <b>1,000</b> | <b>2,190</b> |
| <b>Education</b>                              |              |              |              |              |
| 1 <sup>st</sup> through 8 <sup>th</sup> grade | 0% -         | 1%           | 2% +         | 0%           |
| Some high school                              | 2% -         | 3%           | 8% +         | 0%           |
| High school graduate or equivalent            | 12% -        | 15%          | 26% +        | 8%           |
| Some college/technical school                 | 22%          | 22%          | 20%          | 23%          |
| College graduate                              | 35% +        | 30%          | 28% -        | 35%          |
| Graduate/post-graduate school                 | 27%          | 25%          | 12% -        | 33%          |
| Prefer not to answer                          | 2%           | 3%           | 5% +         | 2%           |
| <b>Income</b>                                 |              |              |              |              |
| \$40,000 or less                              | 26% -        | 31%          | 45% +        | 22%          |
| Over \$40,000                                 | 55% +        | 50%          | 37% -        | 59%          |
| Prefer not to answer                          | 19%          | 19%          | 18%          | 19%          |

Note: +/- indicates significant difference at 95% confidence level for LG&E vs. KU and Paper vs. Paperless

Almost one-third of paper bill customers surveyed are age 65 or older.

|                      | LG&E         | KU           | Paper        | Paperless    |
|----------------------|--------------|--------------|--------------|--------------|
| <b>Base</b>          | <b>1,604</b> | <b>1,586</b> | <b>1,000</b> | <b>2,190</b> |
| <b>Age</b>           |              |              |              |              |
| 18-34                | 20%          | 20%          | 20%          | 20%          |
| 35-44                | 16%          | 16%          | 13% -        | 17%          |
| 45-54                | 16%          | 16%          | 15%          | 17%          |
| 55-64                | 22%          | 21%          | 18% -        | 23%          |
| 65+                  | 25%          | 23%          | 30% +        | 21%          |
| Prefer not to answer | 2% -         | 3%           | 3% +         | 2%           |
| <b>Gender</b>        |              |              |              |              |
| Male                 | 48%          | 45%          | 49%          | 45%          |
| Female               | 50%          | 52%          | 51%          | 52%          |
| Prefer not to answer | 2%           | 3%           | -            | 3%           |

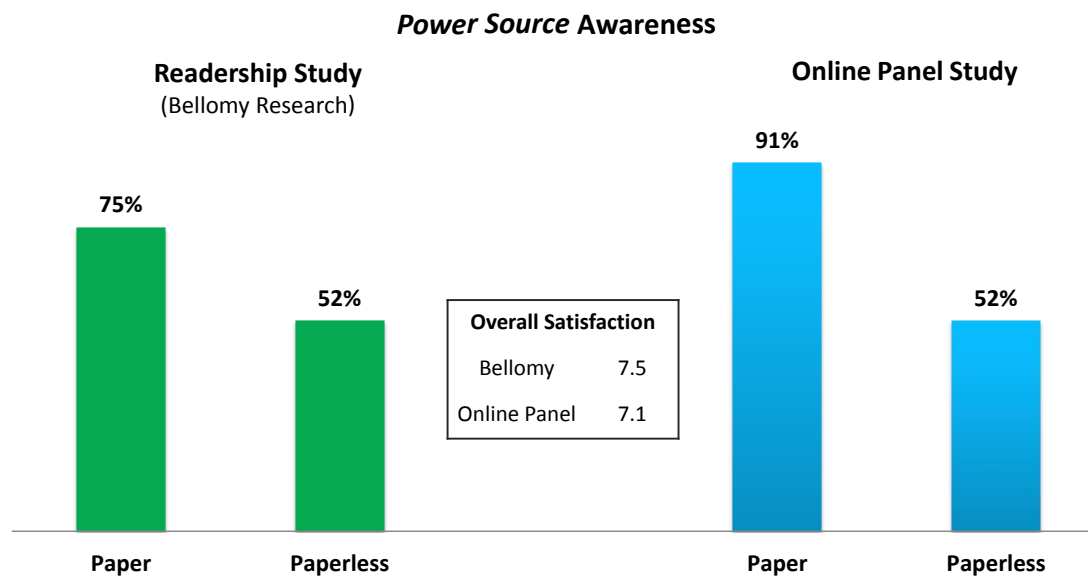
Note: +/- indicates significant difference at 95% confidence level for LG&E vs. KU and Paper vs. Paperless



## Online Panel Study

During the same timeframe that Bellomy Research conducted the phone (paper bill) and internet (paperless bill) newsletter readership studies, LG&E/KU also ran the survey among customers who are participating in the Online Residential Panel. Following is a comparison of those results.

Awareness among paperless customers was identical for both the online panel and Readership studies. Panel members who receive a paper bill reported higher awareness than those surveyed for the Readership Study, possibly due to higher engagement with the utility for panel members. Overall Satisfaction with *Power Source* was slightly higher for the Readership Study.



Q1. [IF PAPER] Are you aware of the *Power Source* newsletter that [LG&E, KU] includes with your monthly bill?

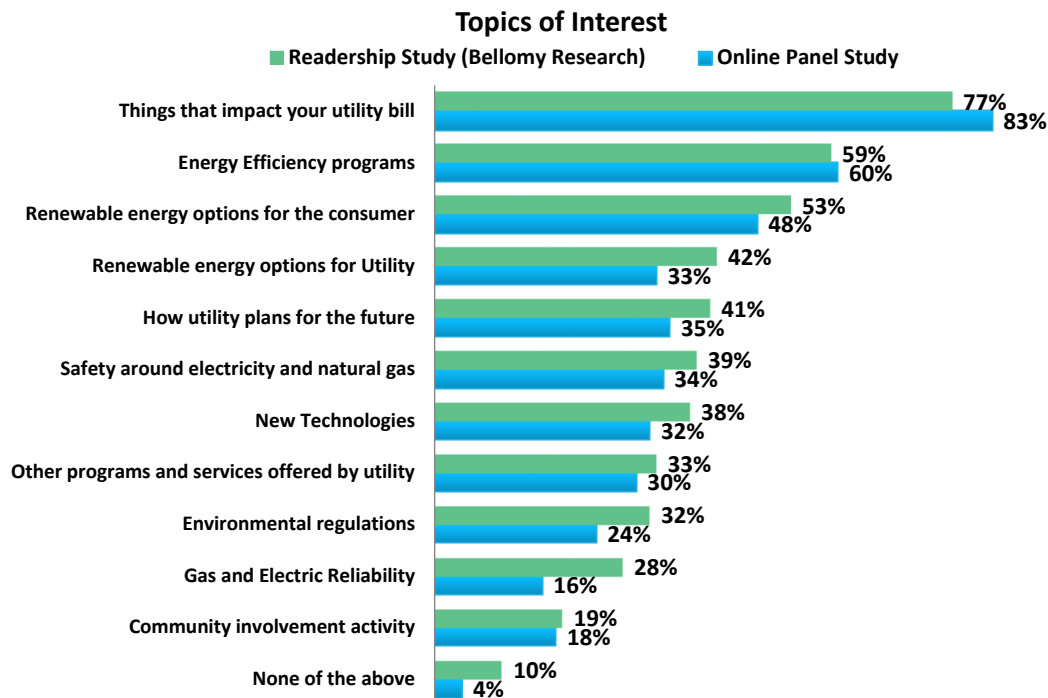
[IF PAPERLESS] Are you aware of the *Power Source* newsletter that [LG&E, KU/ODP] includes as a link with your monthly online bill?

*Power Source* Readership Survey

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Topics of interest were similar for both studies, with learning more about things that impact their utility bill at the top of the list.



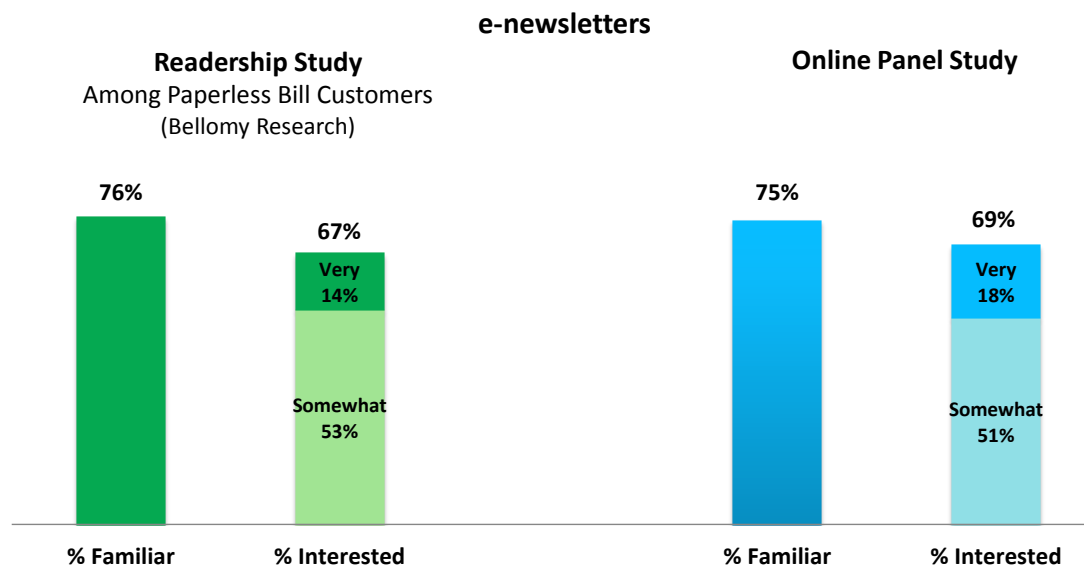
Q6. Which of the following newsletter topics are of interest to you?

**Power Source Readership Survey**

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Awareness and interest in e-newsletters was similar for online panel members and paperless customers surveyed for the Readership Study.



Q7. Are you familiar with e-newsletters?

Q.8 How interested are you in receiving an e-newsletter from LG&E/KU?

**Power Source Readership Survey**

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**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests**

**Dated February 7, 2017**

**Question No. 10**

**Responding Witness: Daniel K. Arbough / Valerie L. Scott**

Q-10. Refer to the response to AG-1-50(e), Charges from LG&E and KU Services Company.

- a. Why are affiliate charges for CWIP (account 107) projected to increase from \$56.161 million in the base period to \$108.409 million in the Forecast Test Period?
- b. Why are there no affiliate charges in the Forecast Test Period in account 165, Prepayments (but \$14.025 million in the base period)?
- c. Why are affiliated charges for Maintenance of Overhead lines (account 571) increasing from \$2.961 million in the base period to \$11.532 million in the Forecast Test Period?
- d. Why are affiliated charges for Maintenance of Meters (account 597) zero in the base period and projected to be \$1.443 million in the Forecast Test Period?
- e. What advertising is included in the base period and Forecast Test Period amounts for each of these accounts (1) account 910, (2) account 913 and (3) account 930.1?
- f. Why are Miscellaneous General Expenses in account 930.2 increasing from zero in the base period to \$5.041 million in the Forecast Test Period?

A-10.

- a. See the response to KIUC 1-38.
- b. The amounts in the base period are prepayments primarily for IT software maintenance contracts and the transmission Reliability Coordinator which occurred during March 2016 – August 2016. The Companies do not forecast prepayments.

- c. See the response to KIUC 1-38.
- d. See the response to KIUC 1-38.
- e. No advertising expense is included in the base period or in the forecast test period amounts for account 910. Accounts 913 and 930.1 are not included in base rates.
- f. Account 930 was shown in total in the response to AG 1-50(e). As shown in the response to KIUC 1-38, the Miscellaneous General Expenses in account 930.2 are \$4,652,659 in the Base Period and they increased to \$5,040,577 in the Forecast Test Period. The increase is primarily due to higher research and development expenses.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 11**

**Responding Witness: Daniel K. Arbough**

Q-11. Refer to the response to AG-1-50(d). Provide an itemization showing what is included in the forecasted PPL Services Corporation charges to KU for each account:

- a. account 920
- b. account 921
- c. account 926

A-11. See table below for a-c.

**Account 920**

|                      |                |
|----------------------|----------------|
| IT Joint Initiatives | <b>139,317</b> |
|----------------------|----------------|

**Account 921**

|                                        |                  |
|----------------------------------------|------------------|
| Audit - PCAOB Fees                     | 37,118           |
| Office of Compliance                   | 58,208           |
| Credit Services                        | 7,891            |
| Financial Statement Reporting Software | 3,514            |
| Hyperion Financial Management Software | 9,676            |
| Insurance Services                     | 77,465           |
| Internal Reporting                     | 172,549          |
| Investor Relations                     | 210,283          |
| IT Joint Initiatives                   | 78,947           |
| Office of General Counsel              | 470,722          |
| Pension/Investments                    | 251,821          |
| UI Planner Software                    | 10,486           |
| Wall Street Software                   | 37,440           |
|                                        | <hr/>            |
|                                        | <b>1,426,120</b> |

**Account 926**

|                      |                |
|----------------------|----------------|
| IT Joint Initiatives | <b>100,896</b> |
|----------------------|----------------|

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 12**

**Responding Witness: Kent W. Blake**

- Q-12. Refer to the response to AG-1-51. Identify and explain the best practices that were exchanged and quantify the savings to KU that resulted from the exchange of best practices.
- A-12. The most recent identification and explanation of best practice exchanges is set forth in the October 31, 2016 update on the adoption and implementation of best practices at the Companies pursuant to Appendix C, Regulatory Commitment No. 12 of the September 30, 2010 Order in Case No. 2010-00204. A copy is available at ([http://psc.ky.gov/PSC\\_WebNet/ViewCaseFilings.aspx?case=2010-00204](http://psc.ky.gov/PSC_WebNet/ViewCaseFilings.aspx?case=2010-00204)). The Company has not quantified and tracked savings from the exchange of the best practices.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 13**

**Responding Witness: Kent W. Blake**

Q-13. Refer to the response to AG-1-51. Are any costs charged to KU (1) during the test period or (2) projected to be charged to KU during the forecast period by PPL EU Services Corporation? If so, identify, quantify and explain the amounts of such charges (1) during the test period or (2) projected to be charged to KU during the forecast period by account.

A-13. No.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

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**Question No. 14**

**Responding Witness: Kent W. Blake / Counsel**

- Q-14. Refer to the response to AG-1-51. Identify the "federal affiliate transaction regulations" that are being referred to in the response.
- A-14. The federal affiliate transaction regulations referenced in response to AG-1-51 are the FERC accounting regulations applicable to centralized service companies located at 18 C.F.R. §§ 366.1–369.1 (2017).

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 15**

**Responding Witness: Gregory J. Meiman**

Q-15. Refer to the response to AG-1-54. For each of the following, show in detail how the target amounts were developed and also show in detail how actual achieved results were calculated:

- a. LKE Net Income Target and Actual
- b. LKE EBIT Target and Actual
- c. Customer Satisfaction payout percentage
- d. Electric Distribution Operations payout percentage
- e. Payout percentage for each Plant
- f. Information Technology payout percentage

A-15.

- a. The LKE Net Income target was developed during the 2015 business planning and budgeting process and reflects budgeted revenue less operating, interest and income tax expenses. Actual net income results for 2015 were compared to budget to determine the achievement. The budget for 2015 assumed a payout based on 100% achievement of the target. See attachment being provided in Excel format. For the forecasted year, the net income target is no longer included as a measure.
- b. For 2015, the EBIT incentive measure was not included in the calculation of revenue requirement; however, the calculation is provided in the attachment to the response to part a.
- c. The Customer Satisfaction target of 18 points requires the company's customer satisfaction score to be above the peer group competitive range for 3 of the 4 quarters, earning six points per quarter.

In 2015 the company was above the peer group competitive range all 4 quarters, earning 24 points. In quarter 1 and quarter 3, the company earned one point for ranking second within the peer group and in quarter 4, the company earned two points for ranking first within the peer group.

- d. The Electric Distribution Operations safety target was developed during the 2015 business planning process and is based on historical recordable incidents, projected performance and industry trending. The OSHA formula ( $\# \text{ of recordable incidents} \times 200,000 / \# \text{ of hours worked}$ ) is used to calculate actual results which reflect incidents that require medical treatment beyond first aid, days away from work, restricted work, transfer to another job, or loss of consciousness. See attached.

The Electric Distribution Operations electric reliability measure was based on a Customer Average Interruption Duration Index (CAIDI) which is the sum of customer minutes interrupted divided by the total number of customers whose service was interrupted. It is calculated by dividing SAIDI (System Average Interruption Duration Index) by SAIFI (System Average Interruption Frequency Index). The 2015 target was based on 2015 business plan target values for SAIDI and SAIFI combined with historic CAIDI performance. Electric Distribution's 2015 actual CAIDI result of 92.21 was calculated based on 2015 outage data in the Outage Management System. See attachment being provided in Excel format.

- e. The Plant budget and KPI targets were developed through the 2015 budget and business planning processes, respectively. The fleet safety (recordable incident rate) target is established and then allocated based on plant headcount. Availability targets are established at the fleet level and then allocated based on capacity. Targets are determined based on historical performance. Actual results are compared to target to determine achievement for each measure. See attachment being provided in Excel format.
- f. Information Technology Telecommunications targets are based on historical performance relative to safety, internal customer satisfaction, and average team competency. Actual results are compared to target to determine achievement for each measure. See attachment being provided in Excel format.

The attachments are  
being provided in  
separate files in Excel  
format.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 16**

**Responding Witness: Gregory J. Meiman**

Q-16. Refer to the response to AG-1-54. Refer to the 2015 Customer Satisfaction Results Summary.

- a. What does a 50 percent customer satisfaction measurement indicate?
- b. Does a 50 percent customer satisfaction measurement indicate that half of the customers are satisfied and the other half are not? If not, explain fully.
- c. What does a 43 percent customer satisfaction measurement indicate?
- d. What does a 66.6 percent customer satisfaction measurement indicate? Does this mean that two-thirds of the customer are satisfied and one-third are not? If not, explain fully.
- e. Which companies are in the "Peer Average" for 2015 Customer Satisfaction?
- f. How were the companies in the "Peer Average" selected?

A-16.

- a. A 50 percent customer satisfaction measurement indicates that 50 percent of customers surveyed rated their overall satisfaction with the company a 9 or 10 on a 10 point scale.
- b. No. It means that the balance of customers (50 percent) surveyed rated their overall satisfaction with the company an 8, 7, 6, 5, 4, 3, 2, or 1.
- c. A 43 percent customer satisfaction measurement indicates that 43 percent of customers surveyed rated their overall satisfaction with the company a 9 or 10 on a 10 point scale.
- d. A 66.6 percent customer satisfaction measurement indicates that 66.6 percent of customers surveyed rated their overall satisfaction with the company a 9 or 10 on a 10 point scale and 33.4% gave a rating of 8, 7, 6, 5, 4, 3, 2, or 1.

- e. AEP Midwest, Duke Carolinas, Georgia Power, Duke Midwest, MidAmerican, South Carolina Electric and Gas.
- f. Peer utilities were selected based on characteristics similar to LG&E and KU.
  - Type of services provided (Electric or Electric and Gas)
  - Size of service area and number of customer's served
  - Performance in syndicated studies (e.g. top ranking in JD Power studies)
  - Customer demographic profiles

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 17**

**Responding Witness: Gregory J. Meiman**

Q-17. Refer to the response to AG-1-68.

- a. How much of the \$11.506 million Team Incentive Award was reflected as expense by KU electric utility operations in the test year? Show the amounts by account.
- b. What is the comparable total amount of Team Incentive Award for the forecasted period?
- c. How much of the total forecasted period Team Incentive Award was reflected as expense by KU electric utility operations in the forecasted period? Show the amounts by account.
- d. Identify each item and the related dollar amount that is included in the \$1.8 million of Other Benefits.
- e. How much of the \$1.8 million Other Benefits were expensed by KU electric utility operations in the test year? Show the amounts by account.
- f. What is the comparable total amount of Other Benefits Expense for the forecasted period? Show a breakout of KU electric utility operations and show the amounts by account.
- g. What calendar period are the "Test Year" amounts in the Attachment to the response to AG-1-68 for?

A-17.

- a. The \$11.506 million Team Incentive Award shown in AG-1-68 is the total company amount included in expense for KU electric utility operations for the forecasted test period. See attachment for the amounts by account. The Kentucky jurisdictional amount included in the forecasted test year is \$10.42 million. See response to Kroger 2-3 for the details.

- b. The amount shown in AG-1-68 for Team Incentive Award is for the total company for the forecasted test period. See attachment to the response to part a. As stated in response a, the Kentucky Jurisdictional amount is \$10.42 million included in expense.
- c. See the response to parts a. and b.
- d. See attached for each item and the related dollar amount that is included in the \$1.8 million of Other Benefits.
- e. The \$1.8 million Other Benefits is the amount included in expensed by KU electric utility operations in the forecasted test year. The expense amounts are charged to FERC account 926.
- f. The amount included in AG-1-68 for Other Benefits is for the forecasted test period. See attachment to the response to part d.
- g. "Test Year" amounts in the Attachment to the response to AG-1-68 for is the Forecasted Test Year ending 6-30-18.

**Kentucky Utilities Company****Case No. 2016-00370**

| <b>Construction-Other</b>       | <b>Total</b>     |
|---------------------------------|------------------|
| 107                             | 2,435,235        |
| 108                             | 103,496          |
| 163                             | 157,070          |
| 184                             | 976,269          |
| 426                             | 42,755           |
| 512                             | 57,862           |
| 908                             | 89,005           |
| <b>Total Construction-Other</b> | <b>3,861,692</b> |

| <b>Operating</b> | <b>Total</b> |
|------------------|--------------|
| 500              | 675,798      |
| 501              | 229,157      |
| 502              | 748,037      |
| 505              | 466,584      |
| 506              | 125,197      |
| 510              | 594,275      |
| 511              | 92,214       |
| 512              | 552,109      |
| 513              | 124,110      |
| 514              | 24,243       |
| 541              | 12,882       |
| 542              | 3,650        |
| 546              | 26,959       |
| 551              | 9,705        |
| 553              | 67,506       |
| 554              | 2,767        |
| 556              | 200,329      |
| 560              | 234,471      |
| 561              | 323,853      |
| 562              | 37,146       |
| 566              | 10,323       |
| 570              | 88,899       |
| 571              | 9,082        |
| 580              | 110,542      |
| 581              | 34,498       |
| 582              | 60,397       |
| 583              | 191,016      |
| 584              | -            |
| 586              | 454,173      |
| 587              | -            |
| 588              | 268,452      |

| <b>Operating</b>       | <b>Total</b>      |
|------------------------|-------------------|
| 590                    | -                 |
| 592                    | 43,127            |
| 593                    | 461,407           |
| 594                    | 30,798            |
| 595                    | 3,836             |
| 598                    | -                 |
| 901                    | 318,088           |
| 902                    | 59,057            |
| 903                    | 1,125,367         |
| 907                    | 57,922            |
| 908                    | 25,509            |
| 920                    | 3,556,333         |
| 935                    | 45,857            |
| <b>Total Operating</b> | <b>11,505,675</b> |
| <b>Total TIA</b>       | <b>15,367,367</b> |

## Kentucky Utilities Company

Case No. 2016-00370

**Other Benefits by Component**

|                                                      | <b>Total<br/>Expensed to<br/>FERC 926</b> |
|------------------------------------------------------|-------------------------------------------|
| PBGC Premium                                         | 516,372                                   |
| Wellness Programs                                    | 482,322                                   |
| Consulting, primarily Actuarial Services             | 421,311                                   |
| Administrative fees and Other miscellaneous benefits | 195,771                                   |
| Medical Fees (ACA)                                   | 177,421                                   |
| Family Assistance Program                            | 40,663                                    |
| <b>Total</b>                                         | <b>1,833,860</b>                          |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 18**

**Responding Witness: Daniel K. Arbough**

Q-18. Workers Compensation. Refer to the response to AG-1-69.

- a. Referring to the \$619,974 of forecasted WC cost in the test year, identify the comparable total amount of forecasted WC cost for the 12 month period ending February 28, 2017.
- b. The response to AG-1-69 (b) indicates that the policy premium for 12/31/15-12/30/16 was \$449,660. An invoice was attached to the response showing a premium of \$461,748 for the policy term of 12/31/2016 - 12/31/2017. The response to AG-1-69 (b) states that "KU estimated a 1% increase in that premium for 2017 and a 5% increase for 2018." Does the Company agree that the comparison of the 2017 premium of \$461,748 with the 2016 premium of \$449,660 indicates a 2.7% increase? If not, explain fully why not.
- c. Show in detail how the 1% 2017 increase and 5% 2018 estimated increases were derived.

A-18.

- a. KU's forecasted workers' compensation cost for the 12 month period ending February 28, 2017 is \$434,980, which includes 11 months of actual costs and 1 month of forecasted costs.
- b. The premium for the 12/31/15-12/31/16 policy period was \$449,660 and was allocated between KU and LG&E as described in KU's response to Question 1-69a. The policy for the 12/31/16-12/31/17 had not been renewed at the time the forecast upon which the 7/1/17-6/30/18 Test Year was prepared. Therefore, KU estimated a 1% increase in that premium for 2017 and included that cost in the 7/1/17-6/30/18 Test Year. Subsequently, the policy for the 12/31/16-12/31/17 period was renewed for \$461,748, which does represent a 2.7% increase.
- c. KU estimated the percentage increase in workers' compensation insurance premiums based upon salary escalation rates in place at the time the forecast

was prepared and market input from its external insurance broker. See calculation below of total premium escalation factors for 2017 and 2018.

|                                    | 2017  | 2018  |
|------------------------------------|-------|-------|
| Market Premium per Broker          | 0.00% | 2.00% |
| Preliminary Salary Escalation Rate | 1.30% | 2.86% |
| Total                              | 1.30% | 4.86% |
|                                    |       |       |
| Rounded Total                      | 1.00% | 5.00% |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 19**

**Responding Witness: Daniel K. Arbough**

- Q-19. Workers Compensation. Refer to the response to AG-1-72. Why does the cost for Workers Comp decrease from \$1,190,019 in 2015 to \$507,946 in 2016?
- A-19. The decrease in KU's workers' compensation cost between 2015 and 2016 is primarily due to the change in the reserve. The reserve is calculated by an outside consultant and is based on estimated future charges for claims incurred.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 20**

**Responding Witness: Valerie L. Scott**

Q-20. Refer to the response to AG-1-72. Identify and provide the journal entries that resulted in the \$926,795 credit for FASB 112 costs in December 2015 and the \$56,608 debit to FASB 112 costs in December 2016.

A-20. The FAS 112 (post-employment) is included in the labor burden process as explained in AG 1-228. On an annual basis, the company meets with Willis Towers Watson actuaries (Towers) and agrees with assumptions to use in the calculation. The actuaries estimate the cost. This estimate is used to develop the FAS 112 burden rate for budgets and actual data. The rate is updated at year-end when Towers calculates the actual liability. The difference in the balance of the liability account on the general ledger and the actual year-end liability from Towers is included in the system burden process during the year-end close. This process reverses the post-employment that had been initially calculated in December and records the amount necessary to balance to the actual liability. The amounts are recorded to capital (FERC Account 107), expense (FERC Account 926), or any other balance sheet account (see AG 2-6 for a list of these other accounts) based on straight time labor charges. The impact of the system burdening processes results in system generated "journal entries" that had the following impact on the FASB 112 costs.

|                                                                             | <b>2015</b>         | <b>2016</b>      |
|-----------------------------------------------------------------------------|---------------------|------------------|
| December post-employment burden calculated from Towers estimate             | \$ 20,295           | \$ 14,634        |
| Reversal of December post-employment burden calculated from Towers estimate | (20,295)            | (14,634)         |
| Post-employment burden calculation based on Towers actual liability         | (926,783)           | 56,622           |
| True-up clearing entries                                                    | (12)                | (14)             |
|                                                                             | <u>\$ (926,795)</u> | <u>\$ 56,608</u> |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 21**

**Responding Witness: Valerie L. Scott**

Q-21. Refer to the response to AG-1-72. Identify, quantify and explain each type of Other Benefit that is included in the \$1.351 million for 2015 and \$1.135 million for 2016.

A-21.

|                                                      | 2015            | 2016            |
|------------------------------------------------------|-----------------|-----------------|
| FSA forfeitures (a)                                  | \$ (239,095.91) | \$ (329,297.92) |
| Affordable Care Act Fees (b)                         | -               | 222,488.79      |
| Family Assistance Program                            | 42,756.33       | 42,932.36       |
| Fidelity Fees                                        | -               | 14,502.89       |
| Legal Services                                       | 332.46          | 237.99          |
| Retiree Medical and Retiree Life Administration Fees | 253,241.62      | 224,751.18      |
| Pension Benefit Guaranty Corporation Premium (c)     | 271,781.36      | -               |
| Pension Valuation                                    | 424.64          | 957.86          |
| Smoking Cessation                                    | 48,750.98       | 51,710.43       |
| Actuarial Fees                                       | 428,248.33      | 279,238.73      |
| Wellness Initiatives                                 | 544,719.69      | 627,169.48      |
| Total                                                | \$1,351,159.50  | \$1,134,691.79  |

(a) Flexible Spending Account forfeitures

(b) Affordable Care Act fees were applied to labor burdens starting in 2016

(c) Pension Benefit Guaranty Corporation Premium in 2016 was paid directly from the pension plan rather than charged to burdens

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 22**

**Responding Witness: Daniel K. Arbough**

- Q-22. Refer to the response to AG-1-81. Have any expenses for lawsuit judgment and/or settlements been included in the Forecasted Test Year? If not, explain fully why not. If so, identify the amounts included and explain fully how they were derived.
- A-22. There are no lawsuit judgments and/or settlements included in the Forecasted Test Year. The Company had no basis on which to estimate if there would be lawsuit settlements or how much they might be.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 23**

**Responding Witness: Valerie L. Scott**

- Q-23. Refer to the response to AG-1-84.
- a. Provide a breakout of the 2016 and 2015 Bad Debt Write-Offs amounts by rate class.
  - b. Provide a breakout of the 2016 and 2015 Collection of Written-Off Accounts amounts by rate class.
- A-23. KU does not record bad debt write-offs or collection of written-off accounts by rate class (code). The Company does track this activity by customer class, which is provided below:

|                              | <b>2015</b>         |                                     | <b>2016</b>         |                                     |
|------------------------------|---------------------|-------------------------------------|---------------------|-------------------------------------|
| Customer Class               | Bad Debt Write-offs | Collections of Written-off Accounts | Bad Debt Write-offs | Collections of Written-off Accounts |
|                              | (a)                 | (b)                                 | (a)                 | (b)                                 |
| Residential Customers        | \$ 4,944,334        | \$ 406,896                          | \$ 3,839,701        | \$ 455,295                          |
| Commercial Customers         | \$ 469,200          | \$ 20,971                           | \$ 389,698          | \$ 31,711                           |
| Industrial Customers         | \$ 169,668          | \$ 42,548                           | \$ 880,071          | \$ 659,185                          |
| Public Authorities Customers | \$ -                | \$ -                                | \$ 8,577            | \$ 379                              |
| Street Lights Customers      | \$ 7,625            | \$ 469                              | \$ 3,977            | \$ 1,802                            |
| Total                        | \$ 5,590,827        | \$ 470,884                          | \$ 5,122,024        | \$ 1,148,372                        |

**KENTUCKY UTILITIES COMPANY**

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**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 24**

**Responding Witness: Daniel K. Arbough**

- Q-24. Refer to the response to AG-1-89. Are the amounts in the "Test" column for the forecast period 7/1/2017 through 6/30/2018? If not, provide comparable amounts for the forecast period 7/1/2017 through 6/30/2018.
- A-24. The Company confirms that the amounts in the "test" column are for the forecast period 7/1/2017 through 6/30/2018.

**KENTUCKY UTILITIES COMPANY**

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**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 25**

**Responding Witness: John P. Malloy**

Q-25. Refer to the response to AG-1-102.

- a. As of December 31, 2016, how many AMI meters were deployed and what was the cost of those AMI meters?
- b. What is the average service life of each type of meters that the Company had installed as of December 31, 2016?
- c. What is the average cost of the AMI meters that the Company proposes to install?

A-25.

- a. KU deployed 1,669 AMS meters as of December 31, 2016 at a cost of \$241,059.
- b. Service life shown below is the amount of time from initial meter installation through Feb. 2017.

| Type of Meter | Average Service Life |
|---------------|----------------------|
| Single-Phase  | 26                   |
| Three-Phase   | 12                   |

- c. See Section 5.3 on page 11 of Exhibit JPM-1 of John Malloy's testimony (\$104.09 for electric meter on average and \$74.09 for gas index).

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 26**

**Responding Witness: Daniel K. Arbough**

- Q-26. Refer to the response to AG-1-108.
- a. Show in detail how the Real Risk-Free Return of -0.71% was derived.
  - b. Show in detail how the Equity Risk Premium of 6.0% was derived.
  - c. Is the 8.96% the projected return for common stock equity investments? If not, explain fully.
- A-26.
- a. The Real-Risk Free is derived by comparing the 1-yr Treasury less current inflation year-over-year (Core CPI). As of end of year 2015 that was 60 bps minus 1.31% published by Bloomberg. See pages 1 and 2 of attached.
  - b. Various sources are considered when deriving the Equity Risk Premium including capital market assumptions used by our Pension Advisor and different publications such as Ibbotson SBBI Classic Yearbook. See page 3 of attached.
  - c. The 8.96% represents the expected return of growth-seeking assets of the portfolio, including US and Non-US Equity, Alternative Investments, such as hedge funds & private equity, and certain types of Fixed Income, such as High-Yield and Emerging Market Debt (hard and local currency).

&lt;Menu&gt; to Return

US TREASURY ACTIVES CUR 97) Actions 98) Chart 99) Settings

Page 1/1 Graph Curves

X-Axis Tenor Y-Axis Yield Currency PCS BGN

Specific 12/31/15 Relative Last 1D 1W 1M Modify

Values and Members Values Members Constituents

Export

Zoom

100%

| I25                       |           |       | I25                       |           |       |
|---------------------------|-----------|-------|---------------------------|-----------|-------|
| US TREASURY ACTIVES CURVE |           |       | US TREASURY ACTIVES CURVE |           |       |
| 01/05/16                  |           |       | 12/31/15                  |           |       |
| Description               | Mid Price | Yield | Description               | Mid Price | Yield |
| 11) B 0 01/28/16 Govt     | 0.197     | 0.201 | Same                      | 0.123     | 0.125 |
| 12) B 0 04/07/16 Govt     | 0.192     | 0.196 | B 0 03/31/16 Govt         | 0.163     | 0.165 |
| 13) B 0 07/07/16 Govt     | 0.468     | 0.476 | B 0 06/30/16 Govt         | 0.468     | 0.476 |
| 14) B 0 12/08/16 Govt     | 0.548     | 0.559 | Same                      | 0.588     | 0.600 |
| 15) T 1 12/31/17 Govt     | 99-307    | 1.018 | Same                      | 99-287    | 1.050 |
| 16) T 1 12/15/18 Gov      | 99-287    | 1.284 | Same                      | 99-267    | 1.308 |
| 17) T 1 12/31/20 Gov      | 100-067   | 1.708 | Same                      | 99-307    | 1.761 |
| 18) T 2 12/31/22 Gov      | 100-187   | 2.037 | Same                      | 100-067   | 2.092 |
| 19) T 2 11/15/25 Gov      | 100-057   | 2.229 | Same                      | 99-267    | 2.270 |
| 20) T 3 11/15/45 Govt     | 100-067   | 2.988 | Same                      | 99-217    | 3.016 |

Curves &amp; Relative Value

Plot Curves

Add Curve Browse | CRVF »

US TREASURY ACTIVES CURVE

Base Curve I25

Show Constituents on Base Curve

Recent Curves

- + US General Obligation AA+ Muni B
- + US General Obligation AA Muni BV
- + GBP United Kingdom Sovereign C
- Curves related to 57563RFH7 <Muni

Bond Spread to Curve

Add Security

Plot New Issues / Points

Interpolate Curves

Australia 61 2 9777 8600 Brazil 5511 2395 9000 Europe 44 20 7530 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000  
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2016 Bloomberg Finance L.P.  
 SN 715120-EST GMT-5:00 H330-5417-0 05-Jan-2016 12:25:38

Screen Printed

90 Chart

Set as Default View

Economic Forecasts

Country/Region/World

Contributor

Contributor Composite

Yearly

Quarterly

United States

Browse

Private

Official

Actual / Forecasts

| Indicator                    | 2008 | 2009  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|------------------------------|------|-------|------|------|------|------|------|------|------|------|
| Private Investment (YoY%)    | -9.4 | -21.6 | 12.9 | 5.2  | 10.6 | 4.5  | 5.4  | 4.7  | 3.9  | 4.5  |
| Exports (YoY%)               | 5.7  | -8.8  | 11.9 | 6.9  | 3.4  | 2.8  | 3.4  | 1.4  | 2.9  | 3.9  |
| Imports (YoY%)               | -2.6 | -13.7 | 12.7 | 5.5  | 2.2  | 1.1  | 3.8  | 5.1  | 4.1  | 4.5  |
| Industrial Production (YoY % | -3.4 | -11.2 | 5.6  | 3.0  | 2.9  | 1.9  | 3.7  | 1.6  | 2.0  | 2.6  |
| Housing Starts (000s SAAR,   |      |       |      |      |      |      |      | 1110 | 1240 | 1353 |
| Price Indices                |      |       |      |      |      |      |      |      |      |      |
| PI (YoY%)                    | 3.8  | -0.3  | 1.6  | 3.2  | 2.1  | 1.5  | 1.6  | 0.1  | 1.8  | 2.2  |
| PCE Price Index (YoY%)       |      |       |      |      |      |      |      | 0.3  | 1.4  | 2.0  |
| Core PCE (yoy%)              | 2.1  | 1.2   | 1.3  | 1.5  | 1.9  | 1.5  | 1.5  | 1.3  | 1.6  | 1.8  |
| Labor Market                 |      |       |      |      |      |      |      |      |      |      |
| Unemployment (%)             | 5.8  | 9.3   | 9.6  | 8.9  | 8.1  | 7.4  | 6.2  | 5.3  | 4.8  | 4.6  |
| Non Farm Payrolls (000s SA,  |      |       |      |      |      |      |      | 209  | 184  | 168  |

News Headlines

NSF »

News Headlines | NSE »

- 51) JPMorgan Global Economic Forecasts as of Dec. 30 (Table) BN 01/03
- 52) Bloomberg Consensus Forecasts Summary as of Jan. 5 (Table) BN 03:00
- 53) Bloomberg Consensus Forecasts Summary as of Jan. 4 (Table) BN 01/04
- 54) JPMorgan Global Economic Forecasts as of Dec. 30 (Table) BN 01/03
- 55) Bloomberg Consensus Forecasts Summary as of Dec. 30 (Table) BN 12/30

Australia 61 2 9777 0600 Brazil 55 11 2395 9000 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000  
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2016 Bloomberg Finance L.P.  
 05-Jan-2016 12:10:31

Table 11-4 illustrates the equity risk premium calculation using several different market indices and the income return on three government bonds of different horizons.

Table 11-4: Equity Risk Premium with Different Market Indices

|                           | Equity Risk Premium |                          |                   |
|---------------------------|---------------------|--------------------------|-------------------|
|                           | Long-Horizon (%)    | Intermediate-Horizon (%) | Short-Horizon (%) |
| S&P 500                   | 6.96                | 7.52                     | 8.51              |
| Total Value-Weighted NYSE | 6.76                | 7.32                     | 8.31              |
| NYSE Deciles 1-2          | 6.23                | 6.79                     | 7.78              |

Data from 1926-2013.

The equity risk premium is calculated by subtracting the arithmetic mean of the government bond income return from the arithmetic mean of the stock market total return. Table 11-5 demonstrates this calculation for the long-horizon equity risk premium.

Table 11-5: Long-Horizon Equity Risk Premium Calculation

| Long-Horizon              | Arithmetic Mean         |                    | Equity Risk Premium (%) |
|---------------------------|-------------------------|--------------------|-------------------------|
|                           | Market Total Return (%) | Risk-Free Rate (%) |                         |
| S&P 500                   | 12.05                   | 5.09               | 6.96                    |
| Total Value-Weighted NYSE | 11.85                   | 5.09               | 6.76                    |
| NYSE Deciles 1-2          | 11.32                   | 5.09               | 6.23                    |

Data from 1926-2013.

Data for the New York Stock Exchange is obtained from Morningstar and the Center for Research in Security Prices (CRSP) at the University of Chicago's Graduate School of Business. The "Total" series is a capitalization-weighted index and includes all stocks traded on the New York Stock Exchange except closed-end mutual funds, real estate investment trusts, foreign stocks, and American Trusts. Capitalization-weighted means that the weight of each stock in the index, for a given month, is proportionate to its market capitalization (price times number of shares outstanding) at the beginning of that month. The "Decile 1-2" series includes all stocks with capitalizations that rank within the upper 20 percent of companies traded on the New York Stock Exchange, and it is therefore a large-capitalization index. For more information on the Center for Research in Security Pricing, data methodology, see Chapter 7.

#### The Market Benchmark and Firm Size

Although not restricted to include only the 500 largest companies, the S&P 500 is considered a large company index. The returns of the S&P 500 are capitalization weighted, which means that the weight of each stock in the index, for a given month, is proportionate to its market capitalization (price times number of shares outstanding) at the beginning of that month. The larger companies in the index therefore receive the majority of the weight. The use of the NYSE "Deciles 1-2" series results in an even purer large company index. However, if using a large stock index to calculate the equity risk premium, an adjustment is usually needed to account for the different risk and return characteristics of small stocks. This was discussed further in Chapter 7 on the size premium.

#### The Risk-Free Asset

The equity risk premium can be calculated for a variety of time horizons when given the choice of risk-free asset to be used in the calculation. Chapter 3 provides equity risk premium calculations for short-, intermediate-, and long-term horizons. The short-, intermediate-, and long-horizon equity risk premium are calculated using the income return from a 30-day Treasury bill, a 5-year Treasury bond, and a 20-year Treasury bond, respectively.

#### 20-Year versus 30-Year Treasuries

Our methodology for estimating the long-horizon equity risk premium makes use of the income return on a 20-year Treasury bond; however, the Treasury currently does not issue a 20-year bond. The 30-year bond that the Treasury recently began issuing again is theoretically more correct when dealing with the long-term nature of business valuation, yet Ibbotson Associates instead creates a series of returns using bonds on the market with approximately 20 years to maturity. The reason for the use of a 20-year maturity bond is that 30-year Treasury securities have only been issued over the relatively recent past, starting in February of 1977, and were not issued at all through the early 2000s.

The same reason exists for why we do not use the 10-year Treasury bond—a long history of market data is not available for 10-year bonds. We have persisted in using a 20-year bond to keep the basis of the time series consistent.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 27**

**Responding Witness: Gregory J. Meiman**

**CONFIDENTIAL INFORMATION REDACTED**

Q-27. Refer to the response to AG-1-67.

- a. How has the Company estimated the impact of work force turnover for the Forecasted Test Year ending June 30, 2018? Identify, quantify and explain how the impact of work force turnover has been incorporated.
- b. Of the 198 positions listed in the response to AG-1-67 where turnover occurred and a replacement was hired, does the Company agree that the annual salaries of the replacement employee are typically [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] than the annual salary of the employee who has been replaced? If not, explain fully why not.
- c. Are the replacements listed in the response to AG-1-67 representative of normal experience where positions are vacated and are replaced, on average, with new employees at lower salary levels? If not, explain fully why not.
- d. Are the average salaries of the replacement employees approximately [BEGIN CONFIDENTIAL] [END CONFIDENTIAL] than the salaries of the employees that have been replaced? If not, what is the relationship of (1) the salaries of the replacement employees and (2) the salaries of the employees who were replaced?

A-27.

- a. Retirements and other forms of turnover that have taken place in the previous 12 months, as well as new hires that have taken place in the previous 12 months, are factored into average wage rates that are pulled from the Company's PeopleSoft system. This is described in more detail in the filed testimony of Daniel K. Arbough on pages 5 and 6.
- b. Of the 198 positions replaced for the calendar years information provided in AG 1-67, 139 were replaced by employees with [REDACTED] salaries, 31 were replaced by employees with [REDACTED] salaries, and 28 were the [REDACTED]. The

company evaluates how each position should be replaced based on the needs of the business and replaces those employees at the current market rate. The redacted information requested is confidential and is being provided under seal pursuant to a petition for confidential protection.

- c. The average salaries of those employees that were replaced during the calendar years presented in AG 1-67 were [REDACTED]; however, as a total percentage of employees replaced, it was [REDACTED]. As stated above in response to part a, after the evaluation of how each position should be replaced, a new employee is hired based on current market rates. The redacted information requested is confidential and is being provided under seal pursuant to a petition for confidential protection.
- d. See response to part c.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 28**

**Responding Witness: Christopher M. Garrett**

- Q-28. Refer to the response to AG-1-134.
- a. [BEGIN CONFIDENTIAL]  
[END CONFIDENTIAL]
  - b. Was any book gain or loss recorded on the assets identified in response to part a? If not, explain fully why not. If so, identify the related book gain or loss.
  - c. Explain how the Company has treated (1) the tax gain or loss and (2) the book gain or loss on disposal of assets.
- A-28.
- a. See attached. The information requested is confidential and is being provided under seal pursuant to a petition for confidential protection.
  - b. The Company recorded a book gain of \$47,301 on the sale of vehicles and land in 2015. No other book gain or loss was recorded on other assets. Code of Federal Regulations 18 CFR, Chapter 1, Subchapter C, Part 101 (FERC USofA) Plant Instruction No. 5, Electric Plant Purchased or Sold requires a gain or loss to be recorded when an operating system is sold or purchased. The remaining assets identified in response to part a. were retired, not sold. Since the transaction involved a retirement only, KU followed the guidelines prescribed in the FERC USofA, Plant Instruction 10 - Additions and Retirements of Electric Plant. Assets are depreciated using group depreciation. Under group depreciation, lives for individual assets are not maintained, rather all assets are depreciated using a composite, or group, rate for all the assets within the group. No gain or loss is recorded when using group depreciation unless it meets the guidelines of an operating system.
  - c. The Company recognizes a deferred tax asset or liability for the difference in book and tax gains and losses.

The entire attachment is  
Confidential and  
provided separately  
under seal.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 29**

**Responding Witness: Christopher M. Garrett**

- Q-29. Refer to the response to AG-1-135. Please explain whether any accelerated tax depreciation including bonus tax depreciation is allowed for Kentucky corporation income tax purposes. Explain the limitations on tax depreciation for Kentucky corporation income tax purposes and how those were applied in the Part III - Taxable Income Computation.
- A-29. For income tax purposes, Kentucky does allow accelerated tax depreciation using the MACRS depreciation method in accordance with the Internal Revenue Code. Kentucky does not conform to the federal treatment of bonus tax depreciation and requires an addition to federal taxable income for any bonus tax depreciation taken at the federal level.

In Part III – Taxable Income Computation of the Kentucky Corporate Income Tax Return, line 4 Depreciation adjustment is adding back the federal tax depreciation deduction taken including bonus tax depreciation to federal taxable income. The line 15 Depreciation adjustment is subtracting Kentucky state tax depreciation not including bonus tax depreciation to federal taxable income. The result is bonus tax depreciation is not deducted for Kentucky corporation income tax purposes.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 30**

**Responding Witness: Christopher M. Garrett**

Q-30. Refer to the response to AG-1-136(a). Refer to the Deferred Income Tax Expense for the 12 ME 6/30/18, Federal Timing Differences.

- a. Show in detail how the \$6.180 million Storm Damages amount was derived.
- b. Show in detail how the \$5.323 million Muni True-Up Regulatory Liability amount is derived
- c. Show in detail how the \$10,889 Off System Sales Tracker amount was derived.
- d. Show in detail how the \$32.225 million ARO CCR amount was derived.
- e. What are the non-deductible pensions?
- f. Show in detail how the \$2.835 million for non-deductible pensions was derived.
- g. Show in detail how the \$30 million for Repair Allowance was derived.
- h. Show in detail how the \$48.183 million Federal NOL Utilization was derived.

A-30.

- a. See attached.
- b. See attached.
- c. See attached.
- d. See attached.
- e. Contributions paid in connection with a qualified pension plan are deductible for income tax purposes, pensions expensed for the financial statements are nondeductible for income tax purposes.

- f. See attached.
- g. See response to Question No. 5.
- h. See attachment to response to AG 1-134.

Kentucky Utilities Company  
Case No. 2016-00370  
Timing Differences - Detail  
(\$ dollars)

|                                      | Balances     |              |            | Addback Activity/Amortization   |               |              |
|--------------------------------------|--------------|--------------|------------|---------------------------------|---------------|--------------|
|                                      | 12/31/2016   | 12/31/2017   | 12/31/2018 | 1/2 Year 2017                   | 1/2 Year 2018 | Forward Year |
| a. Storm Damages:                    |              |              |            |                                 |               |              |
| 2008 Wind Storm                      | 786,727      | 567,175      | 347,623    | 109,776                         | 109,776       | 219,552      |
| 2009 Ice Storm                       | 20,509,839   | 14,786,163   | 9,062,487  | 2,861,838                       | 2,861,837     | 5,723,675    |
| Virginia Mountain Storm              | 472,826      | 0            | 0          | 236,413                         | -             | 236,413      |
| Total Storm Damages                  | 21,769,392   | 15,353,338   | 9,410,111  | 3,208,027                       | 2,971,613     | 6,179,640    |
| b. Municipal Generation True-up      | 9,952,324    | 2,721,099    | (694,465)  | 3,615,613                       | 1,707,782     | 5,323,395    |
| c. Off System Sales Tracker          | (29,361)     | (32,204)     | (51,139)   | 1,421                           | 9,468         | 10,889       |
| d. Coal Combustion Residuals AROs    |              |              |            |                                 |               |              |
|                                      | Activity     |              |            | Deduct Payments/Addback Expense |               |              |
|                                      | 2017         | 2018         |            | 1/2 Year 2017                   | 1/2 Year 2018 | Forward Year |
| Deduct Pond Closure Spend            | (17,491,920) | (51,419,038) |            | (8,745,960)                     | (25,709,519)  | (34,455,479) |
| Addback Amortization                 | 962,769      | 3,497,958    |            | 481,384                         | 1,748,979     | 2,230,364    |
| Total Coal Combustion Residuals AROs | (16,529,152) | (47,921,080) |            | (8,264,576)                     | (23,960,540)  | (32,225,116) |
| f. Pensions                          |              |              |            |                                 |               |              |
|                                      | 2017         | 2018         |            | 1/2 Year 2017                   | 1/2 Year 2018 | Forward Year |
| Deduct Pension Contributions         | (11,868,792) | (10,557,934) |            | (5,934,396)                     | (5,278,967)   | (11,213,363) |
| Addback Pension Expense              | 8,795,937    | 7,960,618    |            | 4,397,969                       | 3,980,309     | 8,378,278    |
| Total Pensions                       | (3,072,855)  | (2,597,316)  |            | (1,536,427)                     | (1,298,658)   | (2,835,085)  |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 31**

**Responding Witness: Christopher M. Garrett**

- Q-31. Refer to the response to AG-1-142.
- a. Has the Company included any deferred tax asset related to NOL carryforwards or contribution carryforwards in rate base for the Forecasted Test Year?
  - b. If the answer to part a is "yes" identify the amount, and provide a breakout of the Forecasted Test Year deferred tax asset amount between (1) net operating loss carryforward and (2) contribution carryforwards.
- A-31.
- a. Yes, the Company has included deferred tax assets related to NOL carryforwards and contribution carryforwards in rate base for the Forecasted Test Year.
  - b. See attachment to response to AG 1-36.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 32**

**Responding Witness: Christopher M. Garrett**

- Q-32. Refer to the response to AG-1-145. Provide a break out of the anticipated property tax increase in account 408.1 from the \$26.867 million for 2016 to the \$29.910 million for the Forecasted Test Year between (1) changes in the property tax rates, (2) changes due to increased plant and (3) other (explain any other factors associated with the projected property tax expense increase).
- A-32. See attachment to response to KIUC 1-25.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests**

**Dated February 7, 2017**

**Question No. 33**

**Responding Witness: John J. Spanos**

- Q-33. Refer to the response to AG-1-181.
- a. Identify and provide a copy of all support relied upon for the 2.5% inflation factor used for terminal net salvage projections.
  - b. How much lower would the terminal net salvage component of depreciation rates be if a 2.0% inflation factor were used?
  - c. Provide supporting calculations for the response to part b.
  - d. For each plant asset for which terminal net salvage was computed, show in detail exactly how the 2.5% inflation factor was applied to the dismantlement estimates and clearly identify the period during which the 2.5% annual inflation factor was applied.
  - e. Provide calculations for part (d) showing exactly how the 2.5% inflation factor was applied, for how many years it was applied, and the starting balance of dismantlement cost estimate for each plant asset to which it was applied.
- A-33.
- a. The 2.5% escalation factor is supported by the Consumer Price Index for the last 30 years.
  - b. The attached schedule sets forth the depreciation rates for generation accounts when using a 2.0% escalation factor. The depreciation expense is reduced by \$5,869,967 from that set forth in exhibit JJS-KU-1.
  - c. The attached depreciation calculation sets forth the results from part b.
  - d. The terminal net salvage is applied at the location level as shown by the schedule on pages VIII-2 and VIII-3 of Exhibit JJS-KU-1. The 2.5% escalation factor is calculated up to the date of retirement.

- e. See the attached schedule, which is the workpaper for the terminal net salvage.

KENTUCKY UTILITIES

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2015

|                                                                   |                                             |          |         | NET              |                | BOOK          |             | CALCULATED ANNUAL |             | COMPOSITE   |
|-------------------------------------------------------------------|---------------------------------------------|----------|---------|------------------|----------------|---------------|-------------|-------------------|-------------|-------------|
| ACCOUNT                                                           |                                             | SURVIVOR | SALVAGE | ORIGINAL         | DEPRECIATION   | FUTURE        | ACCRAUAL    | ACCRAUAL          |             |             |
| (1)                                                               |                                             | (2)      | PERCENT | COST             | RESERVE        | ACCRUALS      | AMOUNT      | RATE              | (8)=(7)/(4) | (9)=(6)/(7) |
| DEPRECIABLE PLANT                                                 |                                             |          |         |                  |                |               |             |                   |             |             |
| INTANGIBLE PLANT                                                  |                                             |          |         |                  |                |               |             |                   |             |             |
| 302.00                                                            | FRANCHISES AND CONSENTS                     | 20-SQ    | 0       | 55,918.83        | 52,578         | 3,341         | 2,029       | 3.63              |             | 1.6         |
| 303.00                                                            | MISCELLANEOUS INTANGIBLE PLANT              | 5-SQ     | 0       | 51,209,431.96    | 17,788,070     | 33,421,362    | 10,731,787  | 20.96             |             | 3.1         |
| 303.10                                                            | CCS SOFTWARE                                | SQUARE   | *       | 41,045,494.53    | 26,586,875     | 14,458,620    | 4,131,034   | 10.06             |             | 3.5         |
| TOTAL INTANGIBLE PLANT                                            |                                             |          |         | 92,310,845.32    | 44,427,523     | 47,883,323    | 14,864,850  |                   |             |             |
| STEAM PRODUCTION PLANT                                            |                                             |          |         |                  |                |               |             |                   |             |             |
| 311.00                                                            | STRUCTURES AND IMPROVEMENTS                 |          |         |                  |                |               |             |                   |             |             |
|                                                                   | TRIMBLE COUNTY UNIT 2                       | 100-R2.5 | *       | (11)             | 95,533,749.13  | 23,445,099    | 82,597,363  | 1,714,867         | 1.80        | 48.2        |
|                                                                   | TRIMBLE COUNTY UNIT 2 SCRUBBER              | 100-R2.5 | *       | (11)             | 5,556,451.46   | 3,082,793     | 3,084,868   | 65,944            | 1.19        | 46.8        |
|                                                                   | SYSTEM LABORATORY                           | 100-R2.5 | *       | (1)              | 1,102,956.39   | 713,561       | 400,425     | 16,627            | 1.51        | 24.1        |
|                                                                   | BROWN UNIT 1                                | 100-R2.5 | *       | (5)              | 4,690,069.46   | 4,858,759     | 65,814      | 8,799             | 0.19        | 7.5         |
|                                                                   | BROWN UNIT 2                                | 100-R2.5 | *       | (5)              | 2,297,196.43   | 2,008,651     | 403,405     | 30,046            | 1.31        | 13.4        |
|                                                                   | BROWN UNIT 3                                | 100-R2.5 | *       | (5)              | 22,711,518.61  | 14,083,124    | 9,763,971   | 507,382           | 2.23        | 19.2        |
|                                                                   | BROWN UNIT 1, 2 AND 3 SCRUBBER              | 100-R2.5 | *       | (5)              | 45,507,722.44  | 8,775,718     | 39,007,391  | 2,015,885         | 4.43        | 19.4        |
|                                                                   | GHENT UNIT 1 SCRUBBER                       | 100-R2.5 | *       | (7)              | 8,397,192.12   | 7,331,103     | 1,653,893   | 90,620            | 1.08        | 18.3        |
|                                                                   | GHENT UNIT 1                                | 100-R2.5 | *       | (7)              | 19,505,041.37  | 18,115,555    | 2,754,839   | 150,144           | 0.77        | 18.3        |
|                                                                   | GHENT UNIT 2                                | 100-R2.5 | *       | (7)              | 16,258,655.69  | 14,507,970    | 2,888,792   | 160,168           | 0.99        | 18.0        |
|                                                                   | GHENT UNIT 3                                | 100-R2.5 | *       | (7)              | 51,066,601.71  | 32,981,268    | 21,659,996  | 1,026,693         | 2.01        | 21.1        |
|                                                                   | GHENT UNIT 4                                | 100-R2.5 | *       | (7)              | 33,248,360.76  | 15,639,157    | 19,936,589  | 902,154           | 2.71        | 22.1        |
|                                                                   | GHENT UNIT 2 SCRUBBER                       | 100-R2.5 | *       | (7)              | 15,817,337.72  | 13,742,096    | 3,182,455   | 174,668           | 1.10        | 18.2        |
| TOTAL ACCOUNT 311 - STRUCTURES AND IMPROVEMENTS                   |                                             |          |         | 321,692,853.29   | 159,284,854    | 187,399,801   | 6,863,997   | 2.13              |             | 27.3        |
| 311.10                                                            | STRUCTURES AND IMPROVEMENTS - ASH PONDS     |          |         |                  |                |               |             |                   |             |             |
|                                                                   | TRIMBLE COUNTY UNIT 2 ASH POND              | 100-S4   | *       | 0                | 4,562,600.30   | 2,148,119     | 2,414,481   | 48,425            | 1.06        | 49.9        |
|                                                                   | GHENT UNIT 1 SCRUBBER ASH POND              | 100-S4   | *       | 0                | 39,480.55      | 34,420        | 5,061       | 274               | 0.69        | 18.5        |
|                                                                   | GHENT UNIT 1 ASH POND                       | 100-S4   | *       | 0                | 322,828.55     | 304,586       | 18,243      | 986               | 0.31        | 18.5        |
| TOTAL ACCOUNT 311.1 - STRUCTURES AND IMPROVEMENTS - ASH PONDS     |                                             |          |         | 4,924,909.40     | 2,487,125      | 2,437,785     | 49,685      | 1.01              |             | 49.1        |
| 311.20                                                            | STRUCTURES AND IMPROVEMENTS - RETIRED PLANT |          |         |                  |                |               |             |                   |             |             |
|                                                                   | TYRONE UNIT 3                               | 100-R2.5 | *       | (10)             | 1,692,976.56   | 1,862,274     | 0           | 0                 | -           | -           |
|                                                                   | TYRONE UNITS 1 AND 2                        | 100-R2.5 | *       | (10)             | 583,381.44     | 641,720       | 0           | 0                 | -           | -           |
|                                                                   | GREEN RIVER UNIT 3                          | 100-R2.5 | *       | (10)             | 2,549,285.01   | 2,804,214     | 0           | 0                 | -           | -           |
|                                                                   | GREEN RIVER UNIT 4                          | 100-R2.5 | *       | (10)             | 4,560,022.06   | 5,016,024     | 0           | 0                 | -           | -           |
|                                                                   | GREEN RIVER UNITS 1 AND 2                   | 100-R2.5 | *       | (10)             | 1,558,538.26   | 1,714,392     | 0           | 0                 | -           | -           |
|                                                                   | PINEVILLE UNIT 3                            | 100-R2.5 | *       | (10)             | 37,239.96      | 40,964        | 0           | 0                 | -           | -           |
| TOTAL ACCOUNT 311.2 - STRUCTURES AND IMPROVEMENTS - RETIRED PLANT |                                             |          |         | 10,981,443.29    | 12,079,588     | 0             | 0           | -                 |             | -           |
| 312.00                                                            | BOILER PLANT EQUIPMENT                      |          |         |                  |                |               |             |                   |             |             |
|                                                                   | TRIMBLE COUNTY UNIT 2                       | 65-R2    | *       | (11)             | 531,933,576.48 | 92,306,117    | 498,140,153 | 11,124,720        | 2.09        | 44.8        |
|                                                                   | TRIMBLE COUNTY UNIT 2 SCRUBBER              | 65-R2    | *       | (11)             | 73,021,689.57  | 18,602,423    | 62,451,652  | 1,404,511         | 1.92        | 44.5        |
|                                                                   | BROWN UNIT 1                                | 65-R2    | *       | (5)              | 40,216,199.41  | 22,985,071    | 19,241,938  | 2,602,922         | 6.47        | 7.4         |
|                                                                   | BROWN UNIT 2                                | 65-R2    | *       | (5)              | 41,452,992.23  | 15,937,592    | 27,588,050  | 2,105,633         | 5.08        | 13.1        |
|                                                                   | BROWN UNIT 3                                | 65-R2    | *       | (5)              | 335,039,815.44 | 74,041,334    | 277,750,472 | 14,672,211        | 4.38        | 18.9        |
|                                                                   | BROWN UNIT 1, 2 AND 3 SCRUBBER              | 65-R2    | *       | (5)              | 334,559,939.62 | 77,676,980    | 273,610,957 | 14,360,256        | 4.29        | 19.1        |
|                                                                   | GHENT UNIT 1 SCRUBBER                       | 65-R2    | *       | (7)              | 138,832,539.39 | 47,058,422    | 101,492,395 | 5,617,564         | 4.05        | 18.1        |
|                                                                   | GHENT UNIT 1                                | 65-R2    | *       | (7)              | 347,267,291.09 | 96,144,803    | 275,431,198 | 15,302,639        | 4.41        | 18.0        |
|                                                                   | GHENT UNIT 2                                | 65-R2    | *       | (7)              | 269,565,973.05 | 67,704,359    | 220,731,232 | 12,275,159        | 4.55        | 18.0        |
|                                                                   | GHENT UNIT 3                                | 65-R2    | *       | (7)              | 425,512,609.68 | 168,531,725   | 286,766,767 | 13,903,449        | 3.27        | 20.6        |
|                                                                   | GHENT UNIT 4                                | 65-R2    | *       | (7)              | 735,664,440.23 | 135,118,842   | 652,042,109 | 30,032,084        | 4.08        | 21.7        |
|                                                                   | GHENT UNIT 2 SCRUBBER                       | 65-R2    | *       | (7)              | 66,258,293.73  | 59,902,017    | 10,994,357  | 613,758           | 0.93        | 17.9        |
|                                                                   | GHENT UNIT 3 SCRUBBER                       | 65-R2    | *       | (7)              | 118,460,532.34 | 31,824,024    | 94,928,746  | 4,568,202         | 3.86        | 20.8        |
|                                                                   | GHENT UNIT 4 SCRUBBER                       | 65-R2    | *       | (7)              | 253,701,662.20 | 77,381,453    | 194,079,326 | 8,878,216         | 3.50        | 21.9        |
| TOTAL ACCOUNT 312 - BOILER PLANT EQUIPMENT                        |                                             |          |         | 3,711,487,554.46 | 985,215,162    | 2,995,249,352 | 137,461,324 | 3.70              |             | 21.8        |

KENTUCKY UTILITIES

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2015

|        | ACCOUNT<br>(1)                                                             | SURVIVOR<br>CURVE<br>(2) | NET<br>SALVAGE<br>PERCENT<br>(3) | ORIGINAL<br>COST<br>(4) | BOOK<br>DEPRECIATION<br>RESERVE<br>(5) | FUTURE<br>ACCRUALS<br>(6) | CALCULATED ANNUAL        |                                | COMPOSITE<br>REMAINING<br>LIFE<br>(9)=(6)/(7) |
|--------|----------------------------------------------------------------------------|--------------------------|----------------------------------|-------------------------|----------------------------------------|---------------------------|--------------------------|--------------------------------|-----------------------------------------------|
|        |                                                                            |                          |                                  |                         |                                        |                           | ACCRUAL<br>AMOUNT<br>(7) | ACCRUAL<br>RATE<br>(8)=(7)/(4) |                                               |
| 312.10 | BOILER PLANT EQUIPMENT - ASH PONDS                                         |                          |                                  |                         |                                        |                           |                          |                                |                                               |
|        | TRIMBLE COUNTY UNIT 2 ASH POND                                             | 100-S4                   | * 0                              | 4,610,665.23            | 676,102                                | 3,934,563                 | 77,928                   | 1.69                           | 50.5                                          |
|        | BROWN UNIT 1 ASH POND                                                      | 100-S4                   | * 0                              | 575,455.72              | 575,456                                | 0                         | 0                        | -                              | -                                             |
|        | BROWN UNIT 2 ASH POND                                                      | 100-S4                   | * 0                              | 1,831,840.98            | 1,831,841                              | 0                         | 0                        | -                              | -                                             |
|        | BROWN UNIT 3 ASH POND                                                      | 100-S4                   | * 0                              | 91,265.89               | 91,266                                 | 0                         | 0                        | -                              | -                                             |
|        | GHEINT UNIT 1 ASH POND                                                     | 100-S4                   | * 0                              | 9,299,115.00            | 7,598,416                              | 1,700,699                 | 226,760                  | 2.44                           | 7.5                                           |
|        | GHEINT UNIT 4 ASH POND                                                     | 100-S4                   | * 0                              | 3,909,061.67            | 3,256,464                              | 652,598                   | 48,341                   | 1.24                           | 13.5                                          |
|        | GHEINT UNIT 2 SCRUBBER ASH POND                                            | 100-S4                   | * 0                              | 19,802,080.26           | 6,026,115                              | 13,775,965                | 706,460                  | 3.57                           | 19.5                                          |
|        | TYRONE UNIT 3 - ASH POND                                                   | 100-S4                   | * 0                              | 1,777,792.39            | 1,464,285                              | 313,507                   | 16,983                   | 0.96                           | 18.5                                          |
|        | GREEN RIVER UNIT 3 - ASH POND                                              | 100-S4                   | * 0                              | 32,692,663.87           | 13,338,503                             | 19,354,161                | 860,185                  | 2.63                           | 22.5                                          |
|        | PINEVILLE UNIT 3 - ASH POND                                                | 100-S4                   | * 0                              | 1,901,133.18            | 1,901,133                              | 0                         | 0                        | -                              | -                                             |
|        | TOTAL ACCOUNT 312.1 - BOILER PLANT EQUIPMENT - ASH PONDS                   |                          |                                  | 76,491,074.19           | 36,759,581                             | 39,731,493                | 1,936,657                | 2.53                           | 20.5                                          |
| 312.20 | BOILER PLANT EQUIPMENT - RETIRED PLANT                                     |                          |                                  |                         |                                        |                           |                          |                                |                                               |
|        | TYRONE UNIT 3                                                              | 65-R2                    | * (10)                           | 91,162.48               | 100,279                                | 0                         | 0                        | -                              | -                                             |
|        | TYRONE UNITS 1 AND 2                                                       | 65-R2                    | * (10)                           | 35,937.44               | 39,531                                 | 0                         | 0                        | -                              | -                                             |
|        | GREEN RIVER UNIT 3                                                         | 65-R2                    | * (10)                           | 41,300.90               | 45,431                                 | 0                         | 0                        | -                              | -                                             |
|        | GREEN RIVER UNIT 4                                                         | 65-R2                    | * (10)                           | 599,315.53              | 659,247                                | 0                         | 0                        | -                              | -                                             |
|        | GREEN RIVER UNITS 1 AND 2                                                  | 65-R2                    | * (10)                           | 152,243.76              | 167,468                                | 0                         | 0                        | -                              | -                                             |
|        | PINEVILLE UNIT 3                                                           | 65-R2                    | * (10)                           | 145,202.53              | 159,723                                | 0                         | 0                        | -                              | -                                             |
|        | TOTAL ACCOUNT 312.2 - BOILER PLANT EQUIPMENT - RETIRED PLANT AND ASH PONDS |                          |                                  | 1,065,162.64            | 1,171,679                              | 0                         | 0                        | -                              | -                                             |
| 314.00 | TURBOGENERATOR UNITS                                                       |                          |                                  |                         |                                        |                           |                          |                                |                                               |
|        | TRIMBLE COUNTY UNIT 2                                                      | 60-R2                    | * (11)                           | 89,907,009.94           | 20,271,673                             | 79,525,108                | 1,833,970                | 2.04                           | 43.4                                          |
|        | BROWN UNIT 1                                                               | 60-R2                    | * (5)                            | 8,340,751.67            | 3,801,260                              | 4,956,529                 | 679,299                  | 8.14                           | 7.3                                           |
|        | BROWN UNIT 2                                                               | 60-R2                    | * (5)                            | 13,741,664.70           | 9,070,939                              | 5,357,809                 | 407,878                  | 2.97                           | 13.1                                          |
|        | BROWN UNIT 3                                                               | 60-R2                    | * (5)                            | 45,458,100.43           | 20,614,566                             | 27,116,439                | 1,445,537                | 3.18                           | 18.8                                          |
|        | GHEINT UNIT 1                                                              | 60-R2                    | * (7)                            | 38,748,250.59           | 20,826,042                             | 20,634,586                | 1,173,145                | 3.03                           | 17.6                                          |
|        | GHEINT UNIT 2                                                              | 60-R2                    | * (7)                            | 31,826,255.72           | 21,384,390                             | 12,669,704                | 744,559                  | 2.34                           | 17.0                                          |
|        | GHEINT UNIT 3                                                              | 60-R2                    | * (7)                            | 43,067,738.16           | 29,423,726                             | 16,658,754                | 849,375                  | 1.97                           | 19.6                                          |
|        | GHEINT UNIT 4                                                              | 60-R2                    | * (7)                            | 57,957,357.43           | 33,064,819                             | 28,949,553                | 1,408,391                | 2.43                           | 20.6                                          |
|        | TOTAL ACCOUNT 314 - TURBOGENERATOR UNITS                                   |                          |                                  | 329,047,128.64          | 158,457,415                            | 195,868,482               | 8,542,154                | 2.60                           | 22.9                                          |
| 314.10 | TURBOGENERATOR UNITS - RETIRED PLANT                                       |                          |                                  |                         |                                        |                           |                          |                                |                                               |
|        | TYRONE UNIT 3                                                              |                          |                                  |                         | 460,380                                |                           |                          |                                |                                               |
|        | TYRONE UNITS 1 AND 2                                                       |                          |                                  |                         | 377,537                                |                           |                          |                                |                                               |
|        | GREEN RIVER UNIT 3                                                         |                          |                                  |                         | 361,644                                |                           |                          |                                |                                               |
|        | GREEN RIVER UNIT 4                                                         |                          |                                  |                         | 2,233,665                              |                           |                          |                                |                                               |
|        | TOTAL ACCOUNT 314.1 - TURBOGENERATOR UNITS - RETIRED PLANT                 |                          |                                  |                         | 3,433,226                              |                           |                          |                                |                                               |
| 315.00 | ACCESSORY ELECTRIC EQUIPMENT                                               |                          |                                  |                         |                                        |                           |                          |                                |                                               |
|        | TRIMBLE COUNTY UNIT 2                                                      | 70-R3                    | * (11)                           | 47,156,606.94           | 8,082,472                              | 44,261,362                | 950,037                  | 2.01                           | 46.6                                          |
|        | TRIMBLE COUNTY UNIT 2 SCRUBBER                                             | 70-R3                    | * (11)                           | 1,415,469.10            | 751,018                                | 820,153                   | 20,058                   | 1.42                           | 40.9                                          |
|        | BROWN UNIT 1                                                               | 70-R3                    | * (5)                            | 4,224,540.53            | 3,219,138                              | 1,216,630                 | 162,781                  | 3.85                           | 7.5                                           |
|        | BROWN UNIT 2                                                               | 70-R3                    | * (5)                            | 2,408,998.58            | 1,409,941                              | 1,119,508                 | 83,617                   | 3.47                           | 13.4                                          |
|        | BROWN UNIT 3                                                               | 70-R3                    | * (5)                            | 8,959,757.01            | 6,735,226                              | 2,672,519                 | 138,260                  | 1.54                           | 19.3                                          |
|        | BROWN UNIT 1, 2 AND 3 SCRUBBER                                             | 70-R3                    | * (5)                            | 29,308,888.08           | 5,739,630                              | 25,034,702                | 1,291,780                | 4.41                           | 19.4                                          |
|        | GHEINT UNIT 1 SCRUBBER                                                     | 70-R3                    | * (7)                            | 12,144,071.97           | 4,905,197                              | 8,088,960                 | 440,467                  | 3.63                           | 18.4                                          |
|        | GHEINT UNIT 1                                                              | 70-R3                    | * (7)                            | 11,725,994.72           | 8,500,593                              | 4,046,221                 | 222,000                  | 1.89                           | 18.2                                          |
|        | GHEINT UNIT 2                                                              | 70-R3                    | * (7)                            | 14,302,432.69           | 11,303,320                             | 4,000,283                 | 225,550                  | 1.58                           | 17.7                                          |
|        | GHEINT UNIT 3                                                              | 70-R3                    | * (7)                            | 33,488,118.71           | 24,419,733                             | 11,412,554                | 557,910                  | 1.67                           | 20.5                                          |
|        | GHEINT UNIT 4                                                              | 70-R3                    | * (7)                            | 27,465,559.02           | 18,041,343                             | 11,346,805                | 527,907                  | 1.92                           | 21.5                                          |
|        | GHEINT UNIT 2 SCRUBBER                                                     | 70-R3                    | * (7)                            | 951,198.87              | 180,721                                | 837,062                   | 45,517                   | 4.79                           | 18.4                                          |
|        | GHEINT UNIT 3 SCRUBBER                                                     | 70-R3                    | * (7)                            | 12,041,998.28           | 3,570,888                              | 9,314,050                 | 438,601                  | 3.64                           | 21.2                                          |
|        | GHEINT UNIT 4 SCRUBBER                                                     | 70-R3                    | * (7)                            | 15,148,041.55           | 2,357,879                              | 13,850,525                | 621,100                  | 4.10                           | 22.3                                          |
|        | TOTAL ACCOUNT 315 - ACCESSORY ELECTRIC EQUIPMENT                           |                          |                                  | 220,741,676.05          | 99,217,099                             | 138,021,334               | 5,725,585                | 2.59                           | 24.1                                          |
| 315.10 | ACCESSORY ELECTRIC EQUIPMENT - RETIRED PLANT                               |                          |                                  |                         |                                        |                           |                          |                                |                                               |
|        | TYRONE UNIT 3                                                              | 70-R3                    | * (10)                           | 24,678.67               | 27,147                                 | 0                         | 0                        | -                              | -                                             |
|        | GREEN RIVER UNIT 3                                                         | 70-R3                    | * (10)                           | 165,716.59              | 182,288                                | 0                         | 0                        | -                              | -                                             |
|        | GREEN RIVER UNIT 4                                                         | 70-R3                    | * (10)                           | 480,433.11              | 528,476                                | 0                         | 0                        | -                              | -                                             |
|        | TOTAL ACCOUNT 315.1 - ACCESSORY ELECTRIC EQUIPMENT - RETIRED PLANT         |                          |                                  | 670,828.37              | 737,911                                | 0                         | 0                        | -                              | -                                             |

KENTUCKY UTILITIES

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2015

|        | ACCOUNT                                                             | SURVIVOR<br>CURVE | NET<br>SALVAGE<br>PERCENT | ORIGINAL<br>COST | BOOK<br>DEPRECIATION<br>RESERVE | FUTURE<br>ACCRUALS | CALCULATED ANNUAL |                 | COMPOSITE<br>REMAINING<br>LIFE |      |
|--------|---------------------------------------------------------------------|-------------------|---------------------------|------------------|---------------------------------|--------------------|-------------------|-----------------|--------------------------------|------|
|        |                                                                     |                   |                           |                  |                                 |                    | ACCRUAL<br>AMOUNT | ACCRUAL<br>RATE |                                |      |
|        | (1)                                                                 | (2)               | (3)                       | (4)              | (5)                             | (6)                | (7)               | (8)=(7)/(4)     | (9)=(6)/(7)                    |      |
| 316.00 | MISCELLANEOUS PLANT EQUIPMENT                                       |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | TRIMBLE COUNTY UNIT 2                                               | 75-R1.5           | *                         | (11)             | 8,369,509.98                    | 721,700            | 8,568,456         | 188,876         | 2.26                           | 45.4 |
|        | SYSTEM LABORATORY                                                   | 75-R1.5           | *                         | (1)              | 3,234,114.29                    | 901,711            | 2,364,744         | 101,143         | 3.13                           | 23.4 |
|        | BROWN UNIT 1                                                        | 75-R1.5           | *                         | (5)              | 445,832.67                      | 355,631            | 112,493           | 15,212          | 3.41                           | 7.4  |
|        | BROWN UNIT 2                                                        | 75-R1.5           | *                         | (5)              | 123,107.10                      | 107,051            | 22,211            | 1,680           | 1.36                           | 13.2 |
|        | BROWN UNIT 3                                                        | 75-R1.5           | *                         | (5)              | 6,381,168.11                    | 3,287,152          | 3,413,075         | 181,900         | 2.85                           | 18.8 |
|        | GHENT UNIT 1 SCRUBBER                                               | 75-R1.5           | *                         | (7)              | 1,033,027.09                    | 948,862            | 156,477           | 8,797           | 0.85                           | 17.8 |
|        | GHENT UNIT 1                                                        | 75-R1.5           | *                         | (7)              | 1,883,273.64                    | 1,666,398          | 348,705           | 19,624          | 1.04                           | 17.8 |
|        | GHENT UNIT 2                                                        | 75-R1.5           | *                         | (7)              | 1,527,545.73                    | 1,449,503          | 184,971           | 10,632          | 0.70                           | 17.4 |
|        | GHENT UNIT 3                                                        | 75-R1.5           | *                         | (7)              | 3,984,043.73                    | 2,671,355          | 1,591,572         | 78,030          | 1.96                           | 20.4 |
|        | GHENT UNIT 4                                                        | 75-R1.5           | *                         | (7)              | 8,771,982.95                    | 3,568,709          | 5,817,313         | 271,431         | 3.09                           | 21.4 |
|        | TOTAL ACCOUNT 316 - MISCELLANEOUS PLANT EQUIPMENT                   |                   |                           | 35,753,605.29    | 15,678,072                      | 22,580,017         | 877,325           | 2.45            | 25.7                           |      |
| 316.10 | MISCELLANEOUS PLANT EQUIPMENT - RETIRED PLANT                       |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | TYRONE UNIT 3                                                       | 75-R1.5           | *                         | (10)             | 74,491.69                       | 81,941             | 0                 | 0               | -                              | -    |
|        | TYRONE UNITS 1 AND 2                                                | 75-R1.5           | *                         | (10)             | 11,541.15                       | 12,695             | 0                 | 0               | -                              | -    |
|        | GREEN RIVER UNIT 4                                                  | 75-R1.5           | *                         | (10)             | 380,191.26                      | 418,210            | 0                 | 0               | -                              | -    |
|        | GREEN RIVER UNITS 1 AND 2                                           | 75-R1.5           | *                         | (10)             | 45,689.51                       | 50,258             | 0                 | 0               | -                              | -    |
|        | TOTAL ACCOUNT 316.1 - MISCELLANEOUS PLANT EQUIPMENT - RETIRED PLANT |                   |                           | 511,913.61       | 563,104                         | 0                  | 0                 | -               | -                              |      |
|        | TOTAL STEAM PRODUCTION PLANT                                        |                   |                           | 4,713,368,149.23 | 1,475,084,816                   | 3,581,288,264      | 161,456,727       |                 |                                |      |
|        | HYDROELECTRIC PRODUCTION PLANT                                      |                   |                           |                  |                                 |                    |                   |                 |                                |      |
| 330.10 | LAND RIGHTS                                                         |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | DIX DAM                                                             | 100-R4            | *                         | 0                | 879,311.47                      | 912,333            | (33,022)          | 0               | -                              | -    |
|        | TOTAL ACCOUNT 330.1 - LAND RIGHTS                                   |                   |                           | 879,311.47       | 912,333                         | (33,022)           | 0                 | -               | -                              |      |
| 331.00 | STRUCTURES AND IMPROVEMENTS                                         |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | DIX DAM                                                             | 90-S2.5           | *                         | (3)              | 827,602.64                      | 345,562            | 506,869           | 20,516          | 2.48                           | 24.7 |
|        | TOTAL ACCOUNT 331 - STRUCTURES AND IMPROVEMENTS                     |                   |                           | 827,602.64       | 345,562                         | 506,869            | 20,516            | 2.48            | 24.7                           |      |
| 332.00 | RESERVOIRS, DAMS & WATERWAY                                         |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | DIX DAM                                                             | 105-S2.5          | *                         | (3)              | 21,885,646.37                   | 8,216,620          | 14,325,596        | 570,125         | 2.61                           | 25.1 |
|        | TOTAL ACCOUNT 332 - RESERVOIRS, DAMS & WATERWAYS                    |                   |                           | 21,885,646.37    | 8,216,620                       | 14,325,596         | 570,125           | 2.61            | 25.1                           |      |
| 333.00 | WATER WHEELS, TURBINES & GENERATORS                                 |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | DIX DAM                                                             | 75-R3             | *                         | (3)              | 14,058,896.32                   | 817,722            | 13,662,941        | 542,711         | 3.86                           | 25.2 |
|        | TOTAL ACCOUNT 333 - WATER WHEELS, TURBINES & GENERATORS             |                   |                           | 14,058,896.32    | 817,722                         | 13,662,941         | 542,711           | 3.86            | 25.2                           |      |
| 334.00 | ACCESSORY ELECTRIC EQUIPMENT                                        |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | DIX DAM                                                             | 40-L2.5           | *                         | (3)              | 1,321,688.77                    | 220,518            | 1,140,821         | 50,351          | 3.81                           | 22.7 |
|        | TOTAL ACCOUNT 334 - ACCESSORY ELECTRIC EQUIPMENT                    |                   |                           | 1,321,688.77     | 220,518                         | 1,140,821          | 50,351            | 3.81            | 22.7                           |      |
| 335.00 | MISCELLANEOUS POWER PLANT EQUIPMENT                                 |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | DIX DAM                                                             | 40-S0             | *                         | (3)              | 316,946.74                      | 116,558            | 209,897           | 11,924          | 3.76                           | 17.6 |
|        | TOTAL ACCOUNT 335 - MISCELLANEOUS POWER PLANT EQUIPMENT             |                   |                           | 316,946.74       | 116,558                         | 209,897            | 11,924            | 3.76            | 17.6                           |      |
| 336.00 | ROADS, RAILROADS & BRIDGES                                          |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | DIX DAM                                                             | 60-R4             | *                         | (3)              | 234,509.13                      | 70,567             | 170,977           | 7,820           | 3.33                           | 21.9 |
|        | TOTAL ACCOUNT 336 - ROADS, RAILROADS & BRIDGES                      |                   |                           | 234,509.13       | 70,567                          | 170,977            | 7,820             | 3.33            | 21.9                           |      |
|        | TOTAL HYDROELECTRIC PRODUCTION PLANT                                |                   |                           | 39,524,601.44    | 10,699,880                      | 29,984,079         | 1,203,447         |                 |                                |      |
|        | OTHER PRODUCTION PLANT                                              |                   |                           |                  |                                 |                    |                   |                 |                                |      |
| 340.10 | LAND RIGHTS                                                         |                   |                           |                  |                                 |                    |                   |                 |                                |      |
|        | BROWN CT UNIT 9 GAS PIPE                                            | SQUARE            | *                         | 0                | 176,409.31                      | 116,532            | 59,877            | 3,863           | 2.19                           | 15.5 |
|        | TOTAL ACCOUNT 340.1 - LAND AND LAND RIGHTS                          |                   |                           | 176,409.31       | 116,532                         | 59,877             | 3,863             | 2.19            | 15.5                           |      |

KENTUCKY UTILITIES

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2015

|         |                                                             |          |   | NET     |                | ORIGINAL    |             | BOOK         |       | FUTURE   |  | CALCULATED ANNUAL |  | COMPOSITE   |  |
|---------|-------------------------------------------------------------|----------|---|---------|----------------|-------------|-------------|--------------|-------|----------|--|-------------------|--|-------------|--|
| ACCOUNT |                                                             | SURVIVOR |   | SALVAGE |                | COST        |             | DEPRECIATION |       | ACCRUALS |  | ACCRUAL           |  | REMAINING   |  |
| (1)     |                                                             | (2)      |   | (3)     |                | (4)         |             | (5)          |       | (6)      |  | (7)               |  | (8)=(7)/(4) |  |
|         |                                                             |          |   |         |                |             |             |              |       |          |  |                   |  | (9)=(6)/(7) |  |
| 341.00  | STRUCTURES AND IMPROVEMENTS                                 |          |   |         |                |             |             |              |       |          |  |                   |  |             |  |
|         | CANE RUN CC 7                                               | 50-R2.5  | * | (10)    | 46,895,473.79  | 663,228     | 50,921,793  | 1,395,882    | 2.98  | 36.5     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 5                                         | 50-R2.5  | * | (7)     | 3,740,231.32   | 1,711,412   | 2,290,636   | 144,628      | 3.87  | 15.8     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 6                                         | 50-R2.5  | * | (7)     | 3,588,684.24   | 1,647,141   | 2,192,751   | 138,513      | 3.86  | 15.8     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 7                                         | 50-R2.5  | * | (7)     | 3,559,154.97   | 1,423,558   | 2,384,738   | 134,503      | 3.78  | 17.7     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 8                                         | 50-R2.5  | * | (7)     | 3,548,851.71   | 1,419,437   | 2,377,834   | 134,114      | 3.78  | 17.7     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 9                                         | 50-R2.5  | * | (7)     | 3,655,976.41   | 1,452,931   | 2,458,964   | 138,689      | 3.79  | 17.7     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 10                                        | 50-R2.5  | * | (7)     | 3,653,029.99   | 1,451,760   | 2,456,982   | 138,578      | 3.79  | 17.7     |  |                   |  |             |  |
|         | BROWN CT 5                                                  | 50-R2.5  | * | (6)     | 785,900.23     | 380,011     | 453,043     | 30,420       | 3.87  | 14.9     |  |                   |  |             |  |
|         | BROWN CT 6                                                  | 50-R2.5  | * | (6)     | 192,814.02     | 97,181      | 107,202     | 8,215        | 4.26  | 13.0     |  |                   |  |             |  |
|         | BROWN CT 7                                                  | 50-R2.5  | * | (6)     | 567,512.07     | 287,418     | 314,145     | 24,111       | 4.25  | 13.0     |  |                   |  |             |  |
|         | BROWN CT 8                                                  | 50-R2.5  | * | (6)     | 2,012,654.95   | 1,419,091   | 714,323     | 77,708       | 3.86  | 9.2      |  |                   |  |             |  |
|         | BROWN CT 9                                                  | 50-R2.5  | * | (6)     | 4,660,156.04   | 3,115,511   | 1,824,254   | 125,197      | 2.69  | 14.6     |  |                   |  |             |  |
|         | BROWN CT 10                                                 | 50-R2.5  | * | (6)     | 1,865,718.20   | 1,202,272   | 775,389     | 53,217       | 2.85  | 14.6     |  |                   |  |             |  |
|         | BROWN CT 11                                                 | 50-R2.5  | * | (6)     | 1,919,015.13   | 1,208,894   | 825,262     | 81,069       | 4.22  | 10.2     |  |                   |  |             |  |
|         | HAEFLING UNITS 1, 2 AND 3                                   | 50-R2.5  | * | (10)    | 291,451.55     | 71,390      | 249,207     | 55,881       | 19.17 | 4.5      |  |                   |  |             |  |
|         | PADDY'S RUN GENERATOR 13                                    | 50-R2.5  | * | (6)     | 2,136,302.83   | 936,648     | 1,327,833   | 88,832       | 4.16  | 14.9     |  |                   |  |             |  |
|         | TOTAL ACCOUNT 341 - STRUCTURES AND IMPROVEMENTS             |          |   |         | 83,072,927.45  | 18,487,883  | 71,674,356  | 2,769,557    | 3.33  | 25.9     |  |                   |  |             |  |
| 342.00  | FUEL HOLDERS, PRODUCERS AND ACCESSORIES                     |          |   |         |                |             |             |              |       |          |  |                   |  |             |  |
|         | CANE RUN CC 7                                               | 45-R2.5  | * | (10)    | 111,535,551.95 | 1,643,640   | 121,045,467 | 3,397,291    | 3.05  | 35.6     |  |                   |  |             |  |
|         | CANE RUN GAS PIPELINE                                       | 45-R2.5  | * | (10)    | 23,414,526.87  | 345,052     | 25,410,928  | 713,189      | 3.05  | 35.6     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 5                                         | 45-R2.5  | * | (7)     | 239,584.43     | 110,150     | 146,205     | 9,354        | 3.90  | 15.6     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 6                                         | 45-R2.5  | * | (7)     | 239,245.54     | 110,006     | 145,987     | 9,340        | 3.90  | 15.6     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT PIPELINE                                  | 45-R2.5  | * | (7)     | 4,856,134.65   | 2,216,039   | 2,980,025   | 171,646      | 3.53  | 17.4     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 7                                         | 45-R2.5  | * | (7)     | 578,059.38     | 231,910     | 386,614     | 22,080       | 3.82  | 17.5     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 8                                         | 45-R2.5  | * | (7)     | 576,385.74     | 231,239     | 385,494     | 22,016       | 3.82  | 17.5     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 9                                         | 45-R2.5  | * | (7)     | 593,786.01     | 236,879     | 398,472     | 22,757       | 3.83  | 17.5     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 10                                        | 45-R2.5  | * | (7)     | 622,872.60     | 246,641     | 419,833     | 23,962       | 3.85  | 17.5     |  |                   |  |             |  |
|         | BROWN CT 5                                                  | 45-R2.5  | * | (6)     | 795,787.89     | 261,412     | 582,123     | 39,251       | 4.93  | 14.8     |  |                   |  |             |  |
|         | BROWN CT 6                                                  | 45-R2.5  | * | (6)     | 959,617.20     | 141,990     | 875,204     | 66,086       | 6.89  | 13.2     |  |                   |  |             |  |
|         | BROWN CT 7                                                  | 45-R2.5  | * | (6)     | 959,028.11     | 138,794     | 877,776     | 66,279       | 6.91  | 13.2     |  |                   |  |             |  |
|         | BROWN CT 8                                                  | 45-R2.5  | * | (6)     | 263,045.52     | 120,424     | 158,404     | 16,886       | 6.42  | 9.4      |  |                   |  |             |  |
|         | BROWN CT 9                                                  | 45-R2.5  | * | (6)     | 3,155,168.57   | 1,205,201   | 2,139,278   | 144,655      | 4.58  | 14.8     |  |                   |  |             |  |
|         | BROWN CT 10                                                 | 45-R2.5  | * | (6)     | 282,445.64     | 71,115      | 228,277     | 15,153       | 5.36  | 15.1     |  |                   |  |             |  |
|         | BROWN CT 11                                                 | 45-R2.5  | * | (6)     | 301,560.87     | 92,783      | 226,872     | 21,981       | 7.29  | 10.3     |  |                   |  |             |  |
|         | BROWN CT UNIT 9 GAS PIPE                                    | 45-R2.5  | * | (6)     | 8,208,122.69   | 5,255,746   | 3,444,864   | 242,700      | 2.96  | 14.2     |  |                   |  |             |  |
|         | HAEFLING UNITS 1, 2 AND 3                                   | 45-R2.5  | * | (10)    | 472,116.83     | 192,271     | 327,058     | 74,299       | 15.74 | 4.4      |  |                   |  |             |  |
|         | PADDY'S RUN GENERATOR 13                                    | 45-R2.5  | * | (6)     | 1,997,091.15   | 975,255     | 1,141,662   | 77,700       | 3.89  | 14.7     |  |                   |  |             |  |
|         | TOTAL ACCOUNT 342 - FUEL HOLDERS, PRODUCERS AND ACCESSORIES |          |   |         | 160,050,131.64 | 13,826,547  | 161,320,543 | 5,156,625    | 3.22  | 31.3     |  |                   |  |             |  |
| 343.00  | PRIME MOVERS                                                |          |   |         |                |             |             |              |       |          |  |                   |  |             |  |
|         | CANE RUN CC 7                                               | 35-R1.5  | * | (10)    | 89,873,336.88  | 1,353,524   | 97,507,147  | 3,154,550    | 3.51  | 30.9     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 5                                         | 35-R1.5  | * | (7)     | 33,056,281.24  | 13,187,243  | 22,182,978  | 1,513,668    | 4.58  | 14.7     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 6                                         | 35-R1.5  | * | (7)     | 32,944,728.98  | 13,527,496  | 21,723,364  | 1,483,363    | 4.50  | 14.6     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 7                                         | 35-R1.5  | * | (7)     | 26,290,569.66  | 8,647,624   | 19,483,286  | 1,188,928    | 4.52  | 16.4     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 8                                         | 35-R1.5  | * | (7)     | 25,158,461.82  | 8,098,854   | 18,820,700  | 1,150,385    | 4.57  | 16.4     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 9                                         | 35-R1.5  | * | (7)     | 24,889,310.25  | 8,411,416   | 18,220,146  | 1,114,728    | 4.48  | 16.3     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 10                                        | 35-R1.5  | * | (7)     | 24,739,825.43  | 8,285,715   | 18,185,898  | 1,111,919    | 4.49  | 16.4     |  |                   |  |             |  |
|         | BROWN CT 5                                                  | 35-R1.5  | * | (6)     | 14,722,669.92  | 6,777,304   | 8,828,726   | 638,782      | 4.34  | 13.8     |  |                   |  |             |  |
|         | BROWN CT 6                                                  | 35-R1.5  | * | (6)     | 34,702,471.57  | 14,206,645  | 22,577,975  | 1,851,313    | 5.33  | 12.2     |  |                   |  |             |  |
|         | BROWN CT 7                                                  | 35-R1.5  | * | (6)     | 31,876,587.22  | 13,616,280  | 20,172,902  | 1,657,646    | 5.20  | 12.2     |  |                   |  |             |  |
|         | BROWN CT 8                                                  | 35-R1.5  | * | (6)     | 26,679,925.25  | 14,860,849  | 13,419,872  | 1,519,224    | 5.69  | 8.8      |  |                   |  |             |  |
|         | BROWN CT 9                                                  | 35-R1.5  | * | (6)     | 28,711,611.96  | 12,156,038  | 18,278,271  | 1,338,860    | 4.66  | 13.7     |  |                   |  |             |  |
|         | BROWN CT 10                                                 | 35-R1.5  | * | (6)     | 25,926,887.42  | 10,072,720  | 17,409,781  | 1,260,560    | 4.86  | 13.8     |  |                   |  |             |  |
|         | BROWN CT 11                                                 | 35-R1.5  | * | (6)     | 34,682,773.23  | 21,054,696  | 15,709,044  | 1,636,017    | 4.72  | 9.6      |  |                   |  |             |  |
|         | PADDY'S RUN GENERATOR 13                                    | 35-R1.5  | * | (6)     | 19,558,876.85  | 5,651,832   | 15,080,577  | 1,081,308    | 5.53  | 13.9     |  |                   |  |             |  |
|         | TOTAL ACCOUNT 343 - PRIME MOVERS                            |          |   |         | 473,814,317.68 | 159,908,236 | 347,600,667 | 21,701,251   | 4.58  | 16.0     |  |                   |  |             |  |
| 344.00  | GENERATORS                                                  |          |   |         |                |             |             |              |       |          |  |                   |  |             |  |
|         | CANE RUN CC 7                                               | 55-S2.5  | * | (10)    | 113,390,206.33 | 1,903,560   | 122,825,667 | 3,218,702    | 2.84  | 38.2     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 5                                         | 55-S2.5  | * | (7)     | 3,800,400.42   | 1,691,733   | 2,374,695   | 146,280      | 3.85  | 16.2     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 6                                         | 55-S2.5  | * | (7)     | 3,795,072.48   | 1,689,538   | 2,371,190   | 146,065      | 3.85  | 16.2     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 7                                         | 55-S2.5  | * | (7)     | 2,983,225.97   | 1,154,958   | 2,037,094   | 111,785      | 3.75  | 18.2     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 8                                         | 55-S2.5  | * | (7)     | 2,970,873.80   | 1,150,135   | 2,028,700   | 111,325      | 3.75  | 18.2     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 9                                         | 55-S2.5  | * | (7)     | 2,990,463.70   | 1,150,226   | 2,049,570   | 112,470      | 3.76  | 18.2     |  |                   |  |             |  |
|         | TRIMBLE COUNTY CT 10                                        | 55-S2.5  | * | (7)     | 2,987,092.13   | 1,149,086   | 2,047,103   | 112,335      | 3.76  | 18.2     |  |                   |  |             |  |

KENTUCKY UTILITIES

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2015

|         |                                                   | SURVIVOR | NET     | ORIGINAL | BOOK           | CALCULATED ANNUAL |             | COMPOSITE   |       |      |
|---------|---------------------------------------------------|----------|---------|----------|----------------|-------------------|-------------|-------------|-------|------|
| ACCOUNT |                                                   | CURVE    | SALVAGE | COST     | DEPRECIATION   | FUTURE            | ACCRUAL     | REMAINING   |       |      |
| (1)     |                                                   | (2)      | PERCENT | (4)      | RESERVE        | ACCRUALS          | AMOUNT      | LIFE        |       |      |
|         |                                                   |          | (3)     |          | (5)            | (6)               | (7)         | (9)=(7)/(6) |       |      |
|         |                                                   |          |         |          |                |                   | (8)=(7)/(4) | (7)         |       |      |
|         | BROWN CT 5                                        | 55-S2.5  | *       | (6)      | 2,866,821.78   | 1,327,386         | 1,711,445   | 112,236     | 3.91  | 15.2 |
|         | BROWN CT 6                                        | 55-S2.5  | *       | (6)      | 3,721,293.63   | 1,994,405         | 1,950,166   | 146,951     | 3.95  | 13.3 |
|         | BROWN CT 7                                        | 55-S2.5  | *       | (6)      | 3,731,462.57   | 1,971,763         | 1,983,587   | 149,464     | 4.01  | 13.3 |
|         | BROWN CT 8                                        | 55-S2.5  | *       | (6)      | 4,962,634.83   | 3,437,474         | 1,822,919   | 195,161     | 3.93  | 9.3  |
|         | BROWN CT 9                                        | 55-S2.5  | *       | (6)      | 5,460,715.08   | 3,599,863         | 2,188,495   | 147,437     | 2.70  | 14.8 |
|         | BROWN CT 10                                       | 55-S2.5  | *       | (6)      | 4,953,096.82   | 3,129,054         | 2,121,229   | 142,251     | 2.87  | 14.9 |
|         | BROWN CT 11                                       | 55-S2.5  | *       | (6)      | 5,762,894.98   | 2,847,510         | 3,261,159   | 314,407     | 5.46  | 10.4 |
|         | HAEFLING UNITS 1, 2 AND 3                         | 55-S2.5  | *       | (10)     | 2,682,135.68   | 2,341,531         | 608,818     | 143,904     | 5.37  | 4.2  |
|         | PADDY'S RUN GENERATOR 13                          | 55-S2.5  | *       | (6)      | 5,450,549.42   | 2,269,181         | 3,508,401   | 229,696     | 4.21  | 15.3 |
|         | TOTAL ACCOUNT 344 - GENERATORS                    |          |         |          | 172,508,939.62 | 32,807,403        | 154,890,238 | 5,540,469   | 3.21  | 28.0 |
| 345.00  | ACCESSORY ELECTRIC EQUIPMENT                      |          |         |          |                |                   |             |             |       |      |
|         | CANE RUN CC 7                                     | 50-R3    | *       | (10)     | 26,286,452.56  | 421,424           | 28,493,674  | 764,931     | 2.91  | 37.2 |
|         | TRIMBLE COUNTY CT 5                               | 50-R3    | *       | (7)      | 1,889,943.86   | 754,635           | 1,267,605   | 78,966      | 4.18  | 16.1 |
|         | TRIMBLE COUNTY CT 6                               | 50-R3    | *       | (7)      | 4,329,841.09   | 1,688,232         | 2,944,698   | 184,149     | 4.25  | 16.0 |
|         | TRIMBLE COUNTY CT 7                               | 50-R3    | *       | (7)      | 3,833,038.02   | 1,250,888         | 2,850,463   | 158,187     | 4.13  | 18.0 |
|         | TRIMBLE COUNTY CT 8                               | 50-R3    | *       | (7)      | 3,144,581.31   | 1,229,820         | 2,134,882   | 119,062     | 3.79  | 17.9 |
|         | TRIMBLE COUNTY CT 9                               | 50-R3    | *       | (7)      | 3,423,274.57   | 1,257,225         | 2,405,679   | 133,945     | 3.91  | 18.0 |
|         | TRIMBLE COUNTY CT 10                              | 50-R3    | *       | (7)      | 7,261,076.07   | 2,513,401         | 5,255,950   | 293,027     | 4.04  | 17.9 |
|         | BROWN CT 5                                        | 50-R3    | *       | (6)      | 2,310,232.75   | 1,003,516         | 1,445,331   | 96,109      | 4.16  | 15.0 |
|         | BROWN CT 6                                        | 50-R3    | *       | (6)      | 2,026,642.95   | 987,425           | 1,160,817   | 88,478      | 4.37  | 13.1 |
|         | BROWN CT 7                                        | 50-R3    | *       | (6)      | 1,987,208.52   | 966,000           | 1,140,441   | 86,959      | 4.38  | 13.1 |
|         | BROWN CT 8                                        | 50-R3    | *       | (6)      | 3,326,335.69   | 1,750,769         | 1,775,147   | 190,725     | 5.73  | 9.3  |
|         | BROWN CT 9                                        | 50-R3    | *       | (6)      | 4,707,156.48   | 2,494,754         | 2,494,832   | 168,092     | 3.57  | 14.8 |
|         | BROWN CT 10                                       | 50-R3    | *       | (6)      | 3,245,891.87   | 1,659,633         | 1,781,012   | 120,084     | 3.70  | 14.8 |
|         | BROWN CT 11                                       | 50-R3    | *       | (6)      | 2,454,258.42   | 1,381,238         | 1,220,276   | 118,281     | 4.82  | 10.3 |
|         | HAEFLING UNITS 1, 2 AND 3                         | 50-R3    | *       | (10)     | 816,263.41     | 105,619           | 792,271     | 180,894     | 22.16 | 4.4  |
|         | PADDY'S RUN GENERATOR 13                          | 50-R3    | *       | (6)      | 2,499,650.62   | 1,141,302         | 1,508,328   | 100,236     | 4.01  | 15.0 |
|         | TOTAL ACCOUNT 345 - ACCESSORY ELECTRIC EQUIPMENT  |          |         |          | 73,541,848.19  | 20,605,881        | 58,671,406  | 2,882,125   | 3.92  | 20.4 |
| 346.00  | MISCELLANEOUS PLANT EQUIPMENT                     |          |         |          |                |                   |             |             |       |      |
|         | CANE RUN CC 7                                     | 40-R2    | *       | (10)     | 21,065.55      | 88                | 23,084      | 688         | 3.27  | 33.6 |
|         | TRIMBLE COUNTY CT 5                               | 40-R2    | *       | (7)      | 28,963.63      | 12,880            | 18,111      | 1,169       | 4.04  | 15.5 |
|         | TRIMBLE COUNTY CT 7                               | 40-R2    | *       | (7)      | 8,888.93       | 3,661             | 5,850       | 346         | 3.89  | 16.9 |
|         | TRIMBLE COUNTY CT 8                               | 40-R2    | *       | (7)      | 8,861.01       | 3,649             | 5,832       | 345         | 3.89  | 16.9 |
|         | TRIMBLE COUNTY CT 9                               | 40-R2    | *       | (7)      | 9,113.52       | 3,730             | 6,021       | 356         | 3.91  | 16.9 |
|         | TRIMBLE COUNTY CT 10                              | 40-R2    | *       | (7)      | 41,868.51      | 11,271            | 33,528      | 1,930       | 4.61  | 17.4 |
|         | BROWN CT 5                                        | 40-R2    | *       | (6)      | 2,139,352.61   | 1,067,229         | 1,200,485   | 84,301      | 3.94  | 14.2 |
|         | BROWN CT 6                                        | 40-R2    | *       | (6)      | 102,224.96     | 26,854            | 81,504      | 6,279       | 6.14  | 13.0 |
|         | BROWN CT 7                                        | 40-R2    | *       | (6)      | 84,123.48      | 21,717            | 67,454      | 5,183       | 6.16  | 13.0 |
|         | BROWN CT 8                                        | 40-R2    | *       | (6)      | 291,226.01     | 180,825           | 127,875     | 14,179      | 4.87  | 9.0  |
|         | BROWN CT 9                                        | 40-R2    | *       | (6)      | 860,425.29     | 524,836           | 387,215     | 27,811      | 3.23  | 13.9 |
|         | BROWN CT 10                                       | 40-R2    | *       | (6)      | 274,390.87     | 170,711           | 120,143     | 8,737       | 3.18  | 13.8 |
|         | BROWN CT 11                                       | 40-R2    | *       | (6)      | 590,562.82     | 323,816           | 302,181     | 30,208      | 5.12  | 10.0 |
|         | HAEFLING UNITS 1, 2 AND 3                         | 40-R2    | *       | (10)     | 104,991.22     | 35,538            | 79,952      | 18,636      | 17.75 | 4.3  |
|         | PADDY'S RUN GENERATOR 13                          | 40-R2    | *       | (6)      | 1,089,550.03   | 546,300           | 608,623     | 42,769      | 3.93  | 14.2 |
|         | TOTAL ACCOUNT 346 - MISCELLANEOUS PLANT EQUIPMENT |          |         |          | 5,655,608.44   | 2,933,105         | 3,067,858   | 242,937     | 4.30  | 12.6 |
|         | TOTAL OTHER PRODUCTION PLANT                      |          |         |          | 968,820,182.33 | 248,685,587       | 797,284,945 | 38,296,827  |       |      |
|         | TRANSMISSION PLANT                                |          |         |          |                |                   |             |             |       |      |
| 350.10  | LAND AND LAND RIGHTS                              | 70-R3    |         | 0        | 29,428,995.30  | 17,044,058        | 12,384,937  | 253,363     | 0.86  | 48.9 |
| 352.10  | STRUCTURES & IMPROVEMENTS - NON SYS CONTROL/COM   | 70-R3    |         | (25)     | 25,314,463.82  | 6,625,682         | 25,017,398  | 420,302     | 1.66  | 59.5 |
| 352.20  | STRUCTURES & IMPROVEMENTS - SYS CONTROL/COM       | 65-R4    |         | (25)     | 193,226.01     | 71,970            | 169,563     | 3,543       | 1.83  | 47.9 |
| 353.10  | STATION EQUIPMENT - NON SYS CONTROL/COM           | 60-R2    |         | (15)     | 257,735,637.27 | 70,441,066        | 225,954,917 | 4,908,788   | 1.90  | 46.0 |
| 353.20  | STATION EQUIPMENT - SYS CONTROL/COM               | 45-R2    |         | (15)     | 6,568,060.27   | 7,553,269         | 0           | 0           | -     | -    |
| 354.00  | TOWERS AND FIXTURES                               | 70-R4    |         | (40)     | 76,403,298.64  | 49,143,732        | 57,820,886  | 1,289,330   | 1.69  | 44.8 |
| 355.00  | POLES AND FIXTURES                                | 58-R2    |         | (75)     | 228,799,845.74 | 72,993,220        | 327,406,510 | 6,711,919   | 2.93  | 48.8 |
| 356.00  | OVERHEAD CONDUCTORS AND DEVICES                   | 65-R3    |         | (75)     | 178,542,714.22 | 114,190,318       | 198,259,432 | 4,527,061   | 2.54  | 43.8 |
| 357.00  | UNDERGROUND CONDUIT                               | 50-R4    |         | 0        | 448,760.26     | 229,646           | 219,114     | 7,645       | 1.70  | 28.7 |
| 358.00  | UNDERGROUND CONDUCTORS AND DEVICES                | 40-R3    |         | 0        | 1,173,303.32   | 966,623           | 206,680     | 8,740       | 0.74  | 23.6 |
|         | TOTAL TRANSMISSION PLANT                          |          |         |          | 804,608,304.85 | 339,259,584       | 847,439,437 | 18,130,691  |       |      |

KENTUCKY UTILITIES

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2015

|                            |                                                      | SURVIVOR | NET     | ORIGINAL         | BOOK          | CALCULATED ANNUAL |             | COMPOSITE   |      |
|----------------------------|------------------------------------------------------|----------|---------|------------------|---------------|-------------------|-------------|-------------|------|
| ACCOUNT                    |                                                      | CURVE    | SALVAGE | COST             | DEPRECIATION  | FUTURE            | ACCRUAL     | ACCRAUAL    |      |
| (1)                        |                                                      | (2)      | PERCENT | (4)              | RESERVE       | ACCRUALS          | AMOUNT      | RATE        |      |
|                            |                                                      | (2)      | (3)     | (4)              | (5)           | (6)               | (7)         | (8)=(7)/(4) |      |
|                            |                                                      |          |         |                  |               |                   |             | (9)=(6)/(7) |      |
| DISTRIBUTION PLANT         |                                                      |          |         |                  |               |                   |             |             |      |
| 360.10                     | LAND AND LAND RIGHTS                                 | 70-R4    | 0       | 2,168,929.31     | 1,458,105     | 710,824           | 13,823      | 0.64        | 51.4 |
| 361.00                     | STRUCTURES AND IMPROVEMENTS                          | 60-R2.5  | (25)    | 10,718,796.73    | 2,256,794     | 11,141,702        | 230,057     | 2.15        | 48.4 |
| 362.00                     | STATION EQUIPMENT                                    | 54-R2    | (20)    | 173,228,756.89   | 47,843,031    | 160,031,477       | 3,967,466   | 2.29        | 40.3 |
| 364.00                     | POLES, TOWERS, AND FIXTURES                          | 50-R1.5  | (50)    | 354,797,240.32   | 152,141,111   | 380,054,749       | 9,477,978   | 2.67        | 40.1 |
| 365.00                     | OVERHEAD CONDUCTORS AND DEVICES                      | 47-R1    | (30)    | 337,937,644.27   | 119,403,224   | 319,915,714       | 8,351,144   | 2.47        | 38.3 |
| 366.00                     | UNDERGROUND CONDUIT                                  | 50-R4    | 0       | 2,050,521.69     | 832,564       | 1,217,958         | 47,571      | 2.32        | 25.6 |
| 367.00                     | UNDERGROUND CONDUCTORS AND DEVICES                   | 48-R2    | (20)    | 181,393,660.79   | 40,586,062    | 177,086,331       | 4,406,186   | 2.43        | 40.2 |
| 368.00                     | LINE TRANSFORMERS                                    | 46-R2    | (5)     | 308,054,000.11   | 141,176,694   | 182,280,006       | 5,515,604   | 1.79        | 33.0 |
| 369.00                     | SERVICES                                             | 48-R1    | (25)    | 94,875,368.05    | 61,837,515    | 56,756,695        | 1,549,728   | 1.63        | 36.6 |
| 370.00                     | METERS                                               | 28-L1    | *       | 66,212,808.46    | 56,280,887    | 9,931,921         | 2,326,567   | 3.51        | 4.3  |
| 370.10                     | METERING EQUIPMENT                                   | 28-L1    | 0       | 10,416,674.08    | 3,863,114     | 6,553,560         | 447,268     | 4.29        | 14.7 |
|                            | METERS - RESERVE AMORTIZATION                        |          |         |                  | (22,208,790)  | 22,208,790        | ***         | -           |      |
| 370.20                     | METERS - AMS                                         | 15-S2.5  | 0       | 698,893.34       | 4,284         | 694,609           | 47,904      | 6.85        | 14.5 |
| 371.00                     | INSTALLATIONS ON CUSTOMERS' PREMISES                 | 28-O1    | (10)    | 17,054,091.74    | 17,012,710    | 1,746,791         | 90,485      | 0.53        | 19.3 |
| 373.00                     | STREET LIGHTING AND SIGNAL SYSTEMS                   | 28-L0.5  | (10)    | 95,997,822.30    | 20,947,022    | 84,650,583        | 3,837,892   | 4.00        | 22.1 |
| TOTAL DISTRIBUTION PLANT   |                                                      |          |         | 1,655,605,208.08 | 643,434,327   | 1,414,981,710     | 40,309,673  |             |      |
| GENERAL PLANT              |                                                      |          |         |                  |               |                   |             |             |      |
| 390.10                     | STRUCTURES AND IMPROVEMENTS - TO OWNED PROPERTY      | 50-S0    | (15)    | 56,676,361.14    | 11,157,166    | 54,020,649        | 1,378,746   | 2.43        | 39.2 |
| 390.20                     | STRUCTURES AND IMPROVEMENTS - LEASEHOLDS             | 33-R1.5  | (10)    | 528,658.33       | 445,844       | 135,680           | 7,551       | 1.43        | 18.0 |
| 391.10                     | OFFICE FURNITURE AND EQUIPMENT                       | 20-SQ    | 0       | 9,997,759.47     | 5,677,517     | 4,320,242         | 435,890     | 4.36        | 9.9  |
| 391.20                     | NON PC COMPUTER EQUIPMENT                            | 5-SQ     | 0       | 26,955,602.79    | 14,275,399    | 12,680,204        | 3,152,434   | 11.69       | 4.0  |
| 391.31                     | PERSONAL COMPUTERS                                   | 4-SQ     | 0       | 7,487,177.86     | 3,350,909     | 4,136,269         | 1,873,226   | 25.02       | 2.2  |
| 392.00                     | TRANSPORTATION EQUIPMENT - CARS AND LIGHT TRUCKS     | 14-S2    | 0       | 1,080,256.71     | 850,491       | 229,766           | 21,335      | 1.97        | 10.8 |
| 392.10                     | TRANSPORTATION EQUIPMENT - HEAVY TRUCKS AND OTHER    | 16-L2.5  | 0       | 4,496,087.64     | 2,506,216     | 1,989,872         | 143,633     | 3.19        | 13.9 |
| 393.00                     | STORES EQUIPMENT                                     | 25-SQ    | 0       | 1,504,425.91     | 311,738       | 1,192,688         | 66,208      | 4.40        | 18.0 |
| 394.00                     | TOOLS, SHOP AND GARAGE EQUIPMENT                     | 25-SQ    | 0       | 12,146,898.05    | 3,584,231     | 8,562,667         | 488,036     | 4.02        | 17.5 |
| 396.00                     | POWER OPERATED EQUIPMENT                             | 16-L5    | 0       | 2,293,200.28     | 733,922       | 1,559,278         | 129,523     | 5.65        | 12.0 |
| 397.00                     | COMMUNICATION EQUIPMENT - MICROWAVE, FIBER AND OTHER | 18-L3    | 0       | 25,857,151.87    | 8,888,012     | 16,969,140        | 1,268,220   | 4.90        | 13.4 |
| 397.10                     | COMMUNICATION EQUIPMENT - RADIO AND TELEPHONE        | 10-SQ    | 0       | 20,009,653.11    | 7,845,508     | 12,164,145        | 2,169,315   | 10.84       | 5.6  |
| 397.20                     | COMMUNICATION EQUIPMENT - DSM                        | 10-SQ    | 0       | 5,875,508.03     | 497,906       | 5,377,602         | 827,323     | 14.08       | 6.5  |
| TOTAL GENERAL PLANT        |                                                      |          |         | 174,908,741.19   | 60,124,859    | 123,338,202       | 11,961,440  |             |      |
| TOTAL DEPRECIABLE PLANT    |                                                      |          |         | 8,449,146,032.44 | 2,821,716,576 | 6,842,199,960     | 286,223,655 |             |      |
| NONDEPRECIABLE PLANT       |                                                      |          |         |                  |               |                   |             |             |      |
| 301.00                     | ORGANIZATION                                         |          |         | 44,455.58        |               |                   |             |             |      |
| 310.20                     | LAND                                                 |          |         | 22,958,202.42    |               |                   |             |             |      |
| 340.20                     | LAND                                                 |          |         | 135,099.02       |               |                   |             |             |      |
| 350.20                     | LAND                                                 |          |         | 2,360,270.07     |               |                   |             |             |      |
| 360.20                     | LAND                                                 |          |         | 5,673,927.95     |               |                   |             |             |      |
| 389.20                     | LAND                                                 |          |         | 2,810,081.60     |               |                   |             |             |      |
| TOTAL NONDEPRECIABLE PLANT |                                                      |          |         | 33,982,036.64    |               |                   |             |             |      |
| TOTAL ELECTRIC PLANT       |                                                      |          |         | 8,483,128,069.08 | 2,821,716,576 | 6,842,199,960     | 286,223,655 |             |      |

\* LIFE SPAN PROCEDURE IS USED. CURVE SHOWN IS INTERIM SURVIVOR CURVE

\*\* TERMINAL NET SALVAGE FACTOR WHICH IS BASED ON VINTAGE AND FUTURE COSTS

\*\*\* RESERVE AMOUNT TO BE RECOVERED AT END OF REPLACEMENT PROGRAM

NOTE: Accrual rates for the Brown Solar Assets when placed in service June 2016 wil be as follows:

| Account | Rate  |
|---------|-------|
| 34100   | 4.24% |
| 34400   | 4.61% |
| 34500   | 4.36% |
| 34600   | 4.25% |

Accrual rates for the Electric Vehicle Charging Station Assets when placed in service June 2016 wil be as follows:

| Account | Rate   |
|---------|--------|
| 37100   | 10.00% |

Attachment to Response to AG-2 Question No. 33(b)

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Spanos

KENTUCKY UTILITIES

TABLE 1. SUMMARY OF ESTIMATED SURVIVOR CURVES, NET SALVAGE PERCENT, ORIGINAL COST, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUAL RATES AS OF DECEMBER 31, 2015

| ACCOUNT | SURVIVOR<br>CURVE | NET<br>SALVAGE<br>PERCENT | ORIGINAL<br>COST | BOOK<br>DEPRECIATION<br>RESERVE | FUTURE<br>ACCRUALS | CALCULATED ANNUAL |                 | COMPOSITE<br>REMAINING<br>LIFE |
|---------|-------------------|---------------------------|------------------|---------------------------------|--------------------|-------------------|-----------------|--------------------------------|
|         |                   |                           |                  |                                 |                    | ACCRUAL<br>AMOUNT | ACCRUAL<br>RATE |                                |
| (1)     | (2)               | (3)                       | (4)              | (5)                             | (6)                | (7)               | (8)=(7)/(4)     | (9)=(6)/(7)                    |

SURVIVOR CURVE.. 20-SQUARE

NET SALVAGE PERCENT.. 0

|      |           |        |        |       |      |       |
|------|-----------|--------|--------|-------|------|-------|
| 1991 | 1,588.57  | 1,589  | 1,589  |       |      |       |
| 1992 | 792.28    | 792    | 792    |       |      |       |
| 1993 | 6,183.50  | 6,184  | 6,184  |       |      |       |
| 1995 | 30,302.58 | 30,303 | 30,303 |       |      |       |
| 1996 | 10,457.30 | 10,196 | 9,006  | 1,451 | 0.50 | 1,451 |
| 1997 | 1,725.32  | 1,596  | 1,410  | 315   | 1.50 | 210   |
| 1998 | 2,055.48  | 1,799  | 1,589  | 466   | 2.50 | 186   |
| 1999 | 711.08    | 587    | 519    | 192   | 3.50 | 55    |
| 2002 | 585.80    | 395    | 349    | 237   | 6.50 | 36    |
| 2003 | 1,516.92  | 948    | 837    | 680   | 7.50 | 91    |
|      | 55,918.83 | 54,389 | 52,578 | 3,341 |      | 2,029 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 1.6 3.63

SURVIVOR CURVE.. 5-SQUARE

NET SALVAGE PERCENT.. 0

|      |               |            |            |            |      |            |
|------|---------------|------------|------------|------------|------|------------|
| 2010 | 180,984.56    | 180,985    | 180,985    |            |      |            |
| 2011 | 5,389,063.29  | 4,850,157  | 4,395,288  | 993,775    | 0.50 | 993,775    |
| 2012 | 7,676,028.89  | 5,373,220  | 4,869,296  | 2,806,733  | 1.50 | 1,871,155  |
| 2013 | 7,139,348.90  | 3,569,674  | 3,234,895  | 3,904,454  | 2.50 | 1,561,782  |
| 2014 | 12,768,962.93 | 3,830,689  | 3,471,430  | 9,297,533  | 3.50 | 2,656,438  |
| 2015 | 18,055,043.39 | 1,805,504  | 1,636,176  | 16,418,867 | 4.50 | 3,648,637  |
|      | 51,209,431.96 | 19,610,229 | 17,788,070 | 33,421,362 |      | 10,731,787 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.1 20.96

INTERIM SURVIVOR CURVE.. SQUARE  
 PROBABLE RETIREMENT YEAR.. 6-2019  
 NET SALVAGE PERCENT.. 0

|      |               |            |            |            |      |           |
|------|---------------|------------|------------|------------|------|-----------|
| 2009 | 36,405,085.42 | 23,663,306 | 24,057,058 | 12,348,027 | 3.50 | 3,528,008 |
| 2010 | 979,128.50    | 598,355    | 608,312    | 370,816    | 3.50 | 105,947   |
| 2011 | 2,499,552.85  | 1,405,998  | 1,429,393  | 1,070,160  | 3.50 | 305,760   |
| 2013 | 1,161,727.76  | 484,057    | 492,112    | 669,616    | 3.50 | 191,319   |

|  |               |            |            |            |  |           |
|--|---------------|------------|------------|------------|--|-----------|
|  | 41,045,494.53 | 26,151,716 | 26,586,875 | 14,458,620 |  | 4,131,034 |
|--|---------------|------------|------------|------------|--|-----------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.5 10.06

TRIMBLE COUNTY UNIT 2  
 INTERIM SURVIVOR CURVE.. IOWA 100-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. -11

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1990 | 34,905,872.19 | 13,188,587 | 16,449,824 | 22,295,694 | 46.74 | 477,015   |
| 1997 | 449,904.13    | 135,301    | 168,758    | 330,636    | 47.55 | 6,953     |
| 2002 | 24,848.68     | 5,864      | 7,314      | 20,268     | 48.03 | 422       |
| 2003 | 61,493.38     | 13,654     | 17,030     | 51,227     | 48.11 | 1,065     |
| 2008 | 53,301.70     | 7,702      | 9,607      | 49,558     | 48.51 | 1,022     |
| 2011 | 59,176,473.13 | 5,406,605  | 6,743,535  | 58,942,350 | 48.72 | 1,209,818 |
| 2012 | 377,820.80    | 27,323     | 34,079     | 385,302    | 48.79 | 7,897     |
| 2013 | 79,448.45     | 4,179      | 5,212      | 82,975     | 48.85 | 1,699     |
| 2014 | 158,517.38    | 5,101      | 6,362      | 169,592    | 48.91 | 3,467     |
| 2015 | 246,069.29    | 2,707      | 3,376      | 269,761    | 48.97 | 5,509     |
|      | 95,533,749.13 | 18,797,023 | 23,445,099 | 82,597,363 |       | 1,714,867 |

TRIMBLE COUNTY UNIT 2 SCRUBBER  
 INTERIM SURVIVOR CURVE.. IOWA 100-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. -11

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 1990 | 5,493,644.11 | 2,075,679 | 3,076,062 | 3,021,883 | 46.74 | 64,653 |
| 2012 | 62,807.35    | 4,542     | 6,731     | 62,985    | 48.79 | 1,291  |
|      | 5,556,451.46 | 2,080,221 | 3,082,793 | 3,084,868 |       | 65,944 |

SYSTEM LABORATORY  
 INTERIM SURVIVOR CURVE.. IOWA 100-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2040  
 NET SALVAGE PERCENT.. -1

|      |              |         |         |         |       |        |
|------|--------------|---------|---------|---------|-------|--------|
| 1989 | 724,776.82   | 379,035 | 594,527 | 137,498 | 23.85 | 5,765  |
| 1990 | 58,100.00    | 29,824  | 46,780  | 11,901  | 23.87 | 499    |
| 1994 | 6,176.00     | 2,905   | 4,557   | 1,681   | 23.96 | 70     |
| 1997 | 16,663.00    | 7,214   | 11,315  | 5,514   | 24.02 | 230    |
| 2011 | 19,253.00    | 3,007   | 4,717   | 14,729  | 24.22 | 608    |
| 2012 | 255,306.75   | 32,140  | 50,412  | 207,447 | 24.23 | 8,562  |
| 2014 | 8,935.37     | 519     | 814     | 8,211   | 24.25 | 339    |
| 2015 | 13,745.45    | 280     | 439     | 13,444  | 24.26 | 554    |
|      | 1,102,956.39 | 454,924 | 713,561 | 400,425 |       | 16,627 |

## BROWN UNIT 1

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2023

NET SALVAGE PERCENT.. -5

|      |              |           |           |        |      |       |
|------|--------------|-----------|-----------|--------|------|-------|
| 1948 | 11,983.27    | 11,273    | 12,582    |        |      |       |
| 1956 | 2,427,156.54 | 2,254,161 | 2,548,514 |        |      |       |
| 1958 | 382.11       | 354       | 401       |        |      |       |
| 1965 | 283.00       | 258       | 297       |        |      |       |
| 1979 | 14,516.00    | 12,607    | 15,242    |        |      |       |
| 1982 | 91,160.00    | 77,980    | 95,718    |        |      |       |
| 1983 | 1,965.00     | 1,672     | 2,063     |        |      |       |
| 1984 | 5,212.00     | 4,408     | 5,473     |        |      |       |
| 1985 | 1,849.00     | 1,554     | 1,941     |        |      |       |
| 1987 | 43,137.68    | 35,762    | 45,295    |        |      |       |
| 1988 | 45,243.11    | 37,229    | 47,505    |        |      |       |
| 1989 | 64,194.00    | 52,405    | 67,404    |        |      |       |
| 1990 | 658.09       | 533       | 691       |        |      |       |
| 1991 | 23,174.40    | 18,587    | 24,333    |        |      |       |
| 1994 | 666,989.00   | 517,984   | 700,338   |        |      |       |
| 1995 | 352,899.61   | 270,679   | 370,545   |        |      |       |
| 1996 | 94,854.89    | 71,780    | 99,598    |        |      |       |
| 1997 | 72,522.04    | 54,071    | 76,148    |        |      |       |
| 1998 | 11,065.00    | 8,113     | 11,618    |        |      |       |
| 2004 | 108,817.17   | 69,027    | 114,258   |        |      |       |
| 2005 | 71,616.67    | 43,799    | 75,198    |        |      |       |
| 2006 | 35,830.85    | 20,971    | 37,622    |        |      |       |
| 2007 | 85,296.44    | 47,455    | 86,232    | 3,329  | 7.48 | 445   |
| 2008 | 436,431.15   | 228,512   | 415,237   | 43,015 | 7.48 | 5,751 |
| 2014 | 8,914.20     | 1,563     | 2,840     | 6,520  | 7.48 | 872   |
| 2015 | 13,918.24    | 916       | 1,664     | 12,950 | 7.48 | 1,731 |
|      | 4,690,069.46 | 3,843,653 | 4,858,759 | 65,814 |      | 8,799 |

## BROWN UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -5

|      |              |           |           |
|------|--------------|-----------|-----------|
| 1963 | 1,268,530.68 | 1,054,311 | 1,331,957 |
| 1965 | 11,653.00    | 9,610     | 12,236    |
| 1966 | 10,986.00    | 9,021     | 11,535    |
| 1967 | 2,142.72     | 1,752     | 2,250     |
| 1979 | 24,545.95    | 18,738    | 25,773    |
| 1980 | 400.00       | 303       | 420       |

## BROWN UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -5

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1983 | 1,964.15     | 1,451     | 2,062     |         |       |        |
| 1992 | 96,409.90    | 64,053    | 101,230   |         |       |        |
| 1997 | 19,477.46    | 11,785    | 20,253    | 199     | 13.37 | 15     |
| 2004 | 43,200.52    | 20,811    | 35,764    | 9,597   | 13.40 | 716    |
| 2005 | 5,793.58     | 2,653     | 4,559     | 1,524   | 13.41 | 114    |
| 2007 | 565,018.59   | 228,391   | 392,493   | 200,777 | 13.42 | 14,961 |
| 2009 | 21,690.24    | 7,385     | 12,691    | 10,084  | 13.42 | 751    |
| 2012 | 133,555.40   | 28,794    | 49,483    | 90,750  | 13.43 | 6,757  |
| 2015 | 91,828.24    | 3,459     | 5,944     | 90,475  | 13.44 | 6,732  |
|      | 2,297,196.43 | 1,462,517 | 2,008,651 | 403,405 |       | 30,046 |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1967 | 1,440.97     | 1,074     | 1,372     | 141     | 18.66 | 8      |
| 1968 | 93.83        | 70        | 89        | 9       | 18.69 |        |
| 1971 | 7,455,327.76 | 5,419,390 | 6,924,673 | 903,422 | 18.77 | 48,131 |
| 1972 | 56,652.66    | 40,900    | 52,260    | 7,225   | 18.79 | 385    |
| 1973 | 11,995.55    | 8,599     | 10,987    | 1,608   | 18.81 | 85     |
| 1974 | 2,999.00     | 2,133     | 2,725     | 423     | 18.84 | 22     |
| 1975 | 15,098.31    | 10,656    | 13,616    | 2,237   | 18.86 | 119    |
| 1977 | 1,211,596.00 | 841,048   | 1,074,656 | 197,519 | 18.90 | 10,451 |
| 1979 | 8,850.03     | 6,033     | 7,709     | 1,584   | 18.94 | 84     |
| 1980 | 275,262.00   | 185,806   | 237,415   | 51,610  | 18.96 | 2,722  |
| 1983 | 3,928.40     | 2,567     | 3,280     | 845     | 19.02 | 44     |
| 1984 | 146,459.90   | 94,583    | 120,854   | 32,929  | 19.04 | 1,729  |
| 1985 | 58,036.00    | 37,022    | 47,305    | 13,633  | 19.05 | 716    |
| 1986 | 44,536.07    | 28,036    | 35,823    | 10,940  | 19.07 | 574    |
| 1987 | 251,180.26   | 155,983   | 199,309   | 64,431  | 19.08 | 3,377  |
| 1988 | 56,900.74    | 34,819    | 44,490    | 15,255  | 19.10 | 799    |
| 1989 | 477,066.00   | 287,483   | 367,334   | 133,585 | 19.11 | 6,990  |
| 1990 | 48,018.29    | 28,454    | 36,357    | 14,062  | 19.13 | 735    |
| 1991 | 68,381.00    | 39,826    | 50,888    | 20,912  | 19.14 | 1,093  |
| 1992 | 756,531.00   | 432,321   | 552,402   | 241,956 | 19.16 | 12,628 |
| 1993 | 84,689.00    | 47,448    | 60,627    | 28,296  | 19.17 | 1,476  |
| 1995 | 22,964.00    | 12,311    | 15,730    | 8,382   | 19.19 | 437    |
| 1997 | 215,113.23   | 109,515   | 139,934   | 85,935  | 19.22 | 4,471  |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |               |            |            |           |       |         |
|------|---------------|------------|------------|-----------|-------|---------|
| 1998 | 127,955.64    | 63,278     | 80,854     | 53,499    | 19.23 | 2,782   |
| 2001 | 83,885.45     | 37,410     | 47,801     | 40,279    | 19.26 | 2,091   |
| 2003 | 193,441.22    | 79,056     | 101,014    | 102,099   | 19.27 | 5,298   |
| 2004 | 122,280.23    | 47,471     | 60,656     | 67,738    | 19.28 | 3,513   |
| 2005 | 95,151.19     | 34,843     | 44,521     | 55,388    | 19.29 | 2,871   |
| 2007 | 8,016,945.98  | 2,545,372  | 3,252,371  | 5,165,422 | 19.31 | 267,500 |
| 2009 | 200,931.69    | 52,561     | 67,160     | 143,818   | 19.32 | 7,444   |
| 2010 | 423,902.15    | 97,614     | 124,727    | 320,370   | 19.33 | 16,574  |
| 2011 | 43,327.16     | 8,494      | 10,853     | 34,640    | 19.34 | 1,791   |
| 2012 | 602,913.83    | 96,067     | 122,750    | 510,309   | 19.34 | 26,386  |
| 2013 | 504,143.53    | 59,922     | 76,566     | 452,785   | 19.35 | 23,400  |
| 2014 | 966,396.11    | 72,065     | 92,082     | 922,634   | 19.36 | 47,657  |
| 2015 | 57,124.43     | 1,510      | 1,929      | 58,051    | 19.36 | 2,999   |
|      | 22,711,518.61 | 11,021,740 | 14,083,124 | 9,763,971 |       | 507,382 |

## BROWN UNITS 1, 2 AND 3 SCRUBBER

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |               |           |           |            |       |           |
|------|---------------|-----------|-----------|------------|-------|-----------|
| 1994 | 38,344.63     | 21,028    | 34,098    | 6,164      | 19.18 | 321       |
| 2013 | 45,322,523.30 | 5,387,035 | 8,735,324 | 38,853,326 | 19.35 | 2,007,924 |
| 2015 | 146,854.51    | 3,883     | 6,296     | 147,901    | 19.36 | 7,640     |
|      | 45,507,722.44 | 5,411,946 | 8,775,718 | 39,007,391 |       | 2,015,885 |

## GHENT UNIT 1 SCRUBBER

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 1997 | 8,362,584.36 | 4,455,550 | 7,312,037 | 1,635,929 | 18.25 | 89,640 |
| 2007 | 34,607.76    | 11,618    | 19,066    | 17,964    | 18.33 | 980    |
|      | 8,397,192.12 | 4,467,168 | 7,331,103 | 1,653,893 |       | 90,620 |

## GHENT UNIT 1

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |               |            |            |           |       |         |
|------|---------------|------------|------------|-----------|-------|---------|
| 1974 | 14,792,573.62 | 10,900,464 | 15,828,054 |           |       |         |
| 1979 | 287,003.73    | 202,915    | 307,094    |           |       |         |
| 1980 | 27,171.00     | 19,035     | 28,825     | 248       | 18.02 | 14      |
| 1981 | 10,791.00     | 7,484      | 11,333     | 213       | 18.04 | 12      |
| 1985 | 107,260.53    | 71,146     | 107,736    | 7,032     | 18.10 | 389     |
| 1987 | 218,325.45    | 141,095    | 213,660    | 19,948    | 18.13 | 1,100   |
| 1988 | 97,360.62     | 62,041     | 93,949     | 10,227    | 18.14 | 564     |
| 1992 | 29,300.00     | 17,476     | 26,464     | 4,887     | 18.19 | 269     |
| 1994 | 74,968.00     | 42,941     | 65,026     | 15,190    | 18.22 | 834     |
| 1995 | 60,912.73     | 34,121     | 51,669     | 13,507    | 18.23 | 741     |
| 1996 | 393,716.22    | 215,323    | 326,064    | 95,213    | 18.24 | 5,220   |
| 1997 | 33,704.37     | 17,958     | 27,194     | 8,870     | 18.25 | 486     |
| 2003 | 143,388.86    | 61,642     | 93,344     | 60,082    | 18.30 | 3,283   |
| 2005 | 240,490.70    | 92,781     | 140,498    | 116,827   | 18.32 | 6,377   |
| 2007 | 240,638.23    | 80,783     | 122,330    | 135,153   | 18.33 | 7,373   |
| 2009 | 333,988.93    | 92,662     | 140,318    | 217,050   | 18.34 | 11,835  |
| 2010 | 643,507.32    | 157,224    | 238,084    | 450,469   | 18.35 | 24,549  |
| 2011 | 670,518.89    | 140,033    | 212,052    | 505,403   | 18.35 | 27,542  |
| 2013 | 237,388.65    | 30,105     | 45,588     | 208,418   | 18.37 | 11,346  |
| 2015 | 862,032.52    | 23,954     | 36,274     | 886,101   | 18.38 | 48,210  |
|      | 19,505,041.37 | 12,411,183 | 18,115,555 | 2,754,839 |       | 150,144 |

## GHENT UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |               |            |            |           |       |         |
|------|---------------|------------|------------|-----------|-------|---------|
| 1977 | 14,862,896.44 | 10,695,923 | 13,639,097 | 2,264,202 | 17.97 | 125,999 |
| 1979 | 227,477.00    | 160,829    | 205,084    | 38,316    | 18.01 | 2,127   |
| 1980 | 88,059.38     | 61,690     | 78,665     | 15,558    | 18.02 | 863     |
| 1981 | 10,786.00     | 7,481      | 9,540      | 2,001     | 18.04 | 111     |
| 1986 | 385,657.47    | 252,540    | 322,031    | 90,623    | 18.12 | 5,001   |
| 1988 | 13,292.75     | 8,471      | 10,802     | 3,421     | 18.14 | 189     |
| 1989 | 11,294.78     | 7,087      | 9,037      | 3,048     | 18.16 | 168     |
| 1991 | 1,929.73      | 1,172      | 1,494      | 570       | 18.18 | 31      |
| 1995 | 27,739.56     | 15,539     | 19,815     | 9,866     | 18.23 | 541     |
| 1997 | 13,603.48     | 7,248      | 9,242      | 5,313     | 18.25 | 291     |
| 1998 | 67,159.90     | 34,794     | 44,368     | 27,493    | 18.26 | 1,506   |

## GHENT UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |               |            |            |           |       |         |
|------|---------------|------------|------------|-----------|-------|---------|
| 2003 | 223,834.88    | 96,225     | 122,703    | 116,800   | 18.30 | 6,383   |
| 2013 | 194,635.03    | 24,683     | 31,475     | 176,785   | 18.37 | 9,624   |
| 2015 | 130,289.29    | 3,620      | 4,616      | 134,793   | 18.38 | 7,334   |
|      | 16,258,655.69 | 11,377,302 | 14,507,970 | 2,888,792 |       | 160,168 |

## GHENT UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2037

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1981 | 34,380,542.39 | 22,573,717 | 27,719,915 | 9,067,266  | 20.86 | 434,672   |
| 1982 | 1,235,435.00  | 802,019    | 984,858    | 337,058    | 20.88 | 16,143    |
| 1983 | 511.16        | 328        | 403        | 144        | 20.90 | 7         |
| 1987 | 2,248,542.00  | 1,366,045  | 1,677,466  | 728,474    | 20.98 | 34,722    |
| 1995 | 9,779.16      | 5,087      | 6,247      | 4,217      | 21.12 | 200       |
| 1996 | 195,780.51    | 99,237     | 121,860    | 87,625     | 21.13 | 4,147     |
| 2001 | 263,336.76    | 113,027    | 138,794    | 142,976    | 21.20 | 6,744     |
| 2002 | 234,131.24    | 96,237     | 118,176    | 132,344    | 21.21 | 6,240     |
| 2004 | 2,640,221.52  | 980,768    | 1,204,357  | 1,620,680  | 21.23 | 76,339    |
| 2005 | 105,410.84    | 36,857     | 45,259     | 67,530     | 21.24 | 3,179     |
| 2010 | 643,443.60    | 139,707    | 171,556    | 516,928    | 21.29 | 24,280    |
| 2011 | 109,662.90    | 20,202     | 24,808     | 92,532     | 21.30 | 4,344     |
| 2014 | 8,999,804.63  | 625,070    | 767,569    | 8,862,222  | 21.32 | 415,676   |
|      | 51,066,601.71 | 26,858,301 | 32,981,268 | 21,659,996 |       | 1,026,693 |

## GHENT UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2038

NET SALVAGE PERCENT.. -7

|      |               |           |            |           |       |         |
|------|---------------|-----------|------------|-----------|-------|---------|
| 1984 | 15,550,093.93 | 9,669,523 | 10,099,433 | 6,539,168 | 21.86 | 299,139 |
| 1985 | 931,420.00    | 571,382   | 596,786    | 399,834   | 21.88 | 18,274  |
| 1986 | 734,905.00    | 444,460   | 464,221    | 322,128   | 21.90 | 14,709  |
| 1987 | 15,869.00     | 9,455     | 9,875      | 7,104     | 21.92 | 324     |
| 1988 | 8,118.00      | 4,758     | 4,970      | 3,717     | 21.95 | 169     |
| 1989 | 20,054.00     | 11,558    | 12,072     | 9,386     | 21.97 | 427     |
| 1990 | 23,192.76     | 13,131    | 13,715     | 11,101    | 21.99 | 505     |
| 1991 | 16,217.00     | 9,013     | 9,414      | 7,938     | 22.00 | 361     |

## GHENT UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2038

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |         |
|------|---------------|------------|------------|------------|-------|---------|
| 1992 | 24,302.00     | 13,236     | 13,824     | 12,179     | 22.02 | 553     |
| 1993 | 42,417.00     | 22,605     | 23,610     | 21,776     | 22.04 | 988     |
| 1994 | 11,882.00     | 6,188      | 6,463      | 6,251      | 22.06 | 283     |
| 1995 | 28,654.54     | 14,564     | 15,212     | 15,449     | 22.07 | 700     |
| 1996 | 80,570.00     | 39,875     | 41,648     | 44,562     | 22.09 | 2,017   |
| 1997 | 1,942,669.00  | 934,481    | 976,028    | 1,102,628  | 22.10 | 49,893  |
| 2001 | 618,493.64    | 258,342    | 269,828    | 391,960    | 22.16 | 17,688  |
| 2002 | 186,501.00    | 74,580     | 77,896     | 121,660    | 22.17 | 5,488   |
| 2003 | 189,255.91    | 72,029     | 75,231     | 127,272    | 22.19 | 5,736   |
| 2004 | 276,923.25    | 99,832     | 104,271    | 192,037    | 22.20 | 8,650   |
| 2005 | 181,861.63    | 61,693     | 64,436     | 130,156    | 22.21 | 5,860   |
| 2007 | 7,212,117.43  | 2,108,970  | 2,202,735  | 5,514,230  | 22.23 | 248,054 |
| 2010 | 581,597.75    | 121,854    | 127,272    | 495,038    | 22.26 | 22,239  |
| 2011 | 447,887.14    | 79,664     | 83,206     | 396,033    | 22.27 | 17,783  |
| 2012 | 265,809.06    | 38,134     | 39,829     | 244,586    | 22.28 | 10,978  |
| 2013 | 1,076,247.83  | 114,882    | 119,990    | 1,031,595  | 22.29 | 46,281  |
| 2014 | 2,643,686.56  | 176,061    | 183,889    | 2,644,856  | 22.30 | 118,603 |
| 2015 | 137,615.33    | 3,164      | 3,305      | 143,944    | 22.31 | 6,452   |
|      | 33,248,360.76 | 14,973,434 | 15,639,157 | 19,936,589 |       | 902,154 |

## GHENT UNIT 2 SCRUBBER

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |                                                                   |             |             |             |       |           |
|------|-------------------------------------------------------------------|-------------|-------------|-------------|-------|-----------|
| 1994 | 15,817,337.72                                                     | 9,060,051   | 13,742,096  | 3,182,455   | 18.22 | 174,668   |
|      | 15,817,337.72                                                     | 9,060,051   | 13,742,096  | 3,182,455   |       | 174,668   |
|      | 321,692,853.29                                                    | 122,219,463 | 159,284,854 | 187,399,801 |       | 6,863,997 |
|      | COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 27.3 |             |             |             |       | 2.13      |

TRIMBLE COUNTY UNIT 2 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. 0

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 1990 | 4,562,600.30 | 1,543,893 | 2,148,119 | 2,414,481 | 49.86 | 48,425 |
|      | 4,562,600.30 | 1,543,893 | 2,148,119 | 2,414,481 |       | 48,425 |

GHENT UNIT 1 SCRUBBER ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. 0

|      |           |        |        |       |       |     |
|------|-----------|--------|--------|-------|-------|-----|
| 1997 | 39,480.55 | 19,740 | 34,420 | 5,061 | 18.50 | 274 |
|      | 39,480.55 | 19,740 | 34,420 | 5,061 |       | 274 |

GHENT UNIT 1 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. 0

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 1987 | 322,828.55   | 195,757   | 304,586   | 18,243    | 18.50 | 986    |
|      | 322,828.55   | 195,757   | 304,586   | 18,243    |       | 986    |
|      | 4,924,909.40 | 1,759,390 | 2,487,125 | 2,437,785 |       | 49,685 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 49.1 1.01

## TYRONE UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |              |           |           |
|------|--------------|-----------|-----------|
| 1947 | 572,836.03   | 630,120   | 630,120   |
| 1948 | 291,289.73   | 320,419   | 320,419   |
| 1949 | 3,757.35     | 4,133     | 4,133     |
| 1951 | 449.85       | 495       | 495       |
| 1953 | 284,320.41   | 312,752   | 312,752   |
| 1954 | 19,256.64    | 21,182    | 21,182    |
| 1955 | 1,152.61     | 1,268     | 1,268     |
| 1966 | 18.41        | 20        | 20        |
| 1970 | 15,244.21    | 16,769    | 16,769    |
| 1973 | 0.48         | 1         | 1         |
| 1978 | 45,723.00    | 50,295    | 50,295    |
| 1994 | 7,063.50     | 7,770     | 7,770     |
| 2003 | 8,480.22     | 9,328     | 9,328     |
| 2006 | 48,571.39    | 53,429    | 53,429    |
| 2007 | 111,599.81   | 122,760   | 122,760   |
| 2009 | 67,097.35    | 73,807    | 73,807    |
| 2013 | 6,150.84     | 6,766     | 6,766     |
| 2015 | 209,964.73   | 230,961   | 230,961   |
|      | 1,692,976.56 | 1,862,275 | 1,862,274 |

## TYRONE UNITS 1 AND 2

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |            |         |         |
|------|------------|---------|---------|
| 1947 | 464,339.65 | 510,774 | 510,774 |
| 2000 | 36,257.09  | 39,883  | 39,883  |
| 2001 | 78,101.58  | 85,912  | 85,912  |
| 2004 | 4,683.12   | 5,151   | 5,152   |
|      | 583,381.44 | 641,720 | 641,720 |

## GREEN RIVER UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 100-R2.5

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |              |           |           |
|------|--------------|-----------|-----------|
| 1954 | 1,532,919.98 | 1,686,212 | 1,686,212 |
| 1955 | 34,040.75    | 37,445    | 37,445    |

GREEN RIVER UNIT 3  
 INTERIM SURVIVOR CURVE.. IOWA 100-R2.5  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |              |           |           |
|------|--------------|-----------|-----------|
| 1977 | 454,212.76   | 499,634   | 499,634   |
| 1978 | 2,303.00     | 2,533     | 2,533     |
| 1982 | 372,934.13   | 410,228   | 410,228   |
| 1985 | 19,443.60    | 21,388    | 21,388    |
| 1997 | 26,427.69    | 29,070    | 29,070    |
| 2011 | 107,003.10   | 117,703   | 117,704   |
|      | 2,549,285.01 | 2,804,213 | 2,804,214 |

GREEN RIVER UNIT 4  
 INTERIM SURVIVOR CURVE.. IOWA 100-R2.5  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |              |           |           |
|------|--------------|-----------|-----------|
| 1959 | 2,136,379.91 | 2,350,018 | 2,350,018 |
| 1960 | 9,468.10     | 10,415    | 10,415    |
| 1980 | 37,188.01    | 40,907    | 40,907    |
| 1982 | 1,306.83     | 1,438     | 1,438     |
| 1985 | 14,804.60    | 16,285    | 16,285    |
| 1986 | 78,079.36    | 85,887    | 85,887    |
| 1987 | 8,740.03     | 9,614     | 9,614     |
| 1988 | 18,125.00    | 19,938    | 19,938    |
| 1990 | 0.35         |           | 0         |
| 1991 | 152,430.19   | 167,673   | 167,673   |
| 1992 | 453.00       | 498       | 498       |
| 1994 | 0.20         |           | 0         |
| 1995 | 238.43       | 262       | 262       |
| 1996 | 128,584.00   | 141,442   | 141,442   |
| 1997 | 98,050.96    | 107,856   | 107,856   |
| 2000 | 125,696.00   | 138,266   | 138,266   |
| 2003 | 37,909.52    | 41,700    | 41,700    |
| 2004 | 14,553.86    | 16,009    | 16,009    |
| 2005 | 170,827.36   | 187,910   | 187,910   |
| 2007 | 116,707.42   | 128,378   | 128,378   |
| 2009 | 164,177.61   | 180,595   | 180,595   |
| 2010 | 24.08        | 26        | 26        |

GREEN RIVER UNIT 4  
 INTERIM SURVIVOR CURVE.. IOWA 100-R2.5  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |              |           |           |
|------|--------------|-----------|-----------|
| 2011 | 270,769.12   | 297,846   | 297,846   |
| 2012 | 231,931.02   | 255,124   | 255,124   |
| 2013 | 743,577.10   | 817,935   | 817,935   |
|      | 4,560,022.06 | 5,016,022 | 5,016,024 |

GREEN RIVER UNITS 1 AND 2  
 INTERIM SURVIVOR CURVE.. IOWA 100-R2.5  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |              |           |           |
|------|--------------|-----------|-----------|
| 1950 | 981,876.86   | 1,080,065 | 1,080,065 |
| 1951 | 43,895.11    | 48,285    | 48,285    |
| 1954 | 12,435.28    | 13,679    | 13,679    |
| 1960 | 11,239.00    | 12,363    | 12,363    |
| 1961 | 219.00       | 241       | 241       |
| 1965 | 6,953.70     | 7,649     | 7,649     |
| 1970 | 0.08         |           | 0         |
| 1973 | 5,098.15     | 5,608     | 5,608     |
| 1974 | 28.00        | 31        | 31        |
| 1975 | 394,531.08   | 433,984   | 433,984   |
| 1978 | 34,073.00    | 37,480    | 37,480    |
| 1997 | 68,189.00    | 75,008    | 75,008    |
|      | 1,558,538.26 | 1,714,393 | 1,714,392 |

PINEVILLE UNIT 3  
 INTERIM SURVIVOR CURVE.. IOWA 100-R2.5  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |               |            |            |
|------|---------------|------------|------------|
| 2013 | 37,239.96     | 40,964     | 40,964     |
|      | 37,239.96     | 40,964     | 40,964     |
|      | 10,981,443.29 | 12,079,587 | 12,079,588 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

TRIMBLE COUNTY UNIT 2  
 INTERIM SURVIVOR CURVE.. IOWA 65-R2  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. -11

|      |                |            |            |             |       |            |
|------|----------------|------------|------------|-------------|-------|------------|
| 1990 | 30,527,801.72  | 12,397,820 | 19,605,736 | 14,280,124  | 38.20 | 373,825    |
| 1999 | 46,214.59      | 13,396     | 21,184     | 30,114      | 41.62 | 724        |
| 2002 | 235,262.87     | 58,010     | 91,736     | 169,406     | 42.58 | 3,979      |
| 2003 | 251,881.90     | 58,272     | 92,151     | 187,438     | 42.88 | 4,371      |
| 2004 | 103,726.28     | 22,382     | 35,395     | 79,742      | 43.18 | 1,847      |
| 2008 | 11,126.98      | 1,659      | 2,624      | 9,727       | 44.26 | 220        |
| 2011 | 478,940,169.04 | 45,007,253 | 71,173,828 | 460,449,759 | 44.98 | 10,236,767 |
| 2012 | 4,494,782.01   | 333,628    | 527,595    | 4,461,613   | 45.21 | 98,686     |
| 2013 | 836,833.81     | 45,135     | 71,376     | 857,510     | 45.43 | 18,875     |
| 2014 | 11,469,287.24  | 376,326    | 595,117    | 12,135,792  | 45.64 | 265,903    |
| 2015 | 5,016,490.04   | 56,518     | 89,377     | 5,478,927   | 45.84 | 119,523    |
|      | 531,933,576.48 | 58,370,399 | 92,306,117 | 498,140,153 |       | 11,124,720 |

TRIMBLE COUNTY UNIT 2 SCRUBBER  
 INTERIM SURVIVOR CURVE.. IOWA 65-R2  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. -11

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1990 | 11,005,849.25 | 4,469,648  | 8,098,474  | 4,118,019  | 38.20 | 107,802   |
| 2003 | 51,829.65     | 11,991     | 21,726     | 35,805     | 42.88 | 835       |
| 2005 | 27,031.69     | 5,401      | 9,786      | 20,219     | 43.46 | 465       |
| 2007 | 131,148.15    | 21,849     | 39,588     | 105,987    | 44.00 | 2,409     |
| 2011 | 60,117,074.96 | 5,649,358  | 10,235,969 | 56,493,985 | 44.98 | 1,255,980 |
| 2012 | 1,218,956.00  | 90,478     | 163,935    | 1,189,106  | 45.21 | 26,302    |
| 2013 | 131,025.54    | 7,067      | 12,805     | 132,634    | 45.43 | 2,920     |
| 2014 | 338,774.33    | 11,116     | 20,141     | 355,899    | 45.64 | 7,798     |
|      | 73,021,689.57 | 10,266,908 | 18,602,423 | 62,451,652 |       | 1,404,511 |

BROWN UNIT 1  
 INTERIM SURVIVOR CURVE.. IOWA 65-R2  
 PROBABLE RETIREMENT YEAR.. 6-2023  
 NET SALVAGE PERCENT.. -5

|      |              |           |           |         |      |        |
|------|--------------|-----------|-----------|---------|------|--------|
| 1950 | 38,574.00    | 35,951    | 34,124    | 6,379   | 6.64 | 961    |
| 1956 | 3,432,925.22 | 3,168,166 | 3,007,150 | 597,422 | 6.82 | 87,599 |
| 1957 | 198,794.49   | 183,118   | 173,811   | 34,923  | 6.85 | 5,098  |
| 1959 | 13,000.91    | 11,930    | 11,324    | 2,327   | 6.90 | 337    |
| 1965 | 11,524.63    | 10,435    | 9,905     | 2,196   | 7.04 | 312    |

## BROWN UNIT 1

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2023

NET SALVAGE PERCENT.. -5

|      |               |            |            |            |      |           |
|------|---------------|------------|------------|------------|------|-----------|
| 1966 | 34.45         | 31         | 29         | 7          | 7.06 | 1         |
| 1968 | 1,948.40      | 1,751      | 1,662      | 384        | 7.09 | 54        |
| 1973 | 1,590,515.65  | 1,407,277  | 1,335,755  | 334,287    | 7.17 | 46,623    |
| 1974 | 18,694.00     | 16,480     | 15,642     | 3,986      | 7.19 | 554       |
| 1975 | 441,330.00    | 387,673    | 367,970    | 95,426     | 7.20 | 13,254    |
| 1977 | 7,170.50      | 6,248      | 5,930      | 1,599      | 7.23 | 221       |
| 1978 | 1,881.00      | 1,632      | 1,549      | 426        | 7.24 | 59        |
| 1983 | 80,244.00     | 67,933     | 64,480     | 19,776     | 7.29 | 2,713     |
| 1984 | 4,372.00      | 3,680      | 3,493      | 1,098      | 7.30 | 150       |
| 1985 | 27,185.00     | 22,739     | 21,583     | 6,961      | 7.31 | 952       |
| 1987 | 70,883.58     | 58,507     | 55,533     | 18,894     | 7.32 | 2,581     |
| 1988 | 311,788.04    | 255,423    | 242,442    | 84,936     | 7.33 | 11,587    |
| 1989 | 12,314.44     | 10,007     | 9,498      | 3,432      | 7.34 | 468       |
| 1990 | 16,976.00     | 13,682     | 12,987     | 4,838      | 7.34 | 659       |
| 1991 | 11,405,119.81 | 9,107,393  | 8,644,526  | 3,330,850  | 7.35 | 453,177   |
| 1992 | 299,803.87    | 237,021    | 224,975    | 89,819     | 7.36 | 12,204    |
| 1994 | 809,175.97    | 625,841    | 594,034    | 255,601    | 7.37 | 34,681    |
| 1995 | 5,085.27      | 3,884      | 3,687      | 1,653      | 7.38 | 224       |
| 1996 | 597,835.99    | 450,570    | 427,671    | 200,057    | 7.38 | 27,108    |
| 1997 | 269,896.00    | 200,383    | 190,199    | 93,192     | 7.39 | 12,611    |
| 1999 | 6,580.00      | 4,720      | 4,480      | 2,429      | 7.40 | 328       |
| 2001 | 1,316,699.00  | 905,601    | 859,575    | 522,959    | 7.41 | 70,575    |
| 2002 | 13,656.00     | 9,166      | 8,700      | 5,639      | 7.41 | 761       |
| 2003 | 217,931.20    | 142,274    | 135,043    | 93,785     | 7.41 | 12,657    |
| 2004 | 1,845,220.71  | 1,166,228  | 1,106,957  | 830,525    | 7.42 | 111,931   |
| 2005 | 556,841.17    | 339,303    | 322,059    | 262,625    | 7.42 | 35,394    |
| 2006 | 40,236.58     | 23,474     | 22,281     | 19,967     | 7.43 | 2,687     |
| 2007 | 421,857.31    | 234,121    | 222,222    | 220,728    | 7.43 | 29,708    |
| 2008 | 2,917,291.73  | 1,524,318  | 1,446,847  | 1,616,309  | 7.43 | 217,538   |
| 2009 | 1,903,167.53  | 922,527    | 875,641    | 1,122,685  | 7.44 | 150,899   |
| 2010 | 2,427,890.91  | 1,073,275  | 1,018,728  | 1,530,558  | 7.44 | 205,720   |
| 2011 | 180,640.37    | 70,788     | 67,190     | 122,482    | 7.44 | 16,463    |
| 2012 | 3,112,190.42  | 1,035,239  | 982,625    | 2,285,175  | 7.44 | 307,147   |
| 2013 | 518,642.40    | 135,180    | 128,310    | 416,265    | 7.45 | 55,874    |
| 2014 | 64,953.85     | 11,303     | 10,729     | 57,473     | 7.45 | 7,714     |
| 2015 | 5,005,327.01  | 330,524    | 313,726    | 4,941,868  | 7.45 | 663,338   |
|      | 40,216,199.41 | 24,215,796 | 22,985,071 | 19,241,938 |      | 2,602,922 |

## BROWN UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -5

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1963 | 5,017,723.03  | 4,155,826  | 3,515,320  | 1,753,289  | 11.79 | 148,710   |
| 1964 | 83,935.36     | 69,227     | 58,558     | 29,575     | 11.86 | 2,494     |
| 1965 | 2,757.93      | 2,265      | 1,916      | 980        | 11.92 | 82        |
| 1966 | 425.52        | 348        | 294        | 152        | 11.99 | 13        |
| 1975 | 2,622,355.35  | 2,045,362  | 1,730,126  | 1,023,347  | 12.46 | 82,131    |
| 1976 | 35,297.56     | 27,360     | 23,143     | 13,919     | 12.50 | 1,114     |
| 1977 | 1,845.00      | 1,421      | 1,202      | 735        | 12.54 | 59        |
| 1978 | 16,079.65     | 12,297     | 10,402     | 6,482      | 12.58 | 515       |
| 1980 | 82,061.00     | 61,826     | 52,297     | 33,867     | 12.66 | 2,675     |
| 1985 | 3,930.00      | 2,834      | 2,397      | 1,729      | 12.82 | 135       |
| 1988 | 117,057.24    | 81,695     | 69,104     | 53,806     | 12.90 | 4,171     |
| 1989 | 38,963.27     | 26,854     | 22,715     | 18,196     | 12.93 | 1,407     |
| 1990 | 28,392.45     | 19,318     | 16,341     | 13,471     | 12.95 | 1,040     |
| 1991 | 382,847.00    | 256,807    | 217,227    | 184,762    | 12.98 | 14,234    |
| 1992 | 195,307.00    | 129,077    | 109,183    | 95,889     | 13.00 | 7,376     |
| 1993 | 6,201,184.08  | 4,033,845  | 3,412,139  | 3,099,104  | 13.02 | 238,026   |
| 1994 | 58,066.75     | 37,131     | 31,408     | 29,562     | 13.04 | 2,267     |
| 1995 | 314,560.32    | 197,440    | 167,010    | 163,278    | 13.06 | 12,502    |
| 1996 | 64,792.38     | 39,854     | 33,712     | 34,320     | 13.08 | 2,624     |
| 1998 | 380.00        | 223        | 189        | 210        | 13.12 | 16        |
| 1999 | 1,985,695.00  | 1,137,398  | 962,099    | 1,122,880  | 13.13 | 85,520    |
| 2002 | 30,185.00     | 15,720     | 13,297     | 18,397     | 13.18 | 1,396     |
| 2003 | 419,887.86    | 210,393    | 177,967    | 262,916    | 13.19 | 19,933    |
| 2004 | 3,336,963.09  | 1,599,069  | 1,352,617  | 2,151,195  | 13.21 | 162,846   |
| 2005 | 115,467.62    | 52,628     | 44,517     | 76,724     | 13.22 | 5,804     |
| 2007 | 319,765.64    | 128,644    | 108,817    | 226,937    | 13.25 | 17,127    |
| 2008 | 38,247.48     | 14,234     | 12,040     | 28,120     | 13.26 | 2,121     |
| 2009 | 5,684,731.37  | 1,925,649  | 1,628,863  | 4,340,105  | 13.27 | 327,061   |
| 2010 | 1,991,547.56  | 601,303    | 508,629    | 1,582,496  | 13.28 | 119,164   |
| 2011 | 636,571.01    | 165,964    | 140,385    | 528,014    | 13.29 | 39,730    |
| 2012 | 6,650,986.04  | 1,428,482  | 1,208,321  | 5,775,214  | 13.30 | 434,227   |
| 2013 | 595,614.98    | 97,224     | 82,240     | 543,156    | 13.31 | 40,808    |
| 2014 | 1,500,354.55  | 156,576    | 132,444    | 1,442,928  | 13.32 | 108,328   |
| 2015 | 2,879,014.14  | 107,194    | 90,673     | 2,932,292  | 13.33 | 219,977   |
|      | 41,452,992.23 | 18,841,488 | 15,937,592 | 27,588,050 |       | 2,105,633 |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |                |            |            |             |       |           |
|------|----------------|------------|------------|-------------|-------|-----------|
| 1971 | 23,810,289.08  | 17,337,057 | 17,550,961 | 7,449,843   | 16.78 | 443,972   |
| 1972 | 227,473.81     | 164,375    | 166,403    | 72,444      | 16.89 | 4,289     |
| 1973 | 121,887.17     | 87,414     | 88,493     | 39,489      | 16.99 | 2,324     |
| 1974 | 23,028.00      | 16,383     | 16,585     | 7,594       | 17.09 | 444       |
| 1975 | 413.00         | 291        | 295        | 139         | 17.18 | 8         |
| 1976 | 8,346,832.00   | 5,838,868  | 5,910,908  | 2,853,266   | 17.28 | 165,120   |
| 1977 | 300,180.00     | 208,113    | 210,681    | 104,508     | 17.37 | 6,017     |
| 1980 | 328,422.00     | 221,265    | 223,995    | 120,848     | 17.61 | 6,862     |
| 1981 | 831.05         | 554        | 561        | 312         | 17.69 | 18        |
| 1982 | 1,751,913.00   | 1,155,322  | 1,169,576  | 669,932     | 17.76 | 37,721    |
| 1983 | 208,501.00     | 135,881    | 137,557    | 81,369      | 17.84 | 4,561     |
| 1984 | 583,948.05     | 376,146    | 380,787    | 232,359     | 17.90 | 12,981    |
| 1985 | 116,941.74     | 74,368     | 75,286     | 47,503      | 17.97 | 2,643     |
| 1986 | 6,308.00       | 3,959      | 4,008      | 2,616       | 18.03 | 145       |
| 1987 | 1,331,048.28   | 823,774    | 833,938    | 563,663     | 18.09 | 31,159    |
| 1988 | 825,544.36     | 503,389    | 509,600    | 357,222     | 18.15 | 19,682    |
| 1990 | 642,103.72     | 379,121    | 383,799    | 290,410     | 18.26 | 15,904    |
| 1991 | 23,220.54      | 13,472     | 13,638     | 10,743      | 18.31 | 587       |
| 1992 | 12,776,750.40  | 7,274,737  | 7,364,492  | 6,051,096   | 18.36 | 329,580   |
| 1993 | 2,346,857.63   | 1,309,550  | 1,325,707  | 1,138,493   | 18.41 | 61,841    |
| 1994 | 3,077,923.00   | 1,681,031  | 1,701,771  | 1,530,048   | 18.46 | 82,885    |
| 1995 | 750,300.20     | 400,502    | 405,443    | 382,372     | 18.50 | 20,669    |
| 1997 | 4,676,406.78   | 2,370,412  | 2,399,658  | 2,510,569   | 18.59 | 135,049   |
| 1998 | 68,370.00      | 33,684     | 34,100     | 37,689      | 18.62 | 2,024     |
| 1999 | 401,832.00     | 191,849    | 194,216    | 227,708     | 18.66 | 12,203    |
| 2000 | 127,001.94     | 58,579     | 59,302     | 74,050      | 18.70 | 3,960     |
| 2001 | 251,033.71     | 111,539    | 112,915    | 150,670     | 18.73 | 8,044     |
| 2002 | 95,234.56      | 40,562     | 41,062     | 58,934      | 18.77 | 3,140     |
| 2003 | 391,655.38     | 159,322    | 161,288    | 249,950     | 18.80 | 13,295    |
| 2004 | 86,283.64      | 33,332     | 33,743     | 56,855      | 18.83 | 3,019     |
| 2005 | 3,019,751.72   | 1,100,817  | 1,114,399  | 2,056,340   | 18.86 | 109,032   |
| 2006 | 3,135,165.45   | 1,069,447  | 1,082,642  | 2,209,282   | 18.89 | 116,955   |
| 2007 | 8,078,544.98   | 2,553,818  | 2,585,327  | 5,897,145   | 18.92 | 311,688   |
| 2008 | 1,093,013.42   | 316,434    | 320,338    | 827,326     | 18.94 | 43,681    |
| 2009 | 245,739.33     | 64,021     | 64,811     | 193,215     | 18.97 | 10,185    |
| 2010 | 1,209,243.62   | 277,456    | 280,879    | 988,827     | 18.99 | 52,071    |
| 2011 | 3,445,815.41   | 672,208    | 680,502    | 2,937,605   | 19.02 | 154,448   |
| 2012 | 126,967,027.11 | 20,149,286 | 20,397,887 | 112,917,491 | 19.04 | 5,930,540 |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |                |            |            |             |       |            |
|------|----------------|------------|------------|-------------|-------|------------|
| 2013 | 27,923,468.83  | 3,303,151  | 3,343,905  | 25,975,737  | 19.06 | 1,362,840  |
| 2014 | 2,079,275.62   | 155,185    | 157,100    | 2,026,140   | 19.08 | 106,192    |
| 2015 | 94,144,235.91  | 2,472,275  | 2,502,778  | 96,348,670  | 19.10 | 5,044,433  |
|      | 335,039,815.44 | 73,138,949 | 74,041,334 | 277,750,472 |       | 14,672,211 |

## BROWN UNITS 1, 2 AND 3 SCRUBBER

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |                |            |            |             |       |            |
|------|----------------|------------|------------|-------------|-------|------------|
| 1994 | 5,159,404.89   | 2,817,848  | 4,831,798  | 585,578     | 18.46 | 31,721     |
| 2010 | 32,323,114.73  | 7,416,409  | 12,717,005 | 21,222,266  | 18.99 | 1,117,550  |
| 2012 | 254,234.17     | 40,346     | 69,182     | 197,764     | 19.04 | 10,387     |
| 2013 | 295,455,751.48 | 34,950,347 | 59,929,777 | 250,298,762 | 19.06 | 13,132,149 |
| 2014 | 815,518.70     | 60,865     | 104,366    | 751,929     | 19.08 | 39,409     |
| 2015 | 551,915.65     | 14,494     | 24,853     | 554,658     | 19.10 | 29,040     |
|      | 334,559,939.62 | 45,300,309 | 77,676,980 | 273,610,957 |       | 14,360,256 |

## GHENT UNIT 1 SCRUBBER

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |                |            |            |             |       |           |
|------|----------------|------------|------------|-------------|-------|-----------|
| 1997 | 21,463,096.55  | 11,384,464 | 17,193,704 | 5,771,809   | 17.69 | 326,275   |
| 2010 | 12,043.79      | 2,929      | 4,424      | 8,463       | 18.05 | 469       |
| 2011 | 759,148.82     | 157,893    | 238,462    | 573,827     | 18.07 | 31,756    |
| 2012 | 115,925,898.17 | 19,576,105 | 29,565,358 | 94,475,353  | 18.09 | 5,222,518 |
| 2013 | 152,123.49     | 19,258     | 29,085     | 133,687     | 18.11 | 7,382     |
| 2014 | 67,811.53      | 5,408      | 8,168      | 64,391      | 18.13 | 3,552     |
| 2015 | 452,417.04     | 12,727     | 19,221     | 464,865     | 18.15 | 25,612    |
|      | 138,832,539.39 | 31,158,784 | 47,058,422 | 101,492,395 |       | 5,617,564 |

## GHENT UNIT 1

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |                |            |            |             |       |            |
|------|----------------|------------|------------|-------------|-------|------------|
| 1958 | 50,033.00      | 40,658     | 45,170     | 8,366       | 14.49 | 577        |
| 1974 | 49,030,601.98  | 36,090,171 | 40,095,044 | 12,367,700  | 16.35 | 756,434    |
| 1979 | 153,844.00     | 108,503    | 120,543    | 44,070      | 16.75 | 2,631      |
| 1980 | 485,218.64     | 338,944    | 376,556    | 142,628     | 16.82 | 8,480      |
| 1981 | 6,294.00       | 4,352      | 4,835      | 1,900       | 16.89 | 112        |
| 1982 | 40,874.00      | 27,963     | 31,066     | 12,669      | 16.96 | 747        |
| 1983 | 0.16           |            | 0          |             |       |            |
| 1984 | 705.60         | 472        | 524        | 231         | 17.08 | 14         |
| 1985 | 3,913.34       | 2,586      | 2,873      | 1,314       | 17.14 | 77         |
| 1986 | 20,989.71      | 13,691     | 15,210     | 7,249       | 17.20 | 421        |
| 1987 | 190,485.08     | 122,601    | 136,206    | 67,613      | 17.25 | 3,920      |
| 1989 | 84,769.00      | 52,982     | 58,861     | 31,841      | 17.35 | 1,835      |
| 1990 | 63,912.00      | 39,307     | 43,669     | 24,717      | 17.40 | 1,421      |
| 1991 | 310,440.00     | 187,660    | 208,484    | 123,686     | 17.45 | 7,088      |
| 1992 | 354,903.01     | 210,702    | 234,083    | 145,663     | 17.49 | 8,328      |
| 1993 | 90,815.89      | 52,893     | 58,762     | 38,411      | 17.53 | 2,191      |
| 1994 | 610,532.00     | 348,251    | 386,896    | 266,373     | 17.57 | 15,161     |
| 1995 | 8,510,654.34   | 4,747,531  | 5,274,358  | 3,832,043   | 17.61 | 217,606    |
| 1996 | 780,407.52     | 424,950    | 472,106    | 362,930     | 17.65 | 20,563     |
| 1998 | 134,109.00     | 69,190     | 76,868     | 66,629      | 17.72 | 3,760      |
| 1999 | 149,045.50     | 74,552     | 82,825     | 76,654      | 17.76 | 4,316      |
| 2000 | 37,620.04      | 18,199     | 20,219     | 20,035      | 17.79 | 1,126      |
| 2001 | 4,796,617.93   | 2,236,281  | 2,484,438  | 2,647,943   | 17.82 | 148,594    |
| 2002 | 3,272,250.00   | 1,464,877  | 1,627,432  | 1,873,875   | 17.85 | 104,979    |
| 2003 | 1,558,877.17   | 666,866    | 740,867    | 927,131     | 17.88 | 51,853     |
| 2004 | 53,736,563.83  | 21,852,737 | 24,277,703 | 33,220,420  | 17.91 | 1,854,853  |
| 2005 | 6,533,312.05   | 2,510,969  | 2,789,608  | 4,201,036   | 17.93 | 234,302    |
| 2006 | 2,661,176.28   | 958,255    | 1,064,591  | 1,782,867   | 17.96 | 99,269     |
| 2007 | 1,359,443.47   | 454,462    | 504,893    | 949,712     | 17.98 | 52,820     |
| 2008 | 993,616.17     | 304,247    | 338,009    | 725,160     | 18.01 | 40,264     |
| 2009 | 3,419,068.72   | 943,941    | 1,048,689  | 2,609,715   | 18.03 | 144,743    |
| 2010 | 4,229,579.47   | 1,028,726  | 1,142,882  | 3,382,768   | 18.05 | 187,411    |
| 2011 | 5,070,156.45   | 1,054,525  | 1,171,544  | 4,253,523   | 18.07 | 235,391    |
| 2012 | 30,045,027.82  | 5,073,626  | 5,636,639  | 26,511,541  | 18.09 | 1,465,536  |
| 2013 | 1,558,285.23   | 197,266    | 219,156    | 1,448,209   | 18.11 | 79,967     |
| 2014 | 2,380,884.08   | 189,869    | 210,938    | 2,336,607   | 18.13 | 128,881    |
| 2015 | 164,542,264.61 | 4,628,623  | 5,142,254  | 170,917,969 | 18.15 | 9,416,968  |
|      | 347,267,291.09 | 86,541,428 | 96,144,803 | 275,431,198 |       | 15,302,639 |

## GHENT UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |                |            |            |             |       |            |
|------|----------------|------------|------------|-------------|-------|------------|
| 1977 | 58,730,215.55  | 42,176,587 | 44,740,983 | 18,100,348  | 16.60 | 1,090,382  |
| 1978 | 378,364.00     | 269,302    | 285,676    | 119,174     | 16.68 | 7,145      |
| 1979 | 182,288.33     | 128,564    | 136,381    | 58,668      | 16.75 | 3,503      |
| 1980 | 41,332.94      | 28,873     | 30,629     | 13,598      | 16.82 | 808        |
| 1981 | 6,292.00       | 4,351      | 4,616      | 2,117       | 16.89 | 125        |
| 1982 | 74,950.00      | 51,276     | 54,394     | 25,803      | 16.96 | 1,521      |
| 1986 | 625,102.42     | 407,750    | 432,542    | 236,318     | 17.20 | 13,739     |
| 1987 | 303,212.93     | 195,156    | 207,022    | 117,416     | 17.25 | 6,807      |
| 1988 | 440,286.00     | 279,385    | 296,372    | 174,734     | 17.30 | 10,100     |
| 1989 | 22,395.85      | 13,998     | 14,849     | 9,114       | 17.35 | 525        |
| 1990 | 3,078.00       | 1,893      | 2,008      | 1,285       | 17.40 | 74         |
| 1991 | 159,055.00     | 96,148     | 101,994    | 68,195      | 17.45 | 3,908      |
| 1992 | 8,980.53       | 5,332      | 5,656      | 3,953       | 17.49 | 226        |
| 1994 | 624,766.08     | 356,371    | 378,039    | 290,461     | 17.57 | 16,532     |
| 1995 | 192,226.00     | 107,230    | 113,750    | 91,932      | 17.61 | 5,220      |
| 1996 | 1,317,733.68   | 717,536    | 761,163    | 648,812     | 17.65 | 36,760     |
| 1997 | 1,696,598.00   | 899,910    | 954,626    | 860,734     | 17.69 | 48,657     |
| 1998 | 31,096.00      | 16,043     | 17,018     | 16,254      | 17.72 | 917        |
| 1999 | 1,074,948.00   | 537,681    | 570,373    | 579,822     | 17.76 | 32,648     |
| 2000 | 18,464.61      | 8,932      | 9,475      | 10,282      | 17.79 | 578        |
| 2001 | 406,215.00     | 189,386    | 200,901    | 233,749     | 17.82 | 13,117     |
| 2002 | 5,238,048.00   | 2,344,899  | 2,487,472  | 3,117,239   | 17.85 | 174,635    |
| 2003 | 281,282.34     | 120,329    | 127,645    | 173,327     | 17.88 | 9,694      |
| 2004 | 48,776.05      | 19,835     | 21,041     | 31,149      | 17.91 | 1,739      |
| 2005 | 2,911,587.84   | 1,119,020  | 1,187,058  | 1,928,341   | 17.93 | 107,548    |
| 2006 | 388,451.69     | 139,876    | 148,381    | 267,263     | 17.96 | 14,881     |
| 2007 | 384,330.33     | 128,482    | 136,294    | 274,940     | 17.98 | 15,291     |
| 2008 | 179,568.29     | 54,984     | 58,327     | 133,811     | 18.01 | 7,430      |
| 2009 | 322,044.12     | 88,910     | 94,316     | 250,271     | 18.03 | 13,881     |
| 2010 | 5,168,023.27   | 1,256,975  | 1,333,401  | 4,196,384   | 18.05 | 232,487    |
| 2011 | 696,400.85     | 144,842    | 153,649    | 591,500     | 18.07 | 32,734     |
| 2012 | 30,284,534.59  | 5,114,071  | 5,425,014  | 26,979,438  | 18.09 | 1,491,401  |
| 2013 | 23,210,479.70  | 2,938,254  | 3,116,904  | 21,718,309  | 18.11 | 1,199,244  |
| 2014 | 1,722,539.01   | 137,367    | 145,719    | 1,697,398   | 18.13 | 93,624     |
| 2015 | 132,392,306.05 | 3,724,235  | 3,950,674  | 137,709,094 | 18.15 | 7,587,278  |
|      | 269,565,973.05 | 63,823,783 | 67,704,359 | 220,731,232 |       | 12,275,159 |

## GHENT UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2037

NET SALVAGE PERCENT.. -7

|      |                |             |             |             |       |            |
|------|----------------|-------------|-------------|-------------|-------|------------|
| 1981 | 130,249,859.69 | 85,517,200  | 99,842,747  | 39,524,603  | 19.25 | 2,053,226  |
| 1982 | 4,323,370.79   | 2,805,349   | 3,275,291   | 1,350,715   | 19.34 | 69,840     |
| 1983 | 175,918.00     | 112,745     | 131,632     | 56,601      | 19.43 | 2,913      |
| 1984 | 9,724,031.69   | 6,153,452   | 7,184,257   | 3,220,457   | 19.51 | 165,067    |
| 1985 | 13,041.58      | 8,142       | 9,506       | 4,449       | 19.59 | 227        |
| 1986 | 5,003.81       | 3,080       | 3,596       | 1,758       | 19.67 | 89         |
| 1987 | 1,523,545.00   | 924,026     | 1,078,816   | 551,377     | 19.74 | 27,932     |
| 1989 | 51,742.00      | 30,371      | 35,459      | 19,905      | 19.89 | 1,001      |
| 1990 | 148,350.00     | 85,582      | 99,918      | 58,816      | 19.95 | 2,948      |
| 1994 | 194,871.00     | 103,501     | 120,839     | 87,673      | 20.20 | 4,340      |
| 1995 | 694,601.50     | 360,166     | 420,500     | 322,724     | 20.25 | 15,937     |
| 1996 | 328,272.00     | 165,903     | 193,694     | 157,557     | 20.30 | 7,761      |
| 1997 | 1,620,817.00   | 796,396     | 929,806     | 804,469     | 20.35 | 39,532     |
| 1998 | 206,918.25     | 98,635      | 115,158     | 106,245     | 20.40 | 5,208      |
| 1999 | 5,607,517.20   | 2,586,019   | 3,019,220   | 2,980,823   | 20.45 | 145,762    |
| 2000 | 72,921.99      | 32,429      | 37,861      | 40,165      | 20.50 | 1,959      |
| 2002 | 602,894.00     | 247,014     | 288,393     | 356,704     | 20.58 | 17,333     |
| 2003 | 855,281.04     | 333,984     | 389,932     | 525,219     | 20.62 | 25,471     |
| 2004 | 71,793,078.90  | 26,563,102  | 31,012,861  | 45,805,733  | 20.66 | 2,217,122  |
| 2005 | 3,708,105.24   | 1,291,517   | 1,507,867   | 2,459,805   | 20.70 | 118,831    |
| 2006 | 1,083,127.40   | 352,470     | 411,515     | 747,432     | 20.73 | 36,056     |
| 2007 | 170,859.09     | 51,385      | 59,993      | 122,826     | 20.77 | 5,914      |
| 2008 | 34,203.02      | 9,391       | 10,964      | 25,633      | 20.80 | 1,232      |
| 2009 | 5,797,862.51   | 1,430,018   | 1,669,570   | 4,534,143   | 20.83 | 217,674    |
| 2010 | 3,722,211.44   | 805,674     | 940,638     | 3,042,129   | 20.86 | 145,836    |
| 2011 | 2,923,273.40   | 538,062     | 628,196     | 2,499,706   | 20.89 | 119,660    |
| 2012 | 5,638,318.74   | 839,130     | 979,698     | 5,053,303   | 20.92 | 241,554    |
| 2013 | 5,171,161.32   | 570,854     | 666,481     | 4,866,661   | 20.95 | 232,299    |
| 2014 | 165,523,321.40 | 11,450,159  | 13,368,250  | 163,741,704 | 20.98 | 7,804,657  |
| 2015 | 3,548,130.68   | 84,852      | 99,066      | 3,697,434   | 21.00 | 176,068    |
|      | 425,512,609.68 | 144,350,608 | 168,531,725 | 286,766,767 |       | 13,903,449 |

## GHENT UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 6-2038

NET SALVAGE PERCENT.. -7

|      |                |            |            |            |       |           |
|------|----------------|------------|------------|------------|-------|-----------|
| 1984 | 124,057,452.69 | 77,152,000 | 71,546,986 | 61,194,489 | 20.29 | 3,015,993 |
| 1986 | 209,125.43     | 126,371    | 117,190    | 106,574    | 20.47 | 5,206     |

NET SALVAGE PERCENT... -7

NET SALVAGE PERCENT.. -7

|      |               |            |            |           |       |         |
|------|---------------|------------|------------|-----------|-------|---------|
| 1994 | 55,782,191.35 | 31,818,513 | 56,178,615 | 3,508,330 | 17.57 | 199,677 |
| 2001 | 57,800.67     | 26,948     | 47,579     | 14,267    | 17.82 | 801     |
| 2002 | 491,092.43    | 219,846    | 388,159    | 137,310   | 17.85 | 7,692   |
| 2003 | 244,482.98    | 104,586    | 184,657    | 76,940    | 17.88 | 4,303   |
| 2004 | 556,738.99    | 226,406    | 399,741    | 195,969   | 17.91 | 10,942  |

GHENT UNIT 2 SCRUBBER  
 INTERIM SURVIVOR CURVE.. IOWA 65-R2  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |         |
|------|---------------|------------|------------|------------|-------|---------|
| 2006 | 13,411.72     | 4,829      | 8,526      | 5,824      | 17.96 | 324     |
| 2012 | 8,815,298.69  | 1,488,617  | 2,628,295  | 6,804,075  | 18.09 | 376,124 |
| 2013 | 297,276.90    | 37,633     | 66,445     | 251,642    | 18.11 | 13,895  |
|      | 66,258,293.73 | 33,927,378 | 59,902,017 | 10,994,357 |       | 613,758 |

GHENT 3 SCRUBBER  
 INTERIM SURVIVOR CURVE.. IOWA 65-R2  
 PROBABLE RETIREMENT YEAR.. 6-2037  
 NET SALVAGE PERCENT.. -7

|      |                |            |            |            |       |           |
|------|----------------|------------|------------|------------|-------|-----------|
| 2007 | 110,351,445.96 | 33,187,635 | 30,565,215 | 87,510,832 | 20.77 | 4,213,328 |
| 2011 | 6,848,600.71   | 1,260,563  | 1,160,956  | 6,167,047  | 20.89 | 295,215   |
| 2012 | 249,577.51     | 37,144     | 34,209     | 232,839    | 20.92 | 11,130    |
| 2013 | 222,658.95     | 24,580     | 22,638     | 215,607    | 20.95 | 10,292    |
| 2014 | 567,246.36     | 39,240     | 36,139     | 570,814    | 20.98 | 27,208    |
| 2015 | 221,002.85     | 5,285      | 4,867      | 231,606    | 21.00 | 11,029    |
|      | 118,460,532.34 | 34,554,447 | 31,824,024 | 94,928,746 |       | 4,568,202 |

GHENT 4 SCRUBBER  
 INTERIM SURVIVOR CURVE.. IOWA 65-R2  
 PROBABLE RETIREMENT YEAR.. 6-2038  
 NET SALVAGE PERCENT.. -7

|      |                  |             |             |               |       |             |
|------|------------------|-------------|-------------|---------------|-------|-------------|
| 2011 | 243,442.48       | 43,131      | 92,184      | 168,299       | 21.82 | 7,713       |
| 2012 | 252,238,345.08   | 36,049,879  | 77,049,557  | 192,845,472   | 21.86 | 8,821,842   |
| 2013 | 784,199.26       | 83,221      | 177,869     | 661,225       | 21.89 | 30,207      |
| 2014 | 435,675.38       | 28,935      | 61,843      | 404,330       | 21.91 | 18,454      |
|      | 253,701,662.20   | 36,205,166  | 77,381,453  | 194,079,326   |       | 8,878,216   |
|      | 3,711,487,554.46 | 806,399,539 | 985,215,162 | 2,995,249,352 |       | 137,461,324 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.8 3.70

TRIMBLE COUNTY UNIT 2 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. 0

|      |              |         |         |           |       |        |
|------|--------------|---------|---------|-----------|-------|--------|
| 2011 | 4,610,665.23 | 377,291 | 676,102 | 3,934,563 | 50.49 | 77,928 |
|      | 4,610,665.23 | 377,291 | 676,102 | 3,934,563 |       | 77,928 |

TYRONE UNIT 3 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. 0

|      |            |         |         |
|------|------------|---------|---------|
| 2005 | 170,126.36 | 170,126 | 170,126 |
| 2007 | 172,621.19 | 172,621 | 172,621 |
| 2008 | 8,648.65   | 8,649   | 8,649   |
| 2009 | 224,059.52 | 224,060 | 224,060 |
|      | 575,455.72 | 575,456 | 575,456 |

GREEN RIVER UNIT 3 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. 0

|      |              |           |           |
|------|--------------|-----------|-----------|
| 1978 | 931,932.13   | 931,932   | 931,932   |
| 1985 | 296.57       | 297       | 297       |
| 1997 | 5,030.40     | 5,030     | 5,030     |
| 2004 | 49,756.95    | 49,757    | 49,757    |
| 2005 | 26,461.24    | 26,461    | 26,461    |
| 2007 | 72,732.11    | 72,732    | 72,732    |
| 2009 | 246,680.85   | 246,681   | 246,681   |
| 2010 | 130,846.99   | 130,847   | 130,847   |
| 2011 | 334,280.60   | 334,281   | 334,281   |
| 2012 | 33,823.14    | 33,823    | 33,823    |
|      | 1,831,840.98 | 1,831,841 | 1,831,841 |

PINEVILLE UNIT 3 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. 0

|      |           |        |        |
|------|-----------|--------|--------|
| 1977 | 50,117.00 | 50,117 | 50,117 |
| 1978 | 41,148.89 | 41,149 | 41,149 |
|      | 91,265.89 | 91,266 | 91,266 |

BROWN UNIT 1 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2023  
 NET SALVAGE PERCENT.. 0

|      |              |           |           |           |      |         |
|------|--------------|-----------|-----------|-----------|------|---------|
| 1993 | 9,299,115.00 | 6,974,336 | 7,598,416 | 1,700,699 | 7.50 | 226,760 |
|      | 9,299,115.00 | 6,974,336 | 7,598,416 | 1,700,699 |      | 226,760 |

BROWN UNIT 2 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2029  
 NET SALVAGE PERCENT.. 0

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1994 | 3,909,061.67 | 2,401,297 | 3,256,464 | 652,598 | 13.50 | 48,341 |
|      | 3,909,061.67 | 2,401,297 | 3,256,464 | 652,598 |       | 48,341 |

BROWN UNIT 3 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2035  
 NET SALVAGE PERCENT.. 0

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 2008 | 19,802,080.26 | 5,500,622 | 6,026,115 | 13,775,965 | 19.50 | 706,460 |
|      | 19,802,080.26 | 5,500,622 | 6,026,115 | 13,775,965 |       | 706,460 |

GHENT UNIT 1 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. 0

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1974 | 1,777,792.39 | 1,230,463 | 1,464,285 | 313,507 | 18.46 | 16,983 |
|      | 1,777,792.39 | 1,230,463 | 1,464,285 | 313,507 |       | 16,983 |

GHENT UNIT 4 ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2038  
 NET SALVAGE PERCENT.. 0

|      |               |            |            |            |       |         |
|------|---------------|------------|------------|------------|-------|---------|
| 1994 | 16,544,368.68 | 8,084,240  | 7,960,266  | 8,584,103  | 22.50 | 381,516 |
| 2004 | 16,148,295.19 | 5,461,999  | 5,378,237  | 10,770,058 | 22.50 | 478,669 |
|      | 32,692,663.87 | 13,546,239 | 13,338,503 | 19,354,161 |       | 860,185 |

GHENT UNIT 2 SCRUBBER ASH POND  
 INTERIM SURVIVOR CURVE.. IOWA 100-S4  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. 0

|      |               |            |            |            |  |           |
|------|---------------|------------|------------|------------|--|-----------|
| 1994 | 1,901,133.18  | 1,021,859  | 1,901,133  |            |  |           |
|      | 1,901,133.18  | 1,021,859  | 1,901,133  |            |  |           |
|      | 76,491,074.19 | 33,550,670 | 36,759,581 | 39,731,493 |  | 1,936,657 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.5 2.53

## TYRONE UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |           |         |         |
|------|-----------|---------|---------|
| 2009 | 80,855.84 | 88,941  | 88,941  |
| 2011 | 10,306.64 | 11,337  | 11,338  |
|      | 91,162.48 | 100,278 | 100,279 |

## TYRONE UNITS 1 AND 2

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |           |        |        |
|------|-----------|--------|--------|
| 1973 | 32,257.44 | 35,483 | 35,483 |
| 1974 | 3,680.00  | 4,048  | 4,048  |
|      | 35,937.44 | 39,531 | 39,531 |

## GREEN RIVER UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |           |        |        |
|------|-----------|--------|--------|
| 2012 | 10,061.86 | 11,068 | 11,068 |
| 2013 | 31,239.04 | 34,363 | 34,363 |
|      | 41,300.90 | 45,431 | 45,431 |

## GREEN RIVER UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |           |        |        |
|------|-----------|--------|--------|
| 1965 | 0.10      |        | 0      |
| 1975 | 6,388.26  | 7,027  | 7,027  |
| 1977 | 1,272.00  | 1,399  | 1,399  |
| 1979 | 4,376.00  | 4,814  | 4,814  |
| 1980 | 2,331.62  | 2,565  | 2,565  |
| 1981 | 5,272.42  | 5,800  | 5,800  |
| 1985 | 692.53    | 762    | 762    |
| 1988 | 83,465.37 | 91,812 | 91,812 |
| 2001 | 18,275.84 | 20,103 | 20,103 |
| 2005 | 76,387.85 | 84,027 | 84,027 |

GREEN RIVER UNIT 4  
 INTERIM SURVIVOR CURVE.. IOWA 65-R2  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |            |         |         |
|------|------------|---------|---------|
| 2007 | 795.41     | 875     | 875     |
| 2012 | 333,641.83 | 367,006 | 367,006 |
| 2013 | 66,416.30  | 73,058  | 73,058  |
|      | 599,315.53 | 659,248 | 659,247 |

GREEN RIVER UNITS 1 AND 2  
 INTERIM SURVIVOR CURVE.. IOWA 65-R2  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |            |         |         |
|------|------------|---------|---------|
| 1974 | 27,465.06  | 30,212  | 30,212  |
| 1975 | 32,966.94  | 36,264  | 36,264  |
| 1977 | 91,811.76  | 100,993 | 100,993 |
|      | 152,243.76 | 167,469 | 167,468 |

PINEVILLE UNIT 3  
 INTERIM SURVIVOR CURVE.. IOWA 65-R2  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |           |        |        |
|------|-----------|--------|--------|
| 1951 | 5,844.00  | 6,428  | 6,428  |
| 1963 | 7,129.00  | 7,842  | 7,842  |
| 1970 | 1,082.00  | 1,190  | 1,190  |
| 1975 | 8,772.00  | 9,649  | 9,649  |
| 1976 | 20.00     | 22     | 22     |
| 1978 | 2,577.11  | 2,835  | 2,835  |
| 1979 | 8,108.00  | 8,919  | 8,919  |
| 1988 | 1,821.00  | 2,003  | 2,003  |
| 1995 | 31,090.00 | 34,199 | 34,199 |
| 1997 | 6,678.00  | 7,346  | 7,346  |

PINEVILLE UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 65-R2

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |           |        |        |
|------|-----------|--------|--------|
| 2000 | 10,484.00 | 11,532 | 11,532 |
| 2002 | 51,958.50 | 57,154 | 57,154 |
| 2011 | 9,638.92  | 10,603 | 10,603 |

|  |            |         |         |
|--|------------|---------|---------|
|  | 145,202.53 | 159,722 | 159,723 |
|--|------------|---------|---------|

|  |              |           |           |
|--|--------------|-----------|-----------|
|  | 1,065,162.64 | 1,171,679 | 1,171,679 |
|--|--------------|-----------|-----------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

TRIMBLE COUNTY UNIT 2  
 INTERIM SURVIVOR CURVE.. IOWA 60-R2  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. -11

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1990 | 10,495,573.59 | 4,416,431  | 7,247,571  | 4,402,515  | 35.64 | 123,527   |
| 2008 | 10,044,788.71 | 1,525,504  | 2,503,424  | 8,646,292  | 43.09 | 200,657   |
| 2011 | 66,353,243.45 | 6,321,560  | 10,373,978 | 63,278,122 | 43.99 | 1,438,466 |
| 2012 | 35,891.34     | 2,709      | 4,446      | 35,394     | 44.27 | 800       |
| 2014 | 2,395,609.34  | 80,013     | 131,305    | 2,527,821  | 44.80 | 56,425    |
| 2015 | 581,903.51    | 6,672      | 10,949     | 634,964    | 45.05 | 14,095    |
|      | 89,907,009.94 | 12,352,889 | 20,271,673 | 79,525,108 |       | 1,833,970 |

BROWN UNIT 1  
 INTERIM SURVIVOR CURVE.. IOWA 60-R2  
 PROBABLE RETIREMENT YEAR.. 6-2023  
 NET SALVAGE PERCENT.. -5

|      |              |           |           |           |      |         |
|------|--------------|-----------|-----------|-----------|------|---------|
| 1956 | 3,283,253.45 | 3,029,003 | 2,671,922 | 775,494   | 6.60 | 117,499 |
| 1959 | 14,882.13    | 13,650    | 12,041    | 3,585     | 6.71 | 534     |
| 1968 | 5,774.91     | 5,184     | 4,573     | 1,491     | 6.98 | 214     |
| 1985 | 11,462.31    | 9,584     | 8,454     | 3,581     | 7.26 | 493     |
| 1996 | 32,671.87    | 24,609    | 21,708    | 12,598    | 7.36 | 1,712   |
| 1997 | 17,942.90    | 13,315    | 11,745    | 7,095     | 7.37 | 963     |
| 2001 | 103,385.99   | 71,104    | 62,722    | 45,834    | 7.39 | 6,202   |
| 2004 | 163,261.40   | 103,095   | 90,941    | 80,483    | 7.41 | 10,861  |
| 2009 | 467,034.49   | 226,357   | 199,672   | 290,714   | 7.43 | 39,127  |
| 2010 | 0.03         |           | 0         |           |      |         |
| 2012 | 1,851,245.33 | 614,593   | 542,140   | 1,401,667 | 7.44 | 188,396 |
| 2013 | 77,712.20    | 20,337    | 17,940    | 63,658    | 7.44 | 8,556   |
| 2014 | 262,052.93   | 45,602    | 40,226    | 234,929   | 7.45 | 31,534  |
| 2015 | 2,050,071.73 | 132,835   | 117,175   | 2,035,400 | 7.45 | 273,208 |
|      | 8,340,751.67 | 4,309,268 | 3,801,260 | 4,956,529 |      | 679,299 |

BROWN UNIT 2  
 INTERIM SURVIVOR CURVE.. IOWA 60-R2  
 PROBABLE RETIREMENT YEAR.. 6-2029  
 NET SALVAGE PERCENT.. -5

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1963 | 4,017,807.85 | 3,336,822 | 4,069,971 | 148,727 | 11.28 | 13,185 |
| 1965 | 26,462.00    | 21,783    | 26,569    | 1,216   | 11.46 | 106    |
| 1985 | 8,768.76     | 6,323     | 7,712     | 1,495   | 12.67 | 118    |
| 1990 | 23,666.17    | 16,098    | 19,635    | 5,215   | 12.84 | 406    |

## BROWN UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 60-R2

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -5

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 1994 | 1,497,407.00  | 957,328   | 1,167,667 | 404,610   | 12.95 | 31,244  |
| 1995 | 574,163.49    | 360,228   | 439,375   | 163,496   | 12.98 | 12,596  |
| 1996 | 32,822.53     | 20,191    | 24,627    | 9,836     | 13.00 | 757     |
| 1997 | 33,091.00     | 19,907    | 24,281    | 10,465    | 13.03 | 803     |
| 2002 | 1,508,264.00  | 785,155   | 957,665   | 626,012   | 13.13 | 47,678  |
| 2003 | 409,883.72    | 205,170   | 250,249   | 180,129   | 13.15 | 13,698  |
| 2004 | 1,221,923.10  | 585,596   | 714,260   | 568,759   | 13.16 | 43,219  |
| 2005 | 146,394.62    | 66,726    | 81,387    | 72,328    | 13.18 | 5,488   |
| 2006 | 632,295.16    | 271,977   | 331,734   | 332,176   | 13.20 | 25,165  |
| 2007 | 2,547.40      | 1,025     | 1,250     | 1,425     | 13.21 | 108     |
| 2009 | 927,175.48    | 313,887   | 382,853   | 590,682   | 13.24 | 44,613  |
| 2010 | 840,714.12    | 253,570   | 309,283   | 573,467   | 13.25 | 43,281  |
| 2011 | 13,859.99     | 3,605     | 4,397     | 10,156    | 13.27 | 765     |
| 2012 | 364,931.03    | 78,287    | 95,488    | 287,690   | 13.28 | 21,663  |
| 2013 | 35,612.96     | 5,800     | 7,074     | 30,319    | 13.29 | 2,281   |
| 2014 | 1,106,284.24  | 115,614   | 141,016   | 1,020,582 | 13.30 | 76,735  |
| 2015 | 317,590.08    | 11,842    | 14,444    | 319,026   | 13.31 | 23,969  |
|      | 13,741,664.70 | 7,436,934 | 9,070,939 | 5,357,809 |       | 407,878 |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 60-R2

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 1971 | 6,690,425.21  | 4,900,884 | 6,258,370 | 766,576   | 16.04 | 47,792  |
| 1972 | 12,875.38     | 9,359     | 11,951    | 1,568     | 16.18 | 97      |
| 1973 | 2,376.00      | 1,713     | 2,187     | 307       | 16.32 | 19      |
| 1984 | 13,467.21     | 8,695     | 11,103    | 3,037     | 17.53 | 173     |
| 1993 | 6,448.62      | 3,603     | 4,601     | 2,170     | 18.19 | 119     |
| 1994 | 191,259.00    | 104,578   | 133,545   | 67,277    | 18.25 | 3,686   |
| 1995 | 421,519.00    | 225,214   | 287,596   | 154,999   | 18.31 | 8,465   |
| 1997 | 10,429,790.49 | 5,294,396 | 6,760,880 | 4,190,400 | 18.41 | 227,615 |
| 1998 | 297,088.00    | 146,469   | 187,039   | 124,903   | 18.46 | 6,766   |
| 1999 | 68,653.00     | 32,795    | 41,879    | 30,207    | 18.51 | 1,632   |
| 2003 | 120,057.33    | 48,879    | 62,418    | 63,642    | 18.68 | 3,407   |
| 2004 | 72,895.42     | 28,183    | 35,989    | 40,551    | 18.72 | 2,166   |
| 2005 | 4,204,448.97  | 1,532,995 | 1,957,616 | 2,457,055 | 18.76 | 130,973 |
| 2006 | 1,419,771.42  | 484,437   | 618,620   | 872,140   | 18.80 | 46,390  |
| 2008 | 781,074.49    | 226,134   | 288,770   | 531,358   | 18.86 | 28,174  |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 60-R2

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 2009 | 810,823.83    | 211,402    | 269,958    | 581,407    | 18.89 | 30,779    |
| 2011 | 407,184.46    | 79,673     | 101,741    | 325,802    | 18.95 | 17,193    |
| 2012 | 16,784,850.43 | 2,664,058  | 3,401,970  | 14,222,123 | 18.98 | 749,322   |
| 2013 | 60,585.16     | 7,157      | 9,139      | 54,475     | 19.01 | 2,866     |
| 2014 | 1,314,686.65  | 97,734     | 124,805    | 1,255,616  | 19.03 | 65,981    |
| 2015 | 1,347,820.36  | 34,758     | 44,386     | 1,370,826  | 19.06 | 71,922    |
|      | 45,458,100.43 | 16,143,116 | 20,614,566 | 27,116,439 |       | 1,445,537 |

## GHENT UNIT 1

INTERIM SURVIVOR CURVE.. IOWA 60-R2

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1974 | 13,820,013.46 | 10,214,702 | 11,887,398 | 2,900,016  | 15.78 | 183,778   |
| 1975 | 38,921.00     | 28,528     | 33,200     | 8,446      | 15.90 | 531       |
| 1976 | 156.00        | 113        | 132        | 35         | 16.01 | 2         |
| 1979 | 21,978.00     | 15,541     | 18,086     | 5,431      | 16.32 | 333       |
| 1980 | 3,163.50      | 2,216      | 2,579      | 806        | 16.41 | 49        |
| 1985 | 156,856.25    | 103,829    | 120,831    | 47,005     | 16.83 | 2,793     |
| 1989 | 252,974.07    | 158,271    | 184,188    | 86,494     | 17.11 | 5,055     |
| 1992 | 58,228.11     | 34,597     | 40,262     | 22,042     | 17.29 | 1,275     |
| 1994 | 1,803,234.05  | 1,029,425  | 1,197,997  | 731,463    | 17.39 | 42,062    |
| 1995 | 13,200.94     | 7,369      | 8,576      | 5,549      | 17.44 | 318       |
| 1996 | 32,637.46     | 17,784     | 20,696     | 14,226     | 17.49 | 813       |
| 2001 | 424,030.20    | 197,878    | 230,281    | 223,431    | 17.70 | 12,623    |
| 2002 | 162,462.00    | 72,758     | 84,672     | 89,162     | 17.74 | 5,026     |
| 2003 | 1,132,828.50  | 484,766    | 564,148    | 647,978    | 17.78 | 36,444    |
| 2004 | 1,385,035.03  | 563,615    | 655,909    | 826,078    | 17.81 | 46,383    |
| 2006 | 1,501,464.76  | 540,690    | 629,230    | 977,337    | 17.88 | 54,661    |
| 2008 | 11,574,683.26 | 3,543,447  | 4,123,700  | 8,261,211  | 17.94 | 460,491   |
| 2009 | 426,823.12    | 117,902    | 137,209    | 319,492    | 17.96 | 17,789    |
| 2011 | 3,073,590.83  | 638,345    | 742,876    | 2,545,866  | 18.02 | 141,280   |
| 2012 | 58,830.81     | 9,933      | 11,560     | 51,389     | 18.04 | 2,849     |
| 2013 | 355,249.66    | 44,915     | 52,270     | 327,847    | 18.06 | 18,153    |
| 2014 | 23,384.79     | 1,857      | 2,161      | 22,861     | 18.09 | 1,264     |
| 2015 | 2,428,504.79  | 67,093     | 78,080     | 2,520,420  | 18.11 | 139,173   |
|      | 38,748,250.59 | 17,895,574 | 20,826,042 | 20,634,586 |       | 1,173,145 |

## GHENT UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 60-R2

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |         |
|------|---------------|------------|------------|------------|-------|---------|
| 1977 | 17,497,877.92 | 12,605,826 | 14,022,022 | 4,700,708  | 16.12 | 291,607 |
| 1978 | 4,313,274.00  | 3,079,310  | 3,425,254  | 1,189,950  | 16.22 | 73,363  |
| 1979 | 20,087.00     | 14,204     | 15,800     | 5,693      | 16.32 | 349     |
| 1980 | 2,264.00      | 1,586      | 1,764      | 658        | 16.41 | 40      |
| 1981 | 899.00        | 623        | 693        | 269        | 16.50 | 16      |
| 1985 | 128,384.83    | 84,982     | 94,529     | 42,843     | 16.83 | 2,546   |
| 1993 | 11,440.84     | 6,667      | 7,416      | 4,826      | 17.34 | 278     |
| 1996 | 2,506,918.63  | 1,366,041  | 1,519,508  | 1,162,895  | 17.49 | 66,489  |
| 1997 | 29,881.11     | 15,858     | 17,640     | 14,333     | 17.54 | 817     |
| 1998 | 64,136.87     | 33,101     | 36,820     | 31,807     | 17.58 | 1,809   |
| 1999 | 678,802.78    | 339,576    | 377,726    | 348,593    | 17.63 | 19,773  |
| 2002 | 137,999.16    | 61,803     | 68,746     | 78,913     | 17.74 | 4,448   |
| 2004 | 951,927.36    | 387,369    | 430,888    | 587,674    | 17.81 | 32,997  |
| 2005 | 458,645.99    | 176,214    | 196,011    | 294,741    | 17.85 | 16,512  |
| 2006 | 172,946.00    | 62,279     | 69,276     | 115,777    | 17.88 | 6,475   |
| 2009 | 2,195,130.77  | 606,364    | 674,486    | 1,674,304  | 17.96 | 93,224  |
| 2011 | 241,196.39    | 50,093     | 55,721     | 202,359    | 18.02 | 11,230  |
| 2012 | 902,565.37    | 152,395    | 169,516    | 796,229    | 18.04 | 44,137  |
| 2013 | 1,341,650.30  | 169,626    | 188,683    | 1,246,883  | 18.06 | 69,041  |
| 2014 | 115,704.20    | 9,187      | 10,219     | 113,584    | 18.09 | 6,279   |
| 2015 | 54,523.20     | 1,506      | 1,675      | 56,665     | 18.11 | 3,129   |
|      | 31,826,255.72 | 19,224,610 | 21,384,390 | 12,669,704 |       | 744,559 |

## GHENT UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 60-R2

PROBABLE RETIREMENT YEAR.. 6-2037

NET SALVAGE PERCENT.. -7

|      |               |            |            |           |       |         |
|------|---------------|------------|------------|-----------|-------|---------|
| 1981 | 23,966,739.13 | 15,805,420 | 19,182,251 | 6,462,160 | 18.70 | 345,570 |
| 1982 | 480,015.00    | 312,736    | 379,552    | 134,064   | 18.82 | 7,123   |
| 1983 | 29,912.17     | 19,251     | 23,364     | 8,642     | 18.93 | 457     |
| 1984 | 7,192,035.00  | 4,568,035  | 5,543,997  | 2,151,481 | 19.04 | 112,998 |
| 1985 | 156,856.24    | 98,253     | 119,245    | 48,591    | 19.15 | 2,537   |
| 1987 | 44,239.03     | 26,904     | 32,652     | 14,684    | 19.35 | 759     |
| 1995 | 2,196,292.70  | 1,140,565  | 1,384,247  | 965,786   | 20.01 | 48,265  |
| 1996 | 2,264.00      | 1,146      | 1,391      | 1,032     | 20.07 | 51      |
| 1999 | 60,118.00     | 27,759     | 33,690     | 30,637    | 20.26 | 1,512   |
| 2003 | 555,078.69    | 216,946    | 263,297    | 330,638   | 20.47 | 16,152  |
| 2004 | 943,602.66    | 349,633    | 424,332    | 585,323   | 20.52 | 28,525  |

## GHENT UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 60-R2

PROBABLE RETIREMENT YEAR.. 6-2037

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |         |
|------|---------------|------------|------------|------------|-------|---------|
| 2005 | 619,008.50    | 215,783    | 261,885    | 400,454    | 20.57 | 19,468  |
| 2006 | 365,407.85    | 119,024    | 144,454    | 246,533    | 20.61 | 11,962  |
| 2007 | 1,228,187.47  | 369,463    | 448,399    | 865,762    | 20.66 | 41,905  |
| 2009 | 1,824,052.27  | 449,739    | 545,826    | 1,405,910  | 20.74 | 67,787  |
| 2011 | 1,402,218.14  | 257,929    | 313,036    | 1,187,338  | 20.81 | 57,056  |
| 2012 | 1,314,528.73  | 195,791    | 237,622    | 1,168,924  | 20.84 | 56,090  |
| 2013 | 530,602.17    | 58,750     | 71,302     | 496,442    | 20.88 | 23,776  |
| 2014 | 156,580.41    | 10,865     | 13,186     | 154,355    | 20.91 | 7,382   |
|      | 43,067,738.16 | 24,243,992 | 29,423,726 | 16,658,754 |       | 849,375 |

## GHENT UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 60-R2

PROBABLE RETIREMENT YEAR.. 6-2038

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |         |
|------|---------------|------------|------------|------------|-------|---------|
| 1984 | 41,557,409.01 | 25,949,718 | 28,492,170 | 15,974,257 | 19.78 | 807,596 |
| 1985 | 236,810.00    | 145,811    | 160,097    | 93,290     | 19.89 | 4,690   |
| 1986 | 51,406.00     | 31,176     | 34,231     | 20,774     | 20.01 | 1,038   |
| 1987 | 65,193.00     | 38,939     | 42,754     | 27,002     | 20.11 | 1,343   |
| 1989 | 118,897.45    | 68,640     | 75,365     | 51,855     | 20.32 | 2,552   |
| 1991 | 21,490.58     | 11,947     | 13,118     | 9,877      | 20.51 | 482     |
| 1993 | 194,113.31    | 103,448    | 113,583    | 94,118     | 20.68 | 4,551   |
| 1994 | 321,113.00    | 167,209    | 183,591    | 159,999    | 20.76 | 7,707   |
| 1996 | 33,858.00     | 16,744     | 18,385     | 17,844     | 20.91 | 853     |
| 2000 | 676.00        | 293        | 322        | 402        | 21.18 | 19      |
| 2003 | 3,747,103.58  | 1,422,856  | 1,562,262  | 2,447,139  | 21.36 | 114,566 |
| 2004 | 106,038.93    | 38,137     | 41,874     | 71,588     | 21.41 | 3,344   |
| 2005 | 951,102.73    | 321,933    | 353,475    | 664,205    | 21.46 | 30,951  |
| 2006 | 1,380,479.45  | 435,734    | 478,426    | 998,687    | 21.51 | 46,429  |
| 2007 | 391,047.02    | 113,961    | 125,126    | 293,294    | 21.56 | 13,604  |
| 2008 | 399,683.45    | 106,244    | 116,653    | 311,008    | 21.60 | 14,399  |
| 2009 | 1,462,218.47  | 348,305    | 382,431    | 1,182,143  | 21.65 | 54,602  |
| 2011 | 9,957.80      | 1,763      | 1,936      | 8,719      | 21.73 | 401     |
| 2012 | 3,951,908.24  | 565,356    | 620,747    | 3,607,794  | 21.77 | 165,723 |

## GHENT UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 60-R2

PROBABLE RETIREMENT YEAR.. 6-2038

NET SALVAGE PERCENT.. -7

|                                                              |                |             |             |             |       |           |
|--------------------------------------------------------------|----------------|-------------|-------------|-------------|-------|-----------|
| 2013                                                         | 766,472.18     | 81,299      | 89,264      | 730,861     | 21.81 | 33,510    |
| 2014                                                         | 2,164,941.54   | 144,225     | 158,356     | 2,158,132   | 21.84 | 98,816    |
| 2015                                                         | 25,437.69      | 596         | 654         | 26,564      | 21.87 | 1,215     |
|                                                              | 57,957,357.43  | 30,114,334  | 33,064,819  | 28,949,553  |       | 1,408,391 |
|                                                              | 329,047,128.64 | 131,720,717 | 158,457,415 | 195,868,482 |       | 8,542,154 |
| COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. |                |             |             |             |       | 22.9 2.60 |

TRIMBLE COUNTY UNIT 2  
 INTERIM SURVIVOR CURVE.. IOWA 70-R3  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. -11

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 1990 | 9,229,511.61  | 3,816,787 | 4,210,142 | 6,034,616  | 40.89 | 147,582 |
| 2008 | 28,344.56     | 4,270     | 4,710     | 26,752     | 47.00 | 569     |
| 2011 | 35,974,616.47 | 3,398,598 | 3,748,855 | 36,182,970 | 47.62 | 759,827 |
| 2012 | 1,088,194.59  | 81,533    | 89,936    | 1,117,960  | 47.80 | 23,388  |
| 2013 | 159,449.60    | 8,665     | 9,558     | 167,431    | 47.98 | 3,490   |
| 2014 | 447,854.18    | 14,923    | 16,461    | 480,657    | 48.14 | 9,985   |
| 2015 | 228,635.93    | 2,548     | 2,811     | 250,975    | 48.30 | 5,196   |
|      | 47,156,606.94 | 7,327,324 | 8,082,472 | 44,261,362 |       | 950,037 |

TRIMBLE COUNTY UNIT 2 SCRUBBER  
 INTERIM SURVIVOR CURVE.. IOWA 70-R3  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. -11

|      |              |         |         |         |       |        |
|------|--------------|---------|---------|---------|-------|--------|
| 1990 | 1,415,469.10 | 585,355 | 751,018 | 820,153 | 40.89 | 20,058 |
|      | 1,415,469.10 | 585,355 | 751,018 | 820,153 |       | 20,058 |

BROWN UNIT 1  
 INTERIM SURVIVOR CURVE.. IOWA 70-R3  
 PROBABLE RETIREMENT YEAR.. 6-2023  
 NET SALVAGE PERCENT.. -5

|      |              |           |           |         |      |        |
|------|--------------|-----------|-----------|---------|------|--------|
| 1956 | 965,068.08   | 898,168   | 1,012,485 | 837     | 6.88 | 122    |
| 1958 | 96,451.16    | 89,402    | 100,781   | 493     | 6.95 | 71     |
| 1963 | 780.00       | 715       | 806       | 13      | 7.09 | 2      |
| 1965 | 63,901.00    | 58,286    | 65,705    | 1,392   | 7.14 | 195    |
| 1968 | 2,135.00     | 1,932     | 2,178     | 64      | 7.19 | 9      |
| 1979 | 58,759.52    | 51,097    | 57,601    | 4,097   | 7.34 | 558    |
| 1989 | 1,850.00     | 1,513     | 1,706     | 237     | 7.41 | 32     |
| 1992 | 1,344.04     | 1,069     | 1,205     | 206     | 7.43 | 28     |
| 1995 | 1,428,056.08 | 1,097,154 | 1,236,797 | 262,661 | 7.44 | 35,304 |
| 2001 | 68,330.19    | 47,241    | 53,254    | 18,493  | 7.47 | 2,476  |
| 2006 | 767,016.47   | 449,749   | 506,992   | 298,375 | 7.48 | 39,890 |
| 2009 | 166,049.72   | 80,931    | 91,232    | 83,120  | 7.48 | 11,112 |
| 2010 | 19,084.61    | 8,467     | 9,545     | 10,494  | 7.49 | 1,401  |
| 2011 | 53,830.80    | 21,155    | 23,848    | 32,675  | 7.49 | 4,362  |

## BROWN UNIT 1

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2023

NET SALVAGE PERCENT.. -5

|      |              |           |           |           |      |         |
|------|--------------|-----------|-----------|-----------|------|---------|
| 2012 | 19,084.61    | 6,369     | 7,180     | 12,859    | 7.49 | 1,717   |
| 2014 | 79,740.42    | 13,970    | 15,748    | 67,979    | 7.49 | 9,076   |
| 2015 | 433,058.83   | 28,456    | 32,078    | 422,634   | 7.49 | 56,426  |
|      | 4,224,540.53 | 2,855,674 | 3,219,138 | 1,216,630 |      | 162,781 |

## BROWN UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -5

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 1948 | 384.00       | 341       | 403       |           |       |        |
| 1963 | 817,849.45   | 686,195   | 825,252   | 33,490    | 12.04 | 2,782  |
| 1965 | 1,103.00     | 917       | 1,103     | 55        | 12.20 | 5      |
| 1966 | 397.00       | 329       | 396       | 21        | 12.27 | 2      |
| 1970 | 793.56       | 644       | 775       | 59        | 12.52 | 5      |
| 1984 | 38,251.57    | 28,139    | 33,841    | 6,323     | 13.06 | 484    |
| 1994 | 185,597.00   | 119,767   | 144,038   | 50,839    | 13.27 | 3,831  |
| 1995 | 12,605.00    | 7,982     | 9,600     | 3,636     | 13.29 | 274    |
| 1997 | 36,014.00    | 21,865    | 26,296    | 11,519    | 13.32 | 865    |
| 1998 | 14,507.07    | 8,601     | 10,344    | 4,888     | 13.33 | 367    |
| 2005 | 30,977.05    | 14,236    | 17,121    | 15,405    | 13.40 | 1,150  |
| 2010 | 105,240.55   | 31,964    | 38,441    | 72,061    | 13.44 | 5,362  |
| 2011 | 34,981.18    | 9,177     | 11,037    | 25,694    | 13.45 | 1,910  |
| 2012 | 1,109,729.78 | 240,058   | 288,706   | 876,511   | 13.45 | 65,168 |
| 2014 | 20,568.37    | 2,153     | 2,589     | 19,007    | 13.46 | 1,412  |
|      | 2,408,998.58 | 1,172,368 | 1,409,941 | 1,119,508 |       | 83,617 |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |              |           |           |    |       |   |
|------|--------------|-----------|-----------|----|-------|---|
| 1972 | 4,207,199.70 | 3,086,063 | 4,417,560 |    |       |   |
| 1973 | 69,444.66    | 50,550    | 72,917    |    |       |   |
| 1974 | 17,025.00    | 12,289    | 17,876    |    |       |   |
| 1984 | 4,045.00     | 2,639     | 4,247     |    |       |   |
| 1985 | 798.00       | 514       | 838       |    |       |   |
| 1988 | 8,408.74     | 5,193     | 8,817     | 13 | 18.69 | 1 |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1989 | 8,164.40     | 4,963     | 8,426     | 147       | 18.74 | 8       |
| 1990 | 9,591.76     | 5,733     | 9,733     | 338       | 18.79 | 18      |
| 1991 | 5,344.58     | 3,138     | 5,328     | 284       | 18.83 | 15      |
| 1997 | 778,846.00   | 399,449   | 678,174   | 139,614   | 19.05 | 7,329   |
| 2003 | 45,349.90    | 18,637    | 31,641    | 15,976    | 19.22 | 831     |
| 2004 | 18,213.04    | 7,107     | 12,066    | 7,058     | 19.24 | 367     |
| 2005 | 6,057.20     | 2,230     | 3,786     | 2,574     | 19.26 | 134     |
| 2007 | 1,652,556.67 | 527,496   | 895,569   | 839,615   | 19.30 | 43,503  |
| 2010 | 208,220.77   | 48,204    | 81,840    | 136,792   | 19.34 | 7,073   |
| 2011 | 163,301.43   | 32,164    | 54,607    | 116,859   | 19.36 | 6,036   |
| 2012 | 1,510,611.21 | 241,569   | 410,130   | 1,176,012 | 19.37 | 60,713  |
| 2013 | 14,410.13    | 1,723     | 2,925     | 12,205    | 19.38 | 630     |
| 2014 | 100,287.63   | 7,561     | 12,837    | 92,465    | 19.39 | 4,769   |
| 2015 | 131,881.19   | 3,480     | 5,908     | 132,567   | 19.40 | 6,833   |
|      | 8,959,757.01 | 4,460,702 | 6,735,226 | 2,672,519 |       | 138,260 |

## BROWN UNITS 1, 2 AND 3 SCRUBBER

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |               |           |           |            |       |           |
|------|---------------|-----------|-----------|------------|-------|-----------|
| 2013 | 29,308,888.08 | 3,503,658 | 5,739,630 | 25,034,702 | 19.38 | 1,291,780 |
|      | 29,308,888.08 | 3,503,658 | 5,739,630 | 25,034,702 |       | 1,291,780 |

## GHENT UNIT 1 SCRUBBER

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 1997 | 3,016,784.27  | 1,617,982 | 2,501,892 | 726,067   | 18.11 | 40,092  |
| 2011 | 5,833.85      | 1,221     | 1,888     | 4,354     | 18.38 | 237     |
| 2012 | 9,121,453.85  | 1,553,004 | 2,401,417 | 7,358,539 | 18.39 | 400,138 |
|      | 12,144,071.97 | 3,172,207 | 4,905,197 | 8,088,960 |       | 440,467 |

## GHENT UNIT 1

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 1974 | 6,397,687.82  | 4,775,713 | 6,515,087 | 330,439   | 16.89 | 19,564  |
| 1978 | 869,693.72    | 627,485   | 856,023   | 74,549    | 17.21 | 4,332   |
| 1994 | 911,155.00    | 525,500   | 716,894   | 258,042   | 18.02 | 14,320  |
| 1995 | 70.00         | 39        | 53        | 22        | 18.05 | 1       |
| 1996 | 15,852.00     | 8,727     | 11,905    | 5,056     | 18.08 | 280     |
| 2000 | 14,398.00     | 7,036     | 9,599     | 5,807     | 18.19 | 319     |
| 2004 | 33,927.95     | 13,941    | 19,018    | 17,284    | 18.27 | 946     |
| 2005 | 160,601.93    | 62,293    | 84,981    | 86,863    | 18.29 | 4,749   |
| 2007 | 53,989.17     | 18,220    | 24,856    | 32,912    | 18.32 | 1,797   |
| 2009 | 84,877.13     | 23,647    | 32,260    | 58,559    | 18.35 | 3,191   |
| 2011 | 268,831.65    | 56,270    | 76,764    | 210,886   | 18.38 | 11,474  |
| 2012 | 178,069.98    | 30,318    | 41,360    | 149,175   | 18.39 | 8,112   |
| 2013 | 43,107.20     | 5,498     | 7,500     | 38,624    | 18.40 | 2,099   |
| 2014 | 33,762.45     | 2,705     | 3,690     | 32,436    | 18.41 | 1,762   |
| 2015 | 2,659,970.72  | 73,744    | 100,602   | 2,745,566 | 18.42 | 149,054 |
|      | 11,725,994.72 | 6,231,136 | 8,500,593 | 4,046,221 |       | 222,000 |

## GHENT UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |               |           |            |           |       |         |
|------|---------------|-----------|------------|-----------|-------|---------|
| 1977 | 9,885,751.20  | 7,195,834 | 8,891,124  | 1,686,629 | 17.14 | 98,403  |
| 1984 | 2,106,460.46  | 1,427,087 | 1,763,299  | 490,614   | 17.59 | 27,892  |
| 1989 | 42,801.92     | 27,078    | 33,457     | 12,341    | 17.83 | 692     |
| 1996 | 44,978.99     | 24,762    | 30,596     | 17,532    | 18.08 | 970     |
| 1997 | 152,868.92    | 81,988    | 101,304    | 62,266    | 18.11 | 3,438   |
| 2007 | 95,312.10     | 32,166    | 39,744     | 62,240    | 18.32 | 3,397   |
| 2009 | 292,925.23    | 81,611    | 100,838    | 212,592   | 18.35 | 11,585  |
| 2010 | 60,449.95     | 14,847    | 18,345     | 46,337    | 18.36 | 2,524   |
| 2011 | 1,111,858.00  | 232,727   | 287,556    | 902,132   | 18.38 | 49,082  |
| 2012 | 34,908.72     | 5,944     | 7,344      | 30,008    | 18.39 | 1,632   |
| 2013 | 66,340.84     | 8,461     | 10,454     | 60,530    | 18.40 | 3,290   |
| 2014 | 81,708.97     | 6,546     | 8,088      | 79,340    | 18.41 | 4,310   |
| 2015 | 326,067.39    | 9,040     | 11,170     | 337,722   | 18.42 | 18,335  |
|      | 14,302,432.69 | 9,148,091 | 11,303,320 | 4,000,283 |       | 225,550 |

## GHENT UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2037

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |         |
|------|---------------|------------|------------|------------|-------|---------|
| 1976 | 639,635.42    | 449,212    | 553,032    | 131,378    | 19.44 | 6,758   |
| 1981 | 25,051,490.27 | 16,684,831 | 20,540,969 | 6,264,126  | 19.95 | 313,991 |
| 1982 | 687,842.97    | 452,768    | 557,410    | 178,582    | 20.03 | 8,916   |
| 1984 | 95,821.00     | 61,497     | 75,710     | 26,819     | 20.19 | 1,328   |
| 1987 | 68,793.51     | 42,277     | 52,048     | 21,561     | 20.41 | 1,056   |
| 1988 | 18,279.36     | 11,058     | 13,614     | 5,945      | 20.47 | 290     |
| 2000 | 4,296,425.13  | 1,933,342  | 2,380,169  | 2,217,006  | 21.04 | 105,371 |
| 2007 | 51,757.15     | 15,740     | 19,378     | 36,002     | 21.23 | 1,696   |
| 2012 | 72,766.46     | 10,921     | 13,445     | 64,415     | 21.33 | 3,020   |
| 2013 | 10,609.78     | 1,186      | 1,460      | 9,892      | 21.34 | 464     |
| 2014 | 2,462,458.14  | 171,817    | 211,527    | 2,423,303  | 21.36 | 113,451 |
| 2015 | 32,239.52     | 789        | 971        | 33,525     | 21.37 | 1,569   |
|      | 33,488,118.71 | 19,835,438 | 24,419,733 | 11,412,554 |       | 557,910 |

## GHENT UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 6-2038

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |         |
|------|---------------|------------|------------|------------|-------|---------|
| 1984 | 21,606,547.09 | 13,629,578 | 16,312,398 | 6,806,607  | 21.04 | 323,508 |
| 1985 | 48,287.00     | 30,038     | 35,951     | 15,716     | 21.12 | 744     |
| 1988 | 20,564.21     | 12,206     | 14,609     | 7,395      | 21.35 | 346     |
| 1991 | 5,683.09      | 3,195      | 3,824      | 2,257      | 21.54 | 105     |
| 1993 | 155,202.00    | 83,604     | 100,060    | 66,006     | 21.66 | 3,047   |
| 1994 | 24,278.82     | 12,776     | 15,291     | 10,688     | 21.71 | 492     |
| 2000 | 2,476,120.09  | 1,085,665  | 1,299,365  | 1,350,083  | 21.98 | 61,423  |
| 2003 | 42,697.44     | 16,388     | 19,614     | 26,072     | 22.08 | 1,181   |
| 2011 | 27,699.80     | 4,951      | 5,926      | 23,713     | 22.29 | 1,064   |
| 2013 | 13,232.05     | 1,421      | 1,701      | 12,458     | 22.32 | 558     |
| 2014 | 2,829,163.88  | 189,291    | 226,551    | 2,800,655  | 22.34 | 125,365 |
| 2015 | 216,083.55    | 5,059      | 6,055      | 225,155    | 22.35 | 10,074  |
|      | 27,465,559.02 | 15,074,172 | 18,041,343 | 11,346,805 |       | 527,907 |

GHENT UNIT 2 SCRUBBER  
 INTERIM SURVIVOR CURVE.. IOWA 70-R3  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 2011 | 5,833.85   | 1,221   | 1,381   | 4,862   | 18.38 | 265    |
| 2012 | 890,617.40 | 151,635 | 171,445 | 781,515 | 18.39 | 42,497 |
| 2013 | 54,747.62  | 6,983   | 7,895   | 50,685  | 18.40 | 2,755  |
|      | 951,198.87 | 159,839 | 180,721 | 837,062 |       | 45,517 |

GHENT 3 SCRUBBER  
 INTERIM SURVIVOR CURVE.. IOWA 70-R3  
 PROBABLE RETIREMENT YEAR.. 6-2037  
 NET SALVAGE PERCENT.. -7

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 2007 | 11,277,366.96 | 3,429,621 | 3,429,052 | 8,637,731 | 21.23 | 406,864 |
| 2011 | 764,631.32    | 141,860   | 141,836   | 676,319   | 21.31 | 31,737  |
|      | 12,041,998.28 | 3,571,481 | 3,570,888 | 9,314,050 |       | 438,601 |

GHENT 4 SCRUBBER  
 INTERIM SURVIVOR CURVE.. IOWA 70-R3  
 PROBABLE RETIREMENT YEAR.. 6-2038  
 NET SALVAGE PERCENT.. -7

|                                                              |                |            |            |             |       |           |
|--------------------------------------------------------------|----------------|------------|------------|-------------|-------|-----------|
| 2011                                                         | 5,833.83       | 1,043      | 1,124      | 5,118       | 22.29 | 230       |
| 2012                                                         | 15,142,207.72  | 2,187,130  | 2,356,755  | 13,845,407  | 22.30 | 620,870   |
|                                                              | 15,148,041.55  | 2,188,173  | 2,357,879  | 13,850,525  |       | 621,100   |
|                                                              | 220,741,676.05 | 79,285,618 | 99,217,099 | 138,021,334 |       | 5,725,585 |
| COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. |                |            |            |             |       | 24.1 2.59 |

## TYRONE UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |           |        |        |
|------|-----------|--------|--------|
| 2007 | 24,678.67 | 27,147 | 27,147 |
|      | 24,678.67 | 27,147 | 27,147 |

## GREEN RIVER UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |            |         |         |
|------|------------|---------|---------|
| 1954 | 17,322.04  | 19,054  | 19,054  |
| 1955 | 443.76     | 488     | 488     |
| 1996 | 107,389.55 | 118,129 | 118,129 |
| 2007 | 40,561.24  | 44,617  | 44,617  |
|      | 165,716.59 | 182,288 | 182,288 |

## GREEN RIVER UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 70-R3

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |            |         |         |
|------|------------|---------|---------|
| 1959 | 16,325.58  | 17,958  | 17,958  |
| 1995 | 26,722.51  | 29,395  | 29,395  |
| 2001 | 33,590.00  | 36,949  | 36,949  |
| 2003 | 17,006.69  | 18,707  | 18,707  |
| 2005 | 60,053.27  | 66,059  | 66,059  |
| 2006 | 19,724.94  | 21,697  | 21,697  |
| 2009 | 79,664.81  | 87,631  | 87,631  |
| 2010 | 90,945.25  | 100,040 | 100,040 |
| 2011 | 91,557.59  | 100,713 | 100,713 |
| 2012 | 44,842.47  | 49,327  | 49,326  |
|      | 480,433.11 | 528,476 | 528,476 |
|      | 670,828.37 | 737,911 | 737,911 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

TRIMBLE COUNTY UNIT 2  
 INTERIM SURVIVOR CURVE.. IOWA 75-R1.5  
 PROBABLE RETIREMENT YEAR.. 6-2066  
 NET SALVAGE PERCENT.. -11

|      |              |         |         |           |       |         |
|------|--------------|---------|---------|-----------|-------|---------|
| 2000 | 41,467.41    | 10,738  | 11,599  | 34,430    | 43.58 | 790     |
| 2002 | 26,900.64    | 6,246   | 6,747   | 23,113    | 43.93 | 526     |
| 2011 | 6,316,703.85 | 564,990 | 610,291 | 6,401,250 | 45.30 | 141,308 |
| 2012 | 203,432.33   | 14,425  | 15,582  | 210,228   | 45.43 | 4,628   |
| 2013 | 838,229.79   | 43,228  | 46,694  | 883,741   | 45.56 | 19,397  |
| 2014 | 889,231.16   | 27,924  | 30,163  | 956,884   | 45.69 | 20,943  |
| 2015 | 53,544.80    | 578     | 624     | 58,810    | 45.81 | 1,284   |
|      | 8,369,509.98 | 668,129 | 721,700 | 8,568,456 |       | 188,876 |

SYSTEM LABORATORY  
 INTERIM SURVIVOR CURVE.. IOWA 75-R1.5  
 PROBABLE RETIREMENT YEAR.. 6-2040  
 NET SALVAGE PERCENT.. -1

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1983 | 229.68     | 129     | 134     | 98      | 22.43 | 4      |
| 1984 | 10,283.72  | 5,716   | 5,917   | 4,469   | 22.49 | 199    |
| 1986 | 48,397.00  | 26,118  | 27,039  | 21,842  | 22.60 | 966    |
| 1987 | 100,806.00 | 53,528  | 55,415  | 46,399  | 22.66 | 2,048  |
| 1989 | 3,576.00   | 1,835   | 1,900   | 1,712   | 22.76 | 75     |
| 1990 | 39,994.08  | 20,144  | 20,854  | 19,540  | 22.80 | 857    |
| 1991 | 72,843.39  | 35,963  | 37,231  | 36,341  | 22.85 | 1,590  |
| 1994 | 4,476.87   | 2,066   | 2,139   | 2,383   | 22.98 | 104    |
| 1995 | 3,198.74   | 1,439   | 1,490   | 1,741   | 23.02 | 76     |
| 1996 | 5,552.69   | 2,430   | 2,516   | 3,093   | 23.06 | 134    |
| 1997 | 47,150.16  | 20,031  | 20,737  | 26,885  | 23.10 | 1,164  |
| 1998 | 67,015.37  | 27,584  | 28,556  | 39,129  | 23.13 | 1,692  |
| 1999 | 62,975.53  | 25,026  | 25,908  | 37,697  | 23.17 | 1,627  |
| 2000 | 730.00     | 279     | 289     | 448     | 23.20 | 19     |
| 2001 | 69,759.00  | 25,608  | 26,511  | 43,946  | 23.24 | 1,891  |
| 2002 | 345,217.94 | 121,145 | 125,416 | 223,255 | 23.27 | 9,594  |
| 2003 | 632,334.03 | 211,051 | 218,491 | 420,167 | 23.30 | 18,033 |
| 2004 | 199,225.39 | 62,903  | 65,120  | 136,097 | 23.33 | 5,834  |
| 2005 | 131,911.92 | 39,119  | 40,498  | 92,733  | 23.36 | 3,970  |
| 2006 | 31,404.52  | 8,671   | 8,977   | 22,742  | 23.39 | 972    |
| 2007 | 89,149.53  | 22,690  | 23,490  | 66,551  | 23.42 | 2,842  |
| 2009 | 226,404.22 | 46,987  | 48,643  | 180,025 | 23.47 | 7,670  |
| 2010 | 90,044.40  | 16,322  | 16,897  | 74,047  | 23.50 | 3,151  |
| 2011 | 250,794.23 | 38,444  | 39,799  | 213,503 | 23.53 | 9,074  |
| 2012 | 175,216.25 | 21,693  | 22,458  | 154,511 | 23.55 | 6,561  |

## SYSTEM LABORATORY

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2040

NET SALVAGE PERCENT.. -1

|      |              |         |         |           |       |         |
|------|--------------|---------|---------|-----------|-------|---------|
| 2013 | 161,221.62   | 14,758  | 15,278  | 147,556   | 23.58 | 6,258   |
| 2014 | 325,883.54   | 18,557  | 19,211  | 309,931   | 23.60 | 13,133  |
| 2015 | 38,318.47    | 771     | 798     | 37,903    | 23.62 | 1,605   |
|      | 3,234,114.29 | 871,007 | 901,711 | 2,364,744 |       | 101,143 |

## BROWN UNIT 1

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2023

NET SALVAGE PERCENT.. -5

|      |            |         |         |         |      |        |
|------|------------|---------|---------|---------|------|--------|
| 1954 | 7,812.22   | 7,212   | 7,994   | 209     | 7.09 | 29     |
| 1955 | 921.00     | 849     | 941     | 26      | 7.10 | 4      |
| 1956 | 150,707.00 | 138,665 | 153,701 | 4,541   | 7.11 | 639    |
| 1958 | 497.00     | 456     | 505     | 16      | 7.14 | 2      |
| 1971 | 672.26     | 597     | 662     | 44      | 7.26 | 6      |
| 1980 | 1,078.00   | 924     | 1,024   | 108     | 7.32 | 15     |
| 1988 | 1,387.17   | 1,133   | 1,256   | 201     | 7.35 | 27     |
| 1990 | 18,405.00  | 14,782  | 16,385  | 2,940   | 7.36 | 399    |
| 1992 | 7,705.00   | 6,072   | 6,730   | 1,360   | 7.37 | 185    |
| 1994 | 9,227.37   | 7,111   | 7,882   | 1,807   | 7.38 | 245    |
| 1995 | 1,940.96   | 1,478   | 1,638   | 400     | 7.38 | 54     |
| 1996 | 2,858.88   | 2,147   | 2,380   | 622     | 7.38 | 84     |
| 2001 | 64,870.51  | 44,472  | 49,294  | 18,820  | 7.40 | 2,543  |
| 2003 | 118,172.07 | 76,873  | 85,209  | 38,872  | 7.40 | 5,253  |
| 2005 | 13,393.06  | 8,129   | 9,010   | 5,052   | 7.41 | 682    |
| 2007 | 497.91     | 275     | 305     | 218     | 7.41 | 29     |
| 2011 | 8,037.82   | 3,137   | 3,477   | 4,963   | 7.42 | 669    |
| 2014 | 37,649.44  | 6,529   | 7,237   | 32,295  | 7.43 | 4,347  |
|      | 445,832.67 | 320,841 | 355,631 | 112,493 |      | 15,212 |

## BROWN UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -5

|      |           |        |        |
|------|-----------|--------|--------|
| 1963 | 59,546.28 | 48,828 | 62,524 |
| 1965 | 541.89    | 441    | 569    |
| 1968 | 520.36    | 418    | 546    |

## BROWN UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -5

|      |            |        |         |        |       |       |
|------|------------|--------|---------|--------|-------|-------|
| 1969 | 4,400.82   | 3,517  | 4,621   |        |       |       |
| 1970 | 555.08     | 441    | 583     |        |       |       |
| 1995 | 3,998.73   | 2,491  | 4,199   |        |       |       |
| 1996 | 2,858.69   | 1,746  | 2,994   | 8      | 13.10 | 1     |
| 1998 | 5,685.52   | 3,318  | 5,689   | 281    | 13.12 | 21    |
| 2000 | 3,709.49   | 2,050  | 3,515   | 380    | 13.14 | 29    |
| 2007 | 21,010.50  | 8,402  | 14,406  | 7,655  | 13.20 | 580   |
| 2012 | 20,279.74  | 4,320  | 7,407   | 13,887 | 13.24 | 1,049 |
|      | 123,107.10 | 75,972 | 107,051 | 22,211 |       | 1,680 |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |            |         |         |         |       |       |
|------|------------|---------|---------|---------|-------|-------|
| 1948 | 3,382.73   | 2,714   | 3,423   | 129     | 15.95 | 8     |
| 1954 | 2,001.51   | 1,569   | 1,979   | 123     | 16.51 | 7     |
| 1955 | 1,111.17   | 867     | 1,093   | 73      | 16.60 | 4     |
| 1969 | 55,586.77  | 40,304  | 50,826  | 7,540   | 17.59 | 429   |
| 1970 | 2,634.00   | 1,897   | 2,392   | 373     | 17.65 | 21    |
| 1971 | 373,932.83 | 267,455 | 337,278 | 55,351  | 17.71 | 3,125 |
| 1972 | 16,006.07  | 11,369  | 14,337  | 2,469   | 17.76 | 139   |
| 1973 | 960.00     | 677     | 854     | 154     | 17.81 | 9     |
| 1974 | 3,179.00   | 2,224   | 2,805   | 533     | 17.86 | 30    |
| 1976 | 2,020.00   | 1,391   | 1,754   | 367     | 17.96 | 20    |
| 1977 | 40,063.51  | 27,350  | 34,490  | 7,577   | 18.00 | 421   |
| 1978 | 1,537.00   | 1,040   | 1,312   | 302     | 18.05 | 17    |
| 1980 | 1,594.00   | 1,058   | 1,334   | 339     | 18.13 | 19    |
| 1981 | 7,296.00   | 4,793   | 6,044   | 1,617   | 18.17 | 89    |
| 1982 | 900.00     | 585     | 738     | 207     | 18.21 | 11    |
| 1983 | 53,223.00  | 34,206  | 43,136  | 12,748  | 18.24 | 699   |
| 1984 | 10,688.00  | 6,788   | 8,560   | 2,662   | 18.28 | 146   |
| 1985 | 14,815.00  | 9,293   | 11,719  | 3,837   | 18.31 | 210   |
| 1986 | 146,238.43 | 90,516  | 114,147 | 39,404  | 18.35 | 2,147 |
| 1987 | 219,946.00 | 134,275 | 169,330 | 61,614  | 18.38 | 3,352 |
| 1988 | 146,004.06 | 87,851  | 110,786 | 42,518  | 18.41 | 2,310 |
| 1989 | 211,250.31 | 125,162 | 157,837 | 63,975  | 18.44 | 3,469 |
| 1990 | 328,072.94 | 191,202 | 241,118 | 103,358 | 18.47 | 5,596 |
| 1991 | 380,519.00 | 217,888 | 274,771 | 124,774 | 18.50 | 6,745 |

## BROWN UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2035

NET SALVAGE PERCENT.. -5

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1992 | 143,407.00   | 80,595    | 101,636   | 48,942    | 18.53 | 2,641   |
| 1993 | 213,117.96   | 117,448   | 148,110   | 75,664    | 18.55 | 4,079   |
| 1994 | 244,539.14   | 131,878   | 166,307   | 90,459    | 18.58 | 4,869   |
| 1995 | 406,217.07   | 214,177   | 270,091   | 156,437   | 18.60 | 8,411   |
| 1996 | 132,026.00   | 67,927    | 85,660    | 52,967    | 18.62 | 2,845   |
| 1997 | 247,261.54   | 123,844   | 156,175   | 103,449   | 18.65 | 5,547   |
| 1998 | 28,007.66    | 13,631    | 17,190    | 12,218    | 18.67 | 654     |
| 1999 | 78,147.46    | 36,869    | 46,494    | 35,561    | 18.69 | 1,903   |
| 2000 | 12,638.00    | 5,762     | 7,266     | 6,004     | 18.71 | 321     |
| 2001 | 61,005.75    | 26,784    | 33,776    | 30,280    | 18.73 | 1,617   |
| 2003 | 217,402.17   | 87,467    | 110,302   | 117,971   | 18.77 | 6,285   |
| 2004 | 87,825.06    | 33,558    | 42,319    | 49,897    | 18.79 | 2,656   |
| 2005 | 126,190.46   | 45,478    | 57,351    | 75,149    | 18.81 | 3,995   |
| 2006 | 93,259.29    | 31,453    | 39,664    | 58,258    | 18.83 | 3,094   |
| 2007 | 109,967.17   | 34,416    | 43,401    | 72,065    | 18.84 | 3,825   |
| 2008 | 76,267.72    | 21,835    | 27,535    | 52,546    | 18.86 | 2,786   |
| 2009 | 25,225.68    | 6,492     | 8,187     | 18,300    | 18.88 | 969     |
| 2010 | 510,629.45   | 115,907   | 146,166   | 389,995   | 18.89 | 20,646  |
| 2011 | 184,777.66   | 35,672    | 44,985    | 149,032   | 18.91 | 7,881   |
| 2012 | 256,120.18   | 40,247    | 50,754    | 218,172   | 18.92 | 11,531  |
| 2013 | 319,773.21   | 37,481    | 47,266    | 288,496   | 18.94 | 15,232  |
| 2014 | 312,463.22   | 23,022    | 29,032    | 299,054   | 18.95 | 15,781  |
| 2015 | 471,937.93   | 12,230    | 15,423    | 480,112   | 18.97 | 25,309  |
|      | 6,381,168.11 | 2,606,647 | 3,287,152 | 3,413,075 |       | 181,900 |

## GHENT UNIT 1 SCRUBBER

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |              |         |         |         |       |       |
|------|--------------|---------|---------|---------|-------|-------|
| 1997 | 982,956.01   | 515,606 | 929,086 | 122,677 | 17.74 | 6,915 |
| 2000 | 2,454.00     | 1,174   | 2,115   | 510     | 17.80 | 29    |
| 2011 | 47,617.08    | 9,801   | 17,661  | 33,290  | 17.97 | 1,853 |
|      | 1,033,027.09 | 526,581 | 948,862 | 156,477 |       | 8,797 |

## GHENT UNIT 1

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1974 | 1,024,130.37 | 742,505   | 1,066,716 | 29,103  | 17.04 | 1,708  |
| 1975 | 81,621.12    | 58,737    | 84,384    | 2,950   | 17.08 | 173    |
| 1976 | 12,253.24    | 8,748     | 12,568    | 543     | 17.12 | 32     |
| 1978 | 6,426.72     | 4,512     | 6,482     | 394     | 17.20 | 23     |
| 1983 | 4,043.88     | 2,701     | 3,880     | 447     | 17.38 | 26     |
| 1988 | 74,936.00    | 46,969    | 67,478    | 12,704  | 17.53 | 725    |
| 1989 | 2,178.22     | 1,345     | 1,932     | 398     | 17.55 | 23     |
| 1990 | 137,000.67   | 83,256    | 119,609   | 26,981  | 17.58 | 1,535  |
| 1994 | 52,592.00    | 29,643    | 42,586    | 13,687  | 17.68 | 774    |
| 1995 | 11,112.00    | 6,126     | 8,801     | 3,089   | 17.70 | 175    |
| 1996 | 153,652.05   | 82,710    | 118,825   | 45,583  | 17.72 | 2,572  |
| 1997 | 18,479.01    | 9,693     | 13,925    | 5,847   | 17.74 | 330    |
| 1998 | 2,709.00     | 1,382     | 1,985     | 913     | 17.76 | 51     |
| 1999 | 79,194.16    | 39,178    | 56,285    | 28,453  | 17.78 | 1,600  |
| 2000 | 2,880.81     | 1,378     | 1,980     | 1,103   | 17.80 | 62     |
| 2004 | 42,569.91    | 17,129    | 24,608    | 20,942  | 17.87 | 1,172  |
| 2006 | 30,770.07    | 10,966    | 15,754    | 17,170  | 17.90 | 959    |
| 2007 | 7,433.84     | 2,460     | 3,534     | 4,420   | 17.91 | 247    |
| 2013 | 68,502.65    | 8,560     | 12,298    | 61,000  | 18.00 | 3,389  |
| 2015 | 70,787.92    | 1,925     | 2,766     | 72,978  | 18.03 | 4,048  |
|      | 1,883,273.64 | 1,159,923 | 1,666,398 | 348,705 |       | 19,624 |

## GHENT UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |            |         |         |        |       |       |
|------|------------|---------|---------|--------|-------|-------|
| 1976 | 97,461.37  | 69,583  | 96,843  | 7,440  | 17.12 | 435   |
| 1977 | 663,118.00 | 469,529 | 653,474 | 56,062 | 17.16 | 3,267 |
| 1978 | 591,177.00 | 415,003 | 577,587 | 54,972 | 17.20 | 3,196 |
| 1980 | 2,018.11   | 1,390   | 1,935   | 225    | 17.28 | 13    |
| 1985 | 7,576.54   | 4,944   | 6,881   | 1,226  | 17.44 | 70    |
| 1989 | 51,128.40  | 31,578  | 43,949  | 10,758 | 17.55 | 613   |
| 1990 | 7,692.02   | 4,674   | 6,505   | 1,725  | 17.58 | 98    |
| 1991 | 6,857.97   | 4,097   | 5,702   | 1,636  | 17.61 | 93    |
| 1992 | 50,988.28  | 29,920  | 41,642  | 12,916 | 17.63 | 733   |
| 2006 | 15,073.78  | 5,372   | 7,477   | 8,652  | 17.90 | 483   |

## GHENT UNIT 2

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 2007 | 7,433.84     | 2,460     | 3,424     | 4,530   | 17.91 | 253    |
| 2013 | 17,365.58    | 2,170     | 3,020     | 15,561  | 18.00 | 864    |
| 2014 | 9,654.84     | 765       | 1,065     | 9,266   | 18.01 | 514    |
|      | 1,527,545.73 | 1,041,485 | 1,449,503 | 184,971 |       | 10,632 |

## GHENT UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2037

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 1981 | 2,137,927.84 | 1,379,595 | 1,814,698 | 472,885   | 19.85 | 23,823 |
| 1982 | 220,596.00   | 140,702   | 185,077   | 50,961    | 19.90 | 2,561  |
| 1983 | 9,393.97     | 5,919     | 7,786     | 2,266     | 19.95 | 114    |
| 1984 | 599,875.00   | 373,322   | 491,062   | 150,804   | 19.99 | 7,544  |
| 1987 | 14,126.58    | 8,429     | 11,087    | 4,028     | 20.12 | 200    |
| 1988 | 8,279.00     | 4,865     | 6,399     | 2,459     | 20.15 | 122    |
| 1993 | 31,841.79    | 17,048    | 22,425    | 11,646    | 20.33 | 573    |
| 1994 | 1,429.72     | 749       | 985       | 545       | 20.36 | 27     |
| 2004 | 70,857.65    | 25,886    | 34,050    | 41,768    | 20.62 | 2,026  |
| 2007 | 56,110.00    | 16,665    | 21,921    | 38,117    | 20.69 | 1,842  |
| 2013 | 8,682.80     | 946       | 1,244     | 8,046     | 20.81 | 387    |
| 2014 | 824,923.38   | 56,729    | 74,620    | 808,048   | 20.82 | 38,811 |
|      | 3,984,043.73 | 2,030,855 | 2,671,355 | 1,591,572 |       | 78,030 |

## GHENT UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2038

NET SALVAGE PERCENT.. -7

|      |              |         |         |         |       |        |
|------|--------------|---------|---------|---------|-------|--------|
| 1984 | 1,552,539.66 | 948,190 | 988,466 | 672,751 | 20.83 | 32,297 |
| 1985 | 75,061.39    | 45,218  | 47,139  | 33,177  | 20.88 | 1,589  |
| 1986 | 71,918.00    | 42,699  | 44,513  | 32,440  | 20.93 | 1,550  |
| 1987 | 197,214.00   | 115,362 | 120,262 | 90,757  | 20.97 | 4,328  |
| 1988 | 246,937.00   | 142,162 | 148,201 | 116,022 | 21.01 | 5,522  |
| 1989 | 288,049.17   | 163,069 | 169,996 | 138,217 | 21.05 | 6,566  |
| 1990 | 248,790.00   | 138,347 | 144,224 | 121,982 | 21.09 | 5,784  |
| 1991 | 238,960.87   | 130,393 | 135,932 | 119,756 | 21.13 | 5,668  |
| 1992 | 186,806.00   | 99,893  | 104,136 | 95,746  | 21.17 | 4,523  |

## GHENT UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 6-2038

NET SALVAGE PERCENT.. -7

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1993 | 119,556.00 | 62,591  | 65,250  | 62,675  | 21.20 | 2,956  |
| 1994 | 96,245.00  | 49,225  | 51,316  | 51,666  | 21.24 | 2,432  |
| 1995 | 403,518.00 | 201,427 | 209,983 | 221,781 | 21.27 | 10,427 |
| 1996 | 260,103.45 | 126,395 | 131,764 | 146,547 | 21.31 | 6,877  |
| 1997 | 261,371.59 | 123,434 | 128,677 | 150,991 | 21.34 | 7,075  |
| 1998 | 36,015.00  | 16,493  | 17,194  | 21,342  | 21.37 | 999    |
| 1999 | 626,250.00 | 277,322 | 289,102 | 380,986 | 21.40 | 17,803 |
| 2000 | 69,931.00  | 29,880  | 31,149  | 43,677  | 21.42 | 2,039  |
| 2003 | 274,884.03 | 102,815 | 107,182 | 186,944 | 21.51 | 8,691  |
| 2004 | 259,074.19 | 91,801  | 95,700  | 181,509 | 21.53 | 8,431  |
| 2005 | 117,203.33 | 39,052  | 40,711  | 84,697  | 21.56 | 3,928  |
| 2006 | 15,073.78  | 4,691   | 4,890   | 11,239  | 21.58 | 521    |
| 2007 | 167,940.61 | 48,301  | 50,353  | 129,344 | 21.60 | 5,988  |
| 2008 | 38,302.23  | 10,031  | 10,457  | 30,526  | 21.63 | 1,411  |
| 2009 | 82,463.42  | 19,371  | 20,194  | 68,042  | 21.65 | 3,143  |
| 2010 | 820,549.05 | 169,118 | 176,302 | 701,686 | 21.67 | 32,381 |
| 2011 | 575,117.79 | 100,626 | 104,900 | 510,476 | 21.69 | 23,535 |
| 2012 | 694,925.41 | 98,114  | 102,282 | 641,289 | 21.71 | 29,539 |
| 2013 | 65,548.30  | 6,897   | 7,190   | 62,947  | 21.73 | 2,897  |
| 2014 | 109,379.77 | 7,173   | 7,478   | 109,559 | 21.75 | 5,037  |
| 2015 | 572,254.91 | 13,208  | 13,769  | 598,544 | 21.77 | 27,494 |

|              |           |           |           |         |
|--------------|-----------|-----------|-----------|---------|
| 8,771,982.95 | 3,423,298 | 3,568,709 | 5,817,313 | 271,431 |
|--------------|-----------|-----------|-----------|---------|

|               |            |            |            |         |
|---------------|------------|------------|------------|---------|
| 35,753,605.29 | 12,724,738 | 15,678,072 | 22,580,017 | 877,325 |
|---------------|------------|------------|------------|---------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.7 2.45

## TYRONE UNIT 3

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |           |        |        |
|------|-----------|--------|--------|
| 1987 | 1.57      | 2      | 2      |
| 1989 | 18,427.65 | 20,270 | 20,270 |
| 1994 | 16,747.71 | 18,422 | 18,422 |
| 1995 | 7,264.00  | 7,990  | 7,990  |
| 1996 | 21.00     | 23     | 23     |
| 1998 | 6,158.71  | 6,775  | 6,775  |
| 1999 | 1,781.97  | 1,960  | 1,960  |
| 2000 | 10,208.60 | 11,229 | 11,229 |
| 2003 | 1,945.90  | 2,140  | 2,140  |
| 2004 | 2,086.10  | 2,295  | 2,295  |
| 2009 | 9,848.48  | 10,833 | 10,833 |
|      | 74,491.69 | 81,939 | 81,941 |

## TYRONE UNITS 1 AND 2

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |           |        |        |
|------|-----------|--------|--------|
| 2003 | 11,541.15 | 12,695 | 12,695 |
|      | 11,541.15 | 12,695 | 12,695 |

## GREEN RIVER UNIT 4

INTERIM SURVIVOR CURVE.. IOWA 75-R1.5

PROBABLE RETIREMENT YEAR.. 12-2015

NET SALVAGE PERCENT.. -10

|      |          |        |        |
|------|----------|--------|--------|
| 1954 | 1,164.00 | 1,280  | 1,280  |
| 1959 | 8,874.48 | 9,762  | 9,762  |
| 1966 | 2,606.00 | 2,867  | 2,867  |
| 1971 | 881.40   | 970    | 970    |
| 1972 | 65.10    | 72     | 72     |
| 1974 | 36.19    | 40     | 40     |
| 1975 | 1,648.52 | 1,813  | 1,813  |
| 1980 | 5,026.03 | 5,529  | 5,529  |
| 1981 | 66.60    | 73     | 73     |
| 1984 | 7,645.65 | 8,410  | 8,410  |
| 1985 | 9,431.32 | 10,374 | 10,374 |
| 1986 | 1,692.00 | 1,861  | 1,861  |

GREEN RIVER UNIT 4  
 INTERIM SURVIVOR CURVE.. IOWA 75-R1.5  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |            |         |         |
|------|------------|---------|---------|
| 1989 | 156.90     | 173     | 173     |
| 1992 | 1,883.56   | 2,072   | 2,072   |
| 1993 | 4,681.88   | 5,150   | 5,150   |
| 1995 | 8,509.23   | 9,360   | 9,360   |
| 1996 | 19,905.00  | 21,896  | 21,896  |
| 1997 | 5,058.15   | 5,564   | 5,564   |
| 1999 | 13,769.35  | 15,146  | 15,146  |
| 2001 | 8,714.92   | 9,586   | 9,586   |
| 2003 | 6,243.33   | 6,868   | 6,868   |
| 2004 | 20,681.30  | 22,749  | 22,749  |
| 2006 | 4,095.33   | 4,505   | 4,505   |
| 2007 | 10,188.60  | 11,207  | 11,207  |
| 2009 | 3,399.56   | 3,740   | 3,740   |
| 2010 | 2,889.70   | 3,179   | 3,179   |
| 2011 | 101,643.05 | 111,807 | 111,807 |
| 2012 | 90,178.44  | 99,196  | 99,196  |
| 2014 | 39,055.67  | 42,961  | 42,961  |
|      | 380,191.26 | 418,210 | 418,210 |

GREEN RIVER UNITS 1 AND 2  
 INTERIM SURVIVOR CURVE.. IOWA 75-R1.5  
 PROBABLE RETIREMENT YEAR.. 12-2015  
 NET SALVAGE PERCENT.. -10

|      |            |         |         |
|------|------------|---------|---------|
| 1941 | 632.00     | 695     | 695     |
| 1950 | 40,301.94  | 44,332  | 44,332  |
| 1974 | 4,755.57   | 5,231   | 5,231   |
|      | 45,689.51  | 50,258  | 50,258  |
|      | 511,913.61 | 563,102 | 563,104 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

DIX DAM  
INTERIM SURVIVOR CURVE.. IOWA 100-R4  
PROBABLE RETIREMENT YEAR.. 6-2041  
NET SALVAGE PERCENT.. 0

|      |            |         |         |         |
|------|------------|---------|---------|---------|
| 1941 | 879,311.47 | 672,928 | 912,333 | 33,022- |
|      | 879,311.47 | 672,928 | 912,333 | 33,022- |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

DIX DAM

INTERIM SURVIVOR CURVE.. IOWA 90-S2.5

PROBABLE RETIREMENT YEAR.. 6-2041

NET SALVAGE PERCENT.. -3

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1941 | 232,513.54 | 185,326 | 197,683 | 41,806  | 19.02 | 2,198  |
| 1967 | 1,469.92   | 1,015   | 1,083   | 431     | 23.06 | 19     |
| 1988 | 21,653.46  | 11,679  | 12,458  | 9,845   | 24.90 | 395    |
| 1990 | 54,778.00  | 28,440  | 30,336  | 26,085  | 25.00 | 1,043  |
| 1991 | 77,146.00  | 39,240  | 41,856  | 37,604  | 25.04 | 1,502  |
| 1992 | 1,037.00   | 516     | 550     | 518     | 25.08 | 21     |
| 2005 | 23,670.29  | 7,129   | 7,604   | 16,776  | 25.41 | 660    |
| 2007 | 66,025.06  | 17,037  | 18,173  | 49,833  | 25.43 | 1,960  |
| 2009 | 11,732.37  | 2,458   | 2,622   | 9,462   | 25.45 | 372    |
| 2010 | 75,260.09  | 13,771  | 14,689  | 62,829  | 25.46 | 2,468  |
| 2012 | 31,110.92  | 3,871   | 4,129   | 27,915  | 25.47 | 1,096  |
| 2013 | 6,860.35   | 631     | 673     | 6,393   | 25.48 | 251    |
| 2014 | 224,345.64 | 12,848  | 13,705  | 217,371 | 25.48 | 8,531  |
|      | 827,602.64 | 323,961 | 345,562 | 506,869 |       | 20,516 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 24.7 2.48

DIX DAM

INTERIM SURVIVOR CURVE.. IOWA 105-S2.5

PROBABLE RETIREMENT YEAR.. 6-2041

NET SALVAGE PERCENT.. -3

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 1941 | 5,868,664.83  | 4,602,030 | 4,975,220 | 1,069,505  | 21.60 | 49,514  |
| 1944 | 862.00        | 668       | 722       | 166        | 21.96 | 8       |
| 1950 | 229,388.00    | 173,264   | 187,314   | 48,955     | 22.64 | 2,162   |
| 1971 | 3,719.85      | 2,461     | 2,661     | 1,171      | 24.45 | 48      |
| 1990 | 7,354.12      | 3,804     | 4,112     | 3,462      | 25.24 | 137     |
| 1991 | 1,200,006.00  | 607,942   | 657,241   | 578,765    | 25.27 | 22,903  |
| 1992 | 370,020.00    | 183,449   | 198,325   | 182,795    | 25.29 | 7,228   |
| 1993 | 16,470.00     | 7,978     | 8,625     | 8,339      | 25.31 | 329     |
| 1994 | 10,861.26     | 5,132     | 5,548     | 5,639      | 25.33 | 223     |
| 2003 | 136,421.67    | 46,295    | 50,049    | 90,465     | 25.44 | 3,556   |
| 2007 | 1,072,820.18  | 276,494   | 298,916   | 806,089    | 25.47 | 31,649  |
| 2008 | 842,093.55    | 197,306   | 213,306   | 654,050    | 25.47 | 25,679  |
| 2011 | 300,776.20    | 46,501    | 50,272    | 259,528    | 25.48 | 10,186  |
| 2012 | 11,493,426.01 | 1,429,229 | 1,545,129 | 10,293,100 | 25.49 | 403,809 |
| 2014 | 297,790.55    | 17,048    | 18,430    | 288,294    | 25.49 | 11,310  |
| 2015 | 34,972.15     | 693       | 749       | 35,272     | 25.49 | 1,384   |
|      | 21,885,646.37 | 7,600,294 | 8,216,620 | 14,325,596 |       | 570,125 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.1 2.61

DIX DAM

INTERIM SURVIVOR CURVE.. IOWA 75-R3

PROBABLE RETIREMENT YEAR.. 6-2041

NET SALVAGE PERCENT.. -3

|                                                                   |               |           |         |            |       |         |
|-------------------------------------------------------------------|---------------|-----------|---------|------------|-------|---------|
| 1941                                                              | 47,034.96     | 39,205    | 16,976  | 31,470     | 14.18 | 2,219   |
| 1957                                                              | 67,525.73     | 50,580    | 21,902  | 47,649     | 19.32 | 2,466   |
| 1958                                                              | 4,342.00      | 3,229     | 1,398   | 3,074      | 19.59 | 157     |
| 1962                                                              | 12,808.80     | 9,240     | 4,001   | 9,192      | 20.60 | 446     |
| 1963                                                              | 31.46         | 23        | 10      | 22         | 20.82 | 1       |
| 1992                                                              | 12,412.14     | 6,183     | 2,677   | 10,107     | 24.49 | 413     |
| 1997                                                              | 24,821.62     | 10,821    | 4,686   | 20,881     | 24.76 | 843     |
| 2005                                                              | 1,992.81      | 601       | 260     | 1,792      | 25.08 | 71      |
| 2008                                                              | 62,158.95     | 14,592    | 6,319   | 57,705     | 25.17 | 2,293   |
| 2010                                                              | 4,035,403.02  | 739,934   | 320,405 | 3,836,061  | 25.21 | 152,164 |
| 2012                                                              | 4,177,975.81  | 521,088   | 225,640 | 4,077,675  | 25.26 | 161,428 |
| 2013                                                              | 5,285,996.18  | 486,418   | 210,628 | 5,233,948  | 25.28 | 207,039 |
| 2015                                                              | 326,392.84    | 6,512     | 2,820   | 333,365    | 25.31 | 13,171  |
|                                                                   | 14,058,896.32 | 1,888,426 | 817,722 | 13,662,941 |       | 542,711 |
| COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.2 |               |           |         |            |       | 3.86    |

DIX DAM

INTERIM SURVIVOR CURVE.. IOWA 40-L2.5

PROBABLE RETIREMENT YEAR.. 6-2041

NET SALVAGE PERCENT.. -3

|      |              |         |         |           |       |        |
|------|--------------|---------|---------|-----------|-------|--------|
| 1941 | 54,187.00    | 46,673  | 40,928  | 14,884    | 6.55  | 2,272  |
| 1947 | 10,865.00    | 9,076   | 7,959   | 3,232     | 7.56  | 428    |
| 1949 | 290.00       | 240     | 210     | 88        | 7.92  | 11     |
| 1950 | 411.49       | 338     | 296     | 127       | 8.11  | 16     |
| 1952 | 206.57       | 168     | 147     | 65        | 8.49  | 8      |
| 1953 | 772.14       | 622     | 545     | 250       | 8.69  | 29     |
| 1960 | 1,738.80     | 1,339   | 1,174   | 617       | 10.09 | 61     |
| 1961 | 56.97        | 44      | 39      | 20        | 10.30 | 2      |
| 1962 | 3,724.00     | 2,828   | 2,480   | 1,356     | 10.49 | 129    |
| 1963 | 156.52       | 118     | 103     | 58        | 10.69 | 5      |
| 1974 | 3,361.98     | 2,382   | 2,089   | 1,374     | 12.33 | 111    |
| 1975 | 4,094.59     | 2,888   | 2,533   | 1,685     | 12.44 | 135    |
| 1989 | 5,503.19     | 3,409   | 2,989   | 2,679     | 15.01 | 178    |
| 2010 | 486,152.97   | 95,070  | 83,368  | 417,369   | 23.34 | 17,882 |
| 2012 | 401,455.77   | 52,767  | 46,272  | 367,227   | 23.86 | 15,391 |
| 2013 | 341,346.54   | 33,070  | 29,000  | 322,587   | 24.08 | 13,396 |
| 2014 | 7,365.24     | 438     | 384     | 7,202     | 24.29 | 297    |
|      | 1,321,688.77 | 251,470 | 220,518 | 1,140,821 |       | 50,351 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 22.7 3.81

DIX DAM

INTERIM SURVIVOR CURVE.. IOWA 40-S0

PROBABLE RETIREMENT YEAR.. 6-2041

NET SALVAGE PERCENT.. -3

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1941 | 3,020.11   | 2,954   | 2,273   | 838     | 2.02  | 415    |
| 1947 | 1,160.75   | 1,068   | 822     | 374     | 4.27  | 88     |
| 1948 | 65.00      | 59      | 45      | 22      | 4.65  | 5      |
| 1949 | 41.43      | 37      | 28      | 14      | 5.03  | 3      |
| 1951 | 59.26      | 52      | 40      | 21      | 5.80  | 4      |
| 1952 | 2.05       | 2       | 2       |         |       |        |
| 1962 | 18,423.86  | 14,161  | 10,896  | 8,080   | 10.15 | 796    |
| 1988 | 185,484.40 | 99,592  | 76,631  | 114,418 | 17.76 | 6,442  |
| 1990 | 1,449.67   | 750     | 577     | 916     | 18.16 | 50     |
| 1992 | 11,230.37  | 5,582   | 4,295   | 7,272   | 18.55 | 392    |
| 1994 | 22,393.40  | 10,633  | 8,182   | 14,884  | 18.93 | 786    |
| 1995 | 14,300.79  | 6,627   | 5,099   | 9,631   | 19.11 | 504    |
| 1996 | 9,512.12   | 4,289   | 3,300   | 6,497   | 19.30 | 337    |
| 2003 | 4,481.37   | 1,557   | 1,198   | 3,418   | 20.55 | 166    |
| 2010 | 10,026.50  | 1,931   | 1,486   | 8,841   | 21.83 | 405    |
| 2014 | 35,295.66  | 2,187   | 1,683   | 34,672  | 22.65 | 1,531  |
|      | 316,946.74 | 151,481 | 116,558 | 209,897 |       | 11,924 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 17.6 3.76

DIX DAM

INTERIM SURVIVOR CURVE.. IOWA 60-R4

PROBABLE RETIREMENT YEAR.. 6-2041

NET SALVAGE PERCENT.. -3

|      |            |        |        |         |       |       |
|------|------------|--------|--------|---------|-------|-------|
| 1941 | 46,976.13  | 45,224 | 43,369 | 5,016   | 3.92  | 1,280 |
| 2009 | 129,383.46 | 27,206 | 26,090 | 107,175 | 25.34 | 4,229 |
| 2015 | 58,149.54  | 1,155  | 1,108  | 58,786  | 25.44 | 2,311 |
|      | 234,509.13 | 73,585 | 70,567 | 170,977 |       | 7,820 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 21.9 3.33

BROWN CT GAS PIPELINE  
 INTERIM SURVIVOR CURVE.. SQUARE  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. 0

|      |            |         |         |        |       |       |
|------|------------|---------|---------|--------|-------|-------|
| 1994 | 167,723.31 | 97,461  | 110,904 | 56,820 | 15.50 | 3,666 |
| 1995 | 8,686.00   | 4,946   | 5,628   | 3,058  | 15.50 | 197   |
|      | 176,409.31 | 102,407 | 116,532 | 59,877 |       | 3,863 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 15.5 2.19

## CANE RUN CC 7

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2055

NET SALVAGE PERCENT.. -10

|      |               |         |         |            |       |           |
|------|---------------|---------|---------|------------|-------|-----------|
| 2015 | 46,895,473.79 | 670,089 | 663,228 | 50,921,793 | 36.48 | 1,395,882 |
|      | 46,895,473.79 | 670,089 | 663,228 | 50,921,793 |       | 1,395,882 |

## TRIMBLE COUNTY CT 5

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2002 | 3,566,217.06 | 1,716,256 | 1,645,021 | 2,170,831 | 15.83 | 137,134 |
| 2004 | 27,551.15    | 12,091    | 11,589    | 17,891    | 15.92 | 1,124   |
| 2006 | 146,463.11   | 57,175    | 54,802    | 101,914   | 16.00 | 6,370   |
|      | 3,740,231.32 | 1,785,522 | 1,711,412 | 2,290,636 |       | 144,628 |

## TRIMBLE COUNTY CT 6

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2002 | 3,564,353.91 | 1,715,359 | 1,636,951 | 2,176,908 | 15.83 | 137,518 |
| 2004 | 24,330.33    | 10,678    | 10,190    | 15,844    | 15.92 | 995     |
|      | 3,588,684.24 | 1,726,037 | 1,647,141 | 2,192,751 |       | 138,513 |

## TRIMBLE COUNTY CT 7

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 3,559,154.97 | 1,461,357 | 1,423,558 | 2,384,738 | 17.73 | 134,503 |
|      | 3,559,154.97 | 1,461,357 | 1,423,558 | 2,384,738 |       | 134,503 |

TRIMBLE COUNTY CT 8  
 INTERIM SURVIVOR CURVE.. IOWA 50-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 3,548,851.71 | 1,457,127 | 1,419,437 | 2,377,834 | 17.73 | 134,114 |
|      | 3,548,851.71 | 1,457,127 | 1,419,437 | 2,377,834 |       | 134,114 |

TRIMBLE COUNTY CT 9  
 INTERIM SURVIVOR CURVE.. IOWA 50-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 3,655,976.41 | 1,501,111 | 1,452,931 | 2,458,964 | 17.73 | 138,689 |
|      | 3,655,976.41 | 1,501,111 | 1,452,931 | 2,458,964 |       | 138,689 |

TRIMBLE COUNTY CT 10  
 INTERIM SURVIVOR CURVE.. IOWA 50-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 3,653,029.99 | 1,499,902 | 1,451,760 | 2,456,982 | 17.73 | 138,578 |
|      | 3,653,029.99 | 1,499,902 | 1,451,760 | 2,456,982 |       | 138,578 |

BROWN CT 5  
 INTERIM SURVIVOR CURVE.. IOWA 50-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 2001 | 754,032.65 | 385,882 | 370,518 | 428,757 | 14.88 | 28,814 |
| 2002 | 1,116.00   | 550     | 528     | 655     | 14.92 | 44     |
| 2004 | 19,933.20  | 8,981   | 8,623   | 12,506  | 15.00 | 834    |
| 2015 | 10,818.38  | 356     | 342     | 11,126  | 15.29 | 728    |
|      | 785,900.23 | 395,769 | 380,011 | 453,043 |       | 30,420 |

## BROWN CT 6

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -6

|      |            |         |        |         |       |       |
|------|------------|---------|--------|---------|-------|-------|
| 1999 | 133,678.33 | 77,770  | 72,280 | 69,419  | 12.98 | 5,348 |
| 2005 | 38,287.07  | 17,694  | 16,445 | 24,139  | 13.17 | 1,833 |
| 2006 | 20,848.62  | 9,098   | 8,456  | 13,644  | 13.19 | 1,034 |
|      | 192,814.02 | 104,562 | 97,181 | 107,202 |       | 8,215 |

## BROWN CT 7

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -6

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1999 | 481,712.77 | 280,246 | 259,377 | 251,238 | 12.98 | 19,356 |
| 2002 | 4,117.50   | 2,176   | 2,014   | 2,351   | 13.08 | 180    |
| 2005 | 57,093.08  | 26,384  | 24,419  | 36,099  | 13.17 | 2,741  |
| 2006 | 2,042.62   | 891     | 825     | 1,341   | 13.19 | 102    |
| 2015 | 22,546.10  | 846     | 783     | 23,116  | 13.35 | 1,732  |
|      | 567,512.07 | 310,543 | 287,418 | 314,145 |       | 24,111 |

## BROWN CT 8

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2025

NET SALVAGE PERCENT.. -6

|      |              |           |           |         |      |        |
|------|--------------|-----------|-----------|---------|------|--------|
| 1994 | 143,346.95   | 104,938   | 102,769   | 49,179  | 9.17 | 5,363  |
| 1995 | 1,730,556.00 | 1,248,430 | 1,222,627 | 611,762 | 9.19 | 66,568 |
| 1997 | 120,183.00   | 83,828    | 82,095    | 45,299  | 9.23 | 4,908  |
| 2001 | 18,569.00    | 11,844    | 11,599    | 8,084   | 9.30 | 869    |
|      | 2,012,654.95 | 1,449,040 | 1,419,091 | 714,323 |      | 77,708 |

## BROWN CT 9

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1994 | 2,477,163.92 | 1,527,424 | 1,702,000 | 923,793 | 14.49 | 63,754 |
| 1995 | 512,980.00   | 309,801   | 345,210   | 198,549 | 14.56 | 13,637 |
| 1996 | 438,868.00   | 259,228   | 288,856   | 176,344 | 14.62 | 12,062 |
| 1997 | 1,190,538.00 | 686,461   | 764,920   | 497,050 | 14.68 | 33,859 |

## BROWN CT 9

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2001 | 18,569.00    | 9,503     | 10,589    | 9,094     | 14.88 | 611     |
| 2012 | 6,254.64     | 1,216     | 1,355     | 5,275     | 15.23 | 346     |
| 2013 | 15,782.48    | 2,316     | 2,581     | 14,149    | 15.25 | 928     |
|      | 4,660,156.04 | 2,795,949 | 3,115,511 | 1,824,254 |       | 125,197 |

## BROWN CT 10

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1995 | 1,751,485.20 | 1,057,765 | 1,133,009 | 723,565 | 14.56 | 49,695 |
| 1997 | 95,664.00    | 55,160    | 59,084    | 42,320  | 14.68 | 2,883  |
| 2001 | 18,569.00    | 9,503     | 10,179    | 9,504   | 14.88 | 639    |
|      | 1,865,718.20 | 1,122,428 | 1,202,272 | 775,389 |       | 53,217 |

## BROWN CT 11

INTERIM SURVIVOR CURVE.. IOWA 50-R2.5

PROBABLE RETIREMENT YEAR.. 6-2026

NET SALVAGE PERCENT.. -6

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1996 | 1,321,515.93 | 907,092   | 870,796   | 530,011 | 10.14 | 52,269 |
| 1997 | 65,678.00    | 44,223    | 42,453    | 27,165  | 10.17 | 2,671  |
| 1998 | 313,025.00   | 206,533   | 198,269   | 133,538 | 10.19 | 13,105 |
| 2001 | 81,269.00    | 49,763    | 47,772    | 38,373  | 10.25 | 3,744  |
| 2004 | 56,158.33    | 30,997    | 29,757    | 29,771  | 10.30 | 2,890  |
| 2011 | 36,259.52    | 11,497    | 11,037    | 27,398  | 10.38 | 2,639  |
| 2013 | 45,109.35    | 9,177     | 8,810     | 39,006  | 10.40 | 3,751  |
|      | 1,919,015.13 | 1,259,282 | 1,208,894 | 825,262 |       | 81,069 |

HAEFLING UNITS 1, 2 AND 3  
 INTERIM SURVIVOR CURVE.. IOWA 50-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2020  
 NET SALVAGE PERCENT.. -10

|      |            |         |        |         |      |        |
|------|------------|---------|--------|---------|------|--------|
| 1994 | 3,638.00   | 3,298   | 951    | 3,051   | 4.43 | 689    |
| 2000 | 287,491.35 | 244,280 | 70,403 | 245,838 | 4.46 | 55,121 |
| 2013 | 322.20     | 127     | 37     | 318     | 4.48 | 71     |
|      | 291,451.55 | 247,705 | 71,390 | 249,207 |      | 55,881 |

PADDY'S RUN GENERATOR 13  
 INTERIM SURVIVOR CURVE.. IOWA 50-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 2001 | 1,906,444.76  | 975,637    | 923,257    | 1,097,575  | 14.88 | 73,762    |
| 2002 | 3,883.00      | 1,913      | 1,810      | 2,306      | 14.92 | 155       |
| 2013 | 42,179.89     | 6,189      | 5,857      | 38,854     | 15.25 | 2,548     |
| 2015 | 183,795.18    | 6,049      | 5,724      | 189,099    | 15.29 | 12,367    |
|      | 2,136,302.83  | 989,788    | 936,648    | 1,327,833  |       | 88,832    |
|      | 83,072,927.45 | 18,776,211 | 18,487,883 | 71,674,356 |       | 2,769,557 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.9 3.33

## CANE RUN CC 7

INTERIM SURVIVOR CURVE.. IOWA 45-R2.5

PROBABLE RETIREMENT YEAR.. 6-2055

NET SALVAGE PERCENT.. -10

|      |                |           |           |             |       |           |
|------|----------------|-----------|-----------|-------------|-------|-----------|
| 2015 | 111,535,551.95 | 1,630,538 | 1,643,640 | 121,045,467 | 35.63 | 3,397,291 |
|      | 111,535,551.95 | 1,630,538 | 1,643,640 | 121,045,467 |       | 3,397,291 |

## CANE RUN GAS PIPELINE

INTERIM SURVIVOR CURVE.. IOWA 45-R2.5

PROBABLE RETIREMENT YEAR.. 6-2055

NET SALVAGE PERCENT.. -10

|      |               |         |         |            |       |         |
|------|---------------|---------|---------|------------|-------|---------|
| 2015 | 23,414,526.87 | 342,297 | 345,052 | 25,410,928 | 35.63 | 713,189 |
|      | 23,414,526.87 | 342,297 | 345,052 | 25,410,928 |       | 713,189 |

## TRIMBLE COUNTY CT 5

INTERIM SURVIVOR CURVE.. IOWA 45-R2.5

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |            |         |         |         |       |       |
|------|------------|---------|---------|---------|-------|-------|
| 2002 | 237,747.79 | 114,730 | 109,380 | 145,010 | 15.63 | 9,278 |
| 2004 | 1,836.64   | 808     | 770     | 1,195   | 15.76 | 76    |
|      | 239,584.43 | 115,538 | 110,150 | 146,205 |       | 9,354 |

## TRIMBLE COUNTY CT 6

INTERIM SURVIVOR CURVE.. IOWA 45-R2.5

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |            |         |         |         |       |       |
|------|------------|---------|---------|---------|-------|-------|
| 2002 | 237,623.60 | 114,670 | 109,326 | 144,931 | 15.63 | 9,273 |
| 2004 | 1,621.94   | 713     | 680     | 1,056   | 15.76 | 67    |
|      | 239,245.54 | 115,383 | 110,006 | 145,987 |       | 9,340 |

TRIMBLE COUNTY CT GAS PIPELINE  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2002 | 4,474,853.28 | 2,032,498 | 2,066,980 | 2,721,113 | 17.34 | 156,927 |
| 2005 | 369,111.16   | 143,564   | 146,000   | 248,949   | 17.58 | 14,161  |
| 2006 | 6,150.29     | 2,240     | 2,278     | 4,303     | 17.65 | 244     |
| 2013 | 6,019.92     | 768       | 781       | 5,660     | 18.02 | 314     |
|      | 4,856,134.65 | 2,179,070 | 2,216,039 | 2,980,025 |       | 171,646 |

TRIMBLE COUNTY CT 7  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 2004 | 578,059.38 | 238,113 | 231,910 | 386,614 | 17.51 | 22,080 |
|      | 578,059.38 | 238,113 | 231,910 | 386,614 |       | 22,080 |

TRIMBLE COUNTY CT 8  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 2004 | 576,385.74 | 237,424 | 231,239 | 385,494 | 17.51 | 22,016 |
|      | 576,385.74 | 237,424 | 231,239 | 385,494 |       | 22,016 |

TRIMBLE COUNTY CT 9  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 2004 | 593,786.01 | 244,591 | 236,879 | 398,472 | 17.51 | 22,757 |
|      | 593,786.01 | 244,591 | 236,879 | 398,472 |       | 22,757 |

TRIMBLE COUNTY CT 10  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 2004 | 593,307.31 | 244,394 | 236,962 | 397,877 | 17.51 | 22,723 |
| 2007 | 29,565.29  | 9,983   | 9,679   | 21,955  | 17.72 | 1,239  |
|      | 622,872.60 | 254,377 | 246,641 | 419,833 |       | 23,962 |

BROWN CT 5  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 2001 | 562,558.04 | 288,627 | 213,466 | 382,846 | 14.69 | 26,062 |
| 2002 | 837.00     | 413     | 305     | 582     | 14.75 | 39     |
| 2010 | 232,392.85 | 64,415  | 47,641  | 198,696 | 15.11 | 13,150 |
|      | 795,787.89 | 353,455 | 261,412 | 582,123 |       | 39,251 |

BROWN CT 6  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2029  
 NET SALVAGE PERCENT.. -6

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1999 | 89,103.45  | 51,919  | 35,815  | 58,635  | 12.82 | 4,574  |
| 2009 | 20,420.52  | 7,016   | 4,840   | 16,806  | 13.20 | 1,273  |
| 2010 | 232,392.75 | 71,157  | 49,086  | 197,251 | 13.22 | 14,921 |
| 2011 | 64,543.29  | 17,027  | 11,746  | 56,670  | 13.25 | 4,277  |
| 2014 | 553,157.19 | 58,717  | 40,504  | 545,842 | 13.30 | 41,041 |
|      | 959,617.20 | 205,836 | 141,990 | 875,204 |       | 66,086 |

BROWN CT 7  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2029  
 NET SALVAGE PERCENT.. -6

|      |           |        |        |        |       |       |
|------|-----------|--------|--------|--------|-------|-------|
| 1999 | 87,848.59 | 51,188 | 34,600 | 58,519 | 12.82 | 4,565 |
| 2009 | 21,086.20 | 7,245  | 4,897  | 17,454 | 13.20 | 1,322 |

BROWN CT 7  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2029  
 NET SALVAGE PERCENT.. -6

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 2010 | 232,392.85 | 71,157  | 48,098  | 198,238 | 13.22 | 14,995 |
| 2011 | 64,543.31  | 17,027  | 11,509  | 56,907  | 13.25 | 4,295  |
| 2014 | 553,157.16 | 58,717  | 39,689  | 546,657 | 13.30 | 41,102 |
|      | 959,028.11 | 205,334 | 138,794 | 877,776 |       | 66,279 |

BROWN CT 8  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2025  
 NET SALVAGE PERCENT.. -6

|      |            |         |         |         |      |        |
|------|------------|---------|---------|---------|------|--------|
| 1995 | 2,370.10   | 1,710   | 2,049   | 463     | 9.09 | 51     |
| 1997 | 1,827.00   | 1,274   | 1,527   | 410     | 9.15 | 45     |
| 2010 | 232,392.85 | 90,001  | 107,846 | 138,491 | 9.38 | 14,764 |
| 2012 | 26,455.57  | 7,513   | 9,003   | 19,040  | 9.40 | 2,026  |
|      | 263,045.52 | 100,498 | 120,424 | 158,404 |      | 16,886 |

BROWN CT 9  
 INTERIM SURVIVOR CURVE.. IOWA 45-R2.5  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1994 | 82,736.81    | 51,238    | 47,648    | 40,053    | 14.14 | 2,833   |
| 1995 | 1,271,203.00 | 771,147   | 717,118   | 630,357   | 14.23 | 44,298  |
| 1996 | 198,281.39   | 117,599   | 109,360   | 100,819   | 14.32 | 7,040   |
| 1997 | 219,834.00   | 127,199   | 118,287   | 114,737   | 14.41 | 7,962   |
| 2010 | 232,392.85   | 64,415    | 59,902    | 186,435   | 15.11 | 12,339  |
| 2012 | 26,455.55    | 5,159     | 4,798     | 23,245    | 15.17 | 1,532   |
| 2013 | 1,019,249.16 | 149,441   | 138,971   | 941,433   | 15.20 | 61,936  |
| 2014 | 105,015.81   | 9,805     | 9,118     | 102,199   | 15.22 | 6,715   |
|      | 3,155,168.57 | 1,296,003 | 1,205,201 | 2,139,278 |       | 144,655 |

## BROWN CT 10

INTERIM SURVIVOR CURVE.. IOWA 45-R2.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |            |        |        |         |       |        |
|------|------------|--------|--------|---------|-------|--------|
| 1995 | 21,944.22  | 13,312 | 11,291 | 11,970  | 14.23 | 841    |
| 1997 | 1,653.00   | 956    | 811    | 941     | 14.41 | 65     |
| 2010 | 232,392.85 | 64,415 | 54,637 | 191,699 | 15.11 | 12,687 |
| 2012 | 26,455.57  | 5,159  | 4,376  | 23,667  | 15.17 | 1,560  |
|      | 282,445.64 | 83,842 | 71,115 | 228,277 |       | 15,153 |

## BROWN CT 11

INTERIM SURVIVOR CURVE.. IOWA 45-R2.5

PROBABLE RETIREMENT YEAR.. 6-2026

NET SALVAGE PERCENT.. -6

|      |            |         |        |         |       |        |
|------|------------|---------|--------|---------|-------|--------|
| 1996 | 16,452.45  | 11,302  | 8,721  | 8,718   | 10.02 | 870    |
| 1997 | 18,693.00  | 12,598  | 9,721  | 10,093  | 10.06 | 1,003  |
| 1998 | 7,567.00   | 4,997   | 3,856  | 4,165   | 10.09 | 413    |
| 2010 | 232,392.85 | 84,355  | 65,094 | 181,242 | 10.35 | 17,511 |
| 2012 | 26,455.57  | 6,985   | 5,390  | 22,653  | 10.37 | 2,184  |
|      | 301,560.87 | 120,237 | 92,783 | 226,872 |       | 21,981 |

## BROWN CT GAS PIPELINE

INTERIM SURVIVOR CURVE.. IOWA 45-R2.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1994 | 7,687,474.69 | 4,760,810 | 5,005,780 | 3,142,943 | 14.14 | 222,273 |
| 1998 | 206.00       | 116       | 122       | 96        | 14.49 | 7       |
| 1999 | 381,882.00   | 209,182   | 219,946   | 184,849   | 14.56 | 12,696  |
| 2003 | 36,567.97    | 17,310    | 18,201    | 20,561    | 14.81 | 1,388   |
| 2013 | 68,291.83    | 10,013    | 10,528    | 61,861    | 15.20 | 4,070   |
| 2015 | 33,700.20    | 1,112     | 1,169     | 34,553    | 15.25 | 2,266   |
|      | 8,208,122.69 | 4,998,543 | 5,255,746 | 3,444,864 |       | 242,700 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 31.3 3.22

CANE RUN CC 7

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2055

NET SALVAGE PERCENT.. -10

|      |               |           |           |            |       |           |
|------|---------------|-----------|-----------|------------|-------|-----------|
| 2015 | 89,873,336.88 | 1,325,722 | 1,353,524 | 97,507,147 | 30.91 | 3,154,550 |
|      | 89,873,336.88 | 1,325,722 | 1,353,524 | 97,507,147 |       | 3,154,550 |

TRIMBLE COUNTY CT 5

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 2002 | 28,175,412.09 | 13,329,500 | 12,202,878 | 17,944,813 | 14.51 | 1,236,720 |
| 2004 | 535,878.89    | 230,893    | 211,378    | 362,013    | 14.73 | 24,577    |
| 2006 | 139,712.62    | 53,454     | 48,936     | 100,556    | 14.93 | 6,735     |
| 2007 | 41,824.49     | 14,898     | 13,639     | 31,113     | 15.01 | 2,073     |
| 2010 | 35,842.85     | 9,369      | 8,577      | 29,775     | 15.25 | 1,952     |
| 2011 | 504,489.32    | 113,143    | 103,580    | 436,224    | 15.31 | 28,493    |
| 2012 | 3,518,543.10  | 643,374    | 588,995    | 3,175,846  | 15.38 | 206,492   |
| 2013 | 20,239.38     | 2,786      | 2,551      | 19,106     | 15.44 | 1,237     |
| 2014 | 84,338.50     | 7,329      | 6,710      | 83,533     | 15.50 | 5,389     |
|      | 33,056,281.24 | 14,404,746 | 13,187,243 | 22,182,978 |       | 1,513,668 |

TRIMBLE COUNTY CT 6

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 2002 | 28,160,141.31 | 13,322,276 | 12,447,622 | 17,683,729 | 14.51 | 1,218,727 |
| 2004 | 615,389.01    | 265,151    | 247,743    | 410,723    | 14.73 | 27,883    |
| 2007 | 9,593.87      | 3,417      | 3,193      | 7,073      | 15.01 | 471       |
| 2009 | 15,420.35     | 4,564      | 4,264      | 12,235     | 15.17 | 807       |
| 2010 | 17,172.22     | 4,489      | 4,194      | 14,180     | 15.25 | 930       |
| 2011 | 3,199,061.90  | 717,460    | 670,356    | 2,752,640  | 15.31 | 179,794   |
| 2012 | 823,396.88    | 150,560    | 140,675    | 740,359    | 15.38 | 48,138    |
| 2013 | 20,239.38     | 2,786      | 2,603      | 19,053     | 15.44 | 1,234     |
| 2014 | 84,314.06     | 7,326      | 6,845      | 83,371     | 15.50 | 5,379     |
|      | 32,944,728.98 | 14,478,029 | 13,527,496 | 21,723,364 |       | 1,483,363 |

TRIMBLE COUNTY CT 7  
 INTERIM SURVIVOR CURVE.. IOWA 35-R1.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |               |           |           |            |       |           |
|------|---------------|-----------|-----------|------------|-------|-----------|
| 2004 | 20,965,127.62 | 8,469,461 | 7,796,350 | 14,636,336 | 16.19 | 904,036   |
| 2006 | 404,108.42    | 143,958   | 132,517   | 299,879    | 16.45 | 18,230    |
| 2007 | 4,356.44      | 1,440     | 1,326     | 3,336      | 16.56 | 201       |
| 2011 | 447,639.13    | 91,819    | 84,522    | 394,452    | 16.95 | 23,272    |
| 2012 | 3,194,626.52  | 531,880   | 489,609   | 2,928,642  | 17.04 | 171,869   |
| 2013 | 1,199,885.22  | 149,803   | 137,897   | 1,145,980  | 17.11 | 66,977    |
| 2014 | 74,826.31     | 5,870     | 5,403     | 74,661     | 17.19 | 4,343     |
|      | 26,290,569.66 | 9,394,231 | 8,647,624 | 19,483,286 |       | 1,188,928 |

TRIMBLE COUNTY CT 8  
 INTERIM SURVIVOR CURVE.. IOWA 35-R1.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |               |           |           |            |       |           |
|------|---------------|-----------|-----------|------------|-------|-----------|
| 2004 | 20,718,538.04 | 8,369,844 | 7,408,812 | 14,760,023 | 16.19 | 911,675   |
| 2006 | 294,116.88    | 104,775   | 92,745    | 221,960    | 16.45 | 13,493    |
| 2007 | 4,356.44      | 1,440     | 1,275     | 3,387      | 16.56 | 205       |
| 2010 | 17,172.20     | 4,124     | 3,650     | 14,724     | 16.86 | 873       |
| 2011 | 447,639.11    | 91,819    | 81,276    | 397,698    | 16.95 | 23,463    |
| 2012 | 3,146,258.75  | 523,827   | 463,681   | 2,902,816  | 17.04 | 170,353   |
| 2013 | 257,690.19    | 32,172    | 28,478    | 247,251    | 17.11 | 14,451    |
| 2014 | 272,690.21    | 21,393    | 18,937    | 272,842    | 17.19 | 15,872    |
|      | 25,158,461.82 | 9,149,394 | 8,098,854 | 18,820,700 |       | 1,150,385 |

TRIMBLE COUNTY CT 9  
 INTERIM SURVIVOR CURVE.. IOWA 35-R1.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 2004 | 20,776,437.14 | 8,393,234 | 7,701,968 | 14,528,820 | 16.19 | 897,395 |
| 2006 | 294,378.88    | 104,868   | 96,231    | 218,754    | 16.45 | 13,298  |
| 2007 | 4,356.44      | 1,440     | 1,321     | 3,340      | 16.56 | 202     |
| 2009 | 193,712.50    | 52,786    | 48,439    | 158,834    | 16.77 | 9,471   |
| 2010 | 17,172.22     | 4,124     | 3,784     | 14,590     | 16.86 | 865     |
| 2011 | 447,639.11    | 91,819    | 84,257    | 394,717    | 16.95 | 23,287  |

TRIMBLE COUNTY CT 9  
 INTERIM SURVIVOR CURVE.. IOWA 35-R1.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |               |           |           |            |       |           |
|------|---------------|-----------|-----------|------------|-------|-----------|
| 2012 | 3,063,709.10  | 510,083   | 468,073   | 2,810,096  | 17.04 | 164,912   |
| 2013 | 17,078.50     | 2,132     | 1,956     | 16,318     | 17.11 | 954       |
| 2014 | 74,826.36     | 5,870     | 5,387     | 74,678     | 17.19 | 4,344     |
|      | 24,889,310.25 | 9,166,356 | 8,411,416 | 18,220,146 |       | 1,114,728 |

TRIMBLE COUNTY CT 10  
 INTERIM SURVIVOR CURVE.. IOWA 35-R1.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |               |           |           |            |       |           |
|------|---------------|-----------|-----------|------------|-------|-----------|
| 2004 | 20,640,467.03 | 8,338,305 | 7,661,757 | 14,423,543 | 16.19 | 890,892   |
| 2006 | 294,703.99    | 104,984   | 96,466    | 218,867    | 16.45 | 13,305    |
| 2007 | 170,474.64    | 56,337    | 51,766    | 130,642    | 16.56 | 7,889     |
| 2009 | 15,420.35     | 4,202     | 3,861     | 12,639     | 16.77 | 754       |
| 2011 | 447,639.11    | 91,819    | 84,369    | 394,605    | 16.95 | 23,281    |
| 2012 | 730,619.77    | 121,642   | 111,772   | 669,991    | 17.04 | 39,319    |
| 2013 | 2,340,915.97  | 292,258   | 268,545   | 2,236,235  | 17.11 | 130,698   |
| 2014 | 99,584.57     | 7,813     | 7,179     | 99,376     | 17.19 | 5,781     |
|      | 24,739,825.43 | 9,017,360 | 8,285,715 | 18,185,898 |       | 1,111,919 |

BROWN CT 5  
 INTERIM SURVIVOR CURVE.. IOWA 35-R1.5  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 2001 | 12,135,401.29 | 6,102,842 | 6,035,129 | 6,828,396 | 13.67 | 499,517 |
| 2002 | 16,181.00     | 7,828     | 7,741     | 9,411     | 13.78 | 683     |
| 2003 | 122,530.71    | 56,778    | 56,148    | 73,735    | 13.88 | 5,312   |
| 2006 | 718,680.00    | 283,055   | 279,914   | 481,886   | 14.14 | 34,080  |
| 2007 | 23,148.35     | 8,499     | 8,405     | 16,133    | 14.21 | 1,135   |
| 2010 | 16,889.40     | 4,584     | 4,533     | 13,370    | 14.41 | 928     |
| 2011 | 1,590,074.69  | 370,721   | 366,608   | 1,318,871 | 14.47 | 91,145  |
| 2012 | 99,764.48     | 19,037    | 18,826    | 86,925    | 14.53 | 5,982   |
|      | 14,722,669.92 | 6,853,344 | 6,777,304 | 8,828,726 |       | 638,782 |

## BROWN CT 6

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -6

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1999 | 23,268,758.67 | 13,304,485 | 10,642,759 | 14,022,125 | 11.98 | 1,170,461 |
| 2002 | 704,287.00    | 365,172    | 292,115    | 454,429    | 12.24 | 37,127    |
| 2006 | 3,762,739.34  | 1,610,997  | 1,288,697  | 2,699,807  | 12.50 | 215,985   |
| 2007 | 28,730.96     | 11,500     | 9,199      | 21,256     | 12.56 | 1,692     |
| 2008 | 6,186,526.42  | 2,288,578  | 1,830,720  | 4,726,998  | 12.61 | 374,861   |
| 2009 | 154,832.01    | 52,112     | 41,686     | 122,436    | 12.66 | 9,671     |
| 2010 | 116,152.53    | 34,810     | 27,846     | 95,276     | 12.71 | 7,496     |
| 2012 | 348,120.25    | 74,215     | 59,367     | 309,640    | 12.79 | 24,210    |
| 2013 | 70,233.07     | 11,359     | 9,086      | 65,361     | 12.83 | 5,094     |
| 2014 | 62,091.32     | 6,462      | 5,169      | 60,648     | 12.86 | 4,716     |
|      | 34,702,471.57 | 17,759,690 | 14,206,645 | 22,577,975 |       | 1,851,313 |

## BROWN CT 7

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -6

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1999 | 18,883,386.83 | 10,797,041 | 8,840,161  | 11,176,229 | 11.98 | 932,907   |
| 2001 | 5,754,196.00  | 3,091,749  | 2,531,394  | 3,568,054  | 12.16 | 293,425   |
| 2003 | 143,366.38    | 71,472     | 58,518     | 93,450     | 12.31 | 7,591     |
| 2004 | 35,835.80     | 17,085     | 13,988     | 23,997     | 12.38 | 1,938     |
| 2006 | 3,472,462.75  | 1,486,716  | 1,217,260  | 2,463,550  | 12.50 | 197,084   |
| 2007 | 28,730.96     | 11,500     | 9,416      | 21,039     | 12.56 | 1,675     |
| 2009 | 3,254,978.30  | 1,095,532  | 896,975    | 2,553,302  | 12.66 | 201,683   |
| 2012 | 198,456.45    | 42,308     | 34,640     | 175,724    | 12.79 | 13,739    |
| 2013 | 105,173.75    | 17,010     | 13,927     | 97,557     | 12.83 | 7,604     |
|      | 31,876,587.22 | 16,630,413 | 13,616,280 | 20,172,902 |       | 1,657,646 |

## BROWN CT 8

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2025

NET SALVAGE PERCENT.. -6

|      |               |           |           |           |      |         |
|------|---------------|-----------|-----------|-----------|------|---------|
| 1995 | 13,002,726.13 | 9,225,715 | 8,296,918 | 5,485,972 | 8.60 | 637,904 |
| 1997 | 989,546.00    | 678,441   | 610,139   | 438,780   | 8.71 | 50,377  |
| 1998 | 2,617,425.00  | 1,761,262 | 1,583,947 | 1,190,523 | 8.75 | 136,060 |
| 2006 | 1,654,779.20  | 859,212   | 772,711   | 981,355   | 9.04 | 108,557 |
| 2007 | 7,728,711.57  | 3,787,854 | 3,406,512 | 4,785,922 | 9.07 | 527,665 |

## BROWN CT 8

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2025

NET SALVAGE PERCENT.. -6

|      |               |            |            |            |      |           |
|------|---------------|------------|------------|------------|------|-----------|
| 2010 | 20,578.26     | 7,847      | 7,057      | 14,756     | 9.13 | 1,616     |
| 2011 | 483,972.65    | 161,922    | 145,621    | 367,390    | 9.15 | 40,152    |
| 2012 | 43,169.43     | 12,082     | 10,866     | 34,894     | 9.17 | 3,805     |
| 2013 | 139,017.01    | 30,110     | 27,079     | 120,279    | 9.19 | 13,088    |
|      | 26,679,925.25 | 16,524,445 | 14,860,849 | 13,419,872 |      | 1,519,224 |

## BROWN CT 9

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1994 | 13,156,279.09 | 8,042,041  | 7,607,149  | 6,338,506  | 12.70 | 499,095   |
| 1995 | 409,078.00    | 244,659    | 231,429    | 202,194    | 12.86 | 15,723    |
| 1996 | 472,854.00    | 276,115    | 261,183    | 240,042    | 13.02 | 18,436    |
| 1997 | 1,221,475.00  | 695,638    | 658,020    | 636,744    | 13.16 | 48,385    |
| 1998 | 2,439,970.00  | 1,352,102  | 1,278,984  | 1,307,384  | 13.30 | 98,300    |
| 2006 | 1,051,911.47  | 414,299    | 391,895    | 723,131    | 14.14 | 51,141    |
| 2008 | 1,524,046.02  | 515,389    | 487,518    | 1,127,971  | 14.28 | 78,990    |
| 2009 | 637,647.85    | 195,269    | 184,709    | 491,197    | 14.35 | 34,230    |
| 2012 | 43,169.43     | 8,238      | 7,793      | 37,967     | 14.53 | 2,613     |
| 2013 | 7,591,117.33  | 1,092,243  | 1,033,177  | 7,013,407  | 14.58 | 481,029   |
| 2014 | 164,063.77    | 14,991     | 14,180     | 159,727    | 14.63 | 10,918    |
|      | 28,711,611.96 | 12,850,984 | 12,156,038 | 18,278,271 |       | 1,338,860 |

## BROWN CT 10

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 1995 | 12,529,955.77 | 7,493,831 | 7,292,938 | 5,988,815 | 12.86 | 465,693 |
| 1996 | 3,189,002.00  | 1,862,163 | 1,812,242 | 1,568,100 | 13.02 | 120,438 |
| 1997 | 61,215.88     | 34,863    | 33,928    | 30,960    | 13.16 | 2,353   |
| 1999 | 66,608.00     | 35,833    | 34,872    | 35,732    | 13.43 | 2,661   |
| 2006 | 1,075,401.49  | 423,551   | 412,197   | 727,729   | 14.14 | 51,466  |
| 2010 | 831,538.26    | 225,708   | 219,657   | 661,773   | 14.41 | 45,925  |

## BROWN CT 10

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 2012 | 43,169.43     | 8,238      | 8,017      | 37,742     | 14.53 | 2,598     |
| 2014 | 70,820.51     | 6,471      | 6,298      | 68,772     | 14.63 | 4,701     |
| 2015 | 8,059,176.08  | 259,528    | 252,571    | 8,290,156  | 14.68 | 564,725   |
|      | 25,926,887.42 | 10,350,186 | 10,072,720 | 17,409,781 |       | 1,260,560 |

## BROWN CT 11

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2026

NET SALVAGE PERCENT.. -6

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1996 | 14,143,515.81 | 9,545,187  | 9,100,258  | 5,891,869  | 9.45  | 623,478   |
| 1997 | 744,351.00    | 493,014    | 470,033    | 318,979    | 9.51  | 33,541    |
| 1998 | 580,337.00    | 376,427    | 358,881    | 256,277    | 9.57  | 26,779    |
| 1999 | 2,301,040.00  | 1,458,778  | 1,390,780  | 1,048,322  | 9.63  | 108,860   |
| 2000 | 14,259,988.00 | 8,819,643  | 8,408,534  | 6,707,053  | 9.68  | 692,877   |
| 2002 | 336,087.00    | 195,989    | 186,853    | 169,399    | 9.78  | 17,321    |
| 2003 | 1,267,900.75  | 714,605    | 681,295    | 662,680    | 9.82  | 67,483    |
| 2004 | 26,608.61     | 14,424     | 13,752     | 14,453     | 9.86  | 1,466     |
| 2007 | 979,775.63    | 454,807    | 433,607    | 604,955    | 9.96  | 60,738    |
| 2012 | 43,169.43     | 11,226     | 10,703     | 35,057     | 10.09 | 3,474     |
|      | 34,682,773.23 | 22,084,100 | 21,054,696 | 15,709,044 |       | 1,636,017 |

## PADDY'S RUN GENERATOR 13

INTERIM SURVIVOR CURVE.. IOWA 35-R1.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 2001 | 13,635,667.06 | 6,857,320 | 4,733,997 | 9,719,810 | 13.67 | 711,032 |
| 2002 | 37,538.00     | 18,161    | 12,538    | 27,253    | 13.78 | 1,978   |
| 2005 | 23,907.18     | 10,010    | 6,910     | 18,431    | 14.06 | 1,311   |
| 2007 | 40,130.09     | 14,734    | 10,172    | 32,366    | 14.21 | 2,278   |
| 2009 | 1,637,901.07  | 501,581   | 346,270   | 1,389,905 | 14.35 | 96,857  |

PADDY'S RUN GENERATOR 13  
 INTERIM SURVIVOR CURVE.. IOWA 35-R1.5  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|                                                                   |                |             |             |             |       |            |
|-------------------------------------------------------------------|----------------|-------------|-------------|-------------|-------|------------|
| 2012                                                              | 4,027,492.40   | 768,531     | 530,561     | 3,738,581   | 14.53 | 257,301    |
| 2013                                                              | 42,179.90      | 6,069       | 4,190       | 40,521      | 14.58 | 2,779      |
| 2014                                                              | 114,061.15     | 10,422      | 7,195       | 113,710     | 14.63 | 7,772      |
|                                                                   | 19,558,876.85  | 8,186,828   | 5,651,832   | 15,080,577  |       | 1,081,308  |
|                                                                   | 473,814,317.68 | 178,175,828 | 159,908,236 | 347,600,667 |       | 21,701,251 |
| COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 16.0 |                |             |             |             |       | 4.58       |

## CANE RUN CC 7

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2055

NET SALVAGE PERCENT.. -10

|      |                |           |           |             |       |           |
|------|----------------|-----------|-----------|-------------|-------|-----------|
| 2015 | 113,390,206.33 | 1,612,749 | 1,903,560 | 122,825,667 | 38.16 | 3,218,702 |
|      | 113,390,206.33 | 1,612,749 | 1,903,560 | 122,825,667 |       | 3,218,702 |

## TRIMBLE COUNTY CT 5

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2002 | 3,734,423.83 | 1,812,270 | 1,673,522 | 2,322,312 | 16.23 | 143,088 |
| 2004 | 28,850.68    | 12,759    | 11,782    | 19,088    | 16.31 | 1,170   |
| 2012 | 37,125.91    | 6,962     | 6,429     | 33,296    | 16.47 | 2,022   |
|      | 3,800,400.42 | 1,831,991 | 1,691,733 | 2,374,695 |       | 146,280 |

## TRIMBLE COUNTY CT 6

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2002 | 3,732,468.71 | 1,811,322 | 1,672,704 | 2,321,037 | 16.23 | 143,009 |
| 2004 | 25,477.86    | 11,267    | 10,405    | 16,857    | 16.31 | 1,034   |
| 2012 | 37,125.91    | 6,962     | 6,429     | 33,296    | 16.47 | 2,022   |
|      | 3,795,072.48 | 1,829,551 | 1,689,538 | 2,371,190 |       | 146,065 |

## TRIMBLE COUNTY CT 7

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 2,950,282.37 | 1,220,199 | 1,149,660 | 2,007,142 | 18.22 | 110,161 |
| 2012 | 32,943.60    | 5,623     | 5,298     | 29,952    | 18.44 | 1,624   |
|      | 2,983,225.97 | 1,225,822 | 1,154,958 | 2,037,094 |       | 111,785 |

TRIMBLE COUNTY CT 8  
 INTERIM SURVIVOR CURVE.. IOWA 55-S2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 2,937,930.22 | 1,215,090 | 1,144,837 | 1,998,748 | 18.22 | 109,701 |
| 2012 | 32,943.58    | 5,623     | 5,298     | 29,952    | 18.44 | 1,624   |
|      | 2,970,873.80 | 1,220,713 | 1,150,135 | 2,028,700 |       | 111,325 |

TRIMBLE COUNTY CT 9  
 INTERIM SURVIVOR CURVE.. IOWA 55-S2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 2,957,520.12 | 1,223,192 | 1,144,963 | 2,019,584 | 18.22 | 110,844 |
| 2012 | 32,943.58    | 5,623     | 5,263     | 29,986    | 18.44 | 1,626   |
|      | 2,990,463.70 | 1,228,815 | 1,150,226 | 2,049,570 |       | 112,470 |

TRIMBLE COUNTY CT 10  
 INTERIM SURVIVOR CURVE.. IOWA 55-S2.5  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 2,954,148.53 | 1,221,798 | 1,143,822 | 2,017,117 | 18.22 | 110,709 |
| 2012 | 32,943.60    | 5,623     | 5,264     | 29,986    | 18.44 | 1,626   |
|      | 2,987,092.13 | 1,227,421 | 1,149,086 | 2,047,103 |       | 112,335 |

BROWN CT 5  
 INTERIM SURVIVOR CURVE.. IOWA 55-S2.5  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2001 | 2,786,638.61 | 1,438,135 | 1,309,373 | 1,644,464 | 15.24 | 107,904 |
| 2002 | 3,906.00     | 1,940     | 1,766     | 2,374     | 15.28 | 155     |
| 2011 | 67,603.05    | 16,148    | 14,702    | 56,957    | 15.47 | 3,682   |
| 2012 | 8,674.12     | 1,696     | 1,544     | 7,650     | 15.47 | 495     |
|      | 2,866,821.78 | 1,457,919 | 1,327,386 | 1,711,445 |       | 112,236 |

## BROWN CT 6

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1999 | 3,712,619.52 | 2,177,050 | 1,992,671 | 1,942,705 | 13.27 | 146,398 |
| 2012 | 8,674.11     | 1,894     | 1,734     | 7,461     | 13.49 | 553     |
|      | 3,721,293.63 | 2,178,944 | 1,994,405 | 1,950,166 |       | 146,951 |

## BROWN CT 7

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1999 | 3,693,120.46 | 2,165,616 | 1,955,274 | 1,959,434 | 13.27 | 147,659 |
| 2001 | 29,668.00    | 16,369    | 14,779    | 16,669    | 13.33 | 1,250   |
| 2012 | 8,674.11     | 1,894     | 1,710     | 7,485     | 13.49 | 555     |
|      | 3,731,462.57 | 2,183,879 | 1,971,763 | 1,983,587 |       | 149,464 |

## BROWN CT 8

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2025

NET SALVAGE PERCENT.. -6

|      |              |           |           |           |      |         |
|------|--------------|-----------|-----------|-----------|------|---------|
| 1995 | 4,953,960.72 | 3,599,802 | 3,435,112 | 1,816,086 | 9.34 | 194,442 |
| 2012 | 8,674.11     | 2,475     | 2,362     | 6,833     | 9.50 | 719     |
|      | 4,962,634.83 | 3,602,277 | 3,437,474 | 1,822,919 |      | 195,161 |

## BROWN CT 9

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1994 | 5,333,167.97 | 3,329,880 | 3,521,232 | 2,131,926 | 14.84 | 143,661 |
| 1995 | 118,873.00   | 72,662    | 76,838    | 49,168    | 14.91 | 3,298   |
| 2012 | 8,674.11     | 1,696     | 1,793     | 7,401     | 15.47 | 478     |
|      | 5,460,715.08 | 3,404,238 | 3,599,863 | 2,188,495 |       | 147,437 |

## BROWN CT 10

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1995 | 4,944,422.71 | 3,022,326 | 3,127,299 | 2,113,789 | 14.91 | 141,770 |
| 2012 | 8,674.11     | 1,696     | 1,755     | 7,440     | 15.47 | 481     |
|      | 4,953,096.82 | 3,024,022 | 3,129,054 | 2,121,229 |       | 142,251 |

## BROWN CT 11

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2026

NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1996 | 4,573,326.33 | 3,163,287 | 2,601,158 | 2,246,568 | 10.32 | 217,691 |
| 1997 | 119,111.00   | 80,849    | 66,482    | 59,776    | 10.34 | 5,781   |
| 2012 | 8,674.11     | 2,299     | 1,890     | 7,304     | 10.50 | 696     |
| 2013 | 1,061,783.54 | 216,443   | 177,980   | 947,510   | 10.50 | 90,239  |
|      | 5,762,894.98 | 3,462,878 | 2,847,510 | 3,261,159 |       | 314,407 |

## HAEFLING UNITS 1, 2 AND 3

INTERIM SURVIVOR CURVE.. IOWA 55-S2.5

PROBABLE RETIREMENT YEAR.. 6-2020

NET SALVAGE PERCENT.. -10

|      |              |           |           |         |      |         |
|------|--------------|-----------|-----------|---------|------|---------|
| 1970 | 2,280,419.06 | 2,279,915 | 2,019,725 | 488,736 | 4.19 | 116,643 |
| 1971 | 146,547.00   | 146,237   | 129,548   | 31,654  | 4.21 | 7,519   |
| 1975 | 18,497.00    | 18,306    | 16,217    | 4,130   | 4.27 | 967     |
| 2001 | 236,672.62   | 198,720   | 176,042   | 84,298  | 4.49 | 18,775  |
|      | 2,682,135.68 | 2,643,178 | 2,341,531 | 608,818 |      | 143,904 |

PADDY'S RUN GENERATOR 13  
 INTERIM SURVIVOR CURVE.. IOWA 55-S2.5  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|                                                                   |                |            |            |             |       |           |
|-------------------------------------------------------------------|----------------|------------|------------|-------------|-------|-----------|
| 2001                                                              | 4,940,529.59   | 2,549,719  | 2,221,371  | 3,015,590   | 15.24 | 197,873   |
| 2002                                                              | 11,002.00      | 5,464      | 4,760      | 6,902       | 15.28 | 452       |
| 2012                                                              | 26,588.67      | 5,200      | 4,530      | 23,654      | 15.47 | 1,529     |
| 2014                                                              | 472,429.16     | 44,213     | 38,519     | 462,256     | 15.49 | 29,842    |
|                                                                   | 5,450,549.42   | 2,604,596  | 2,269,181  | 3,508,401   |       | 229,696   |
|                                                                   | 172,508,939.62 | 34,738,993 | 32,807,403 | 154,890,238 |       | 5,540,469 |
| COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 28.0 |                |            |            |             |       | 3.21      |

## CANE RUN CC 7

INTERIM SURVIVOR CURVE.. IOWA 50-R3

PROBABLE RETIREMENT YEAR.. 6-2055

NET SALVAGE PERCENT.. -10

|      |               |         |         |            |       |         |
|------|---------------|---------|---------|------------|-------|---------|
| 2015 | 26,286,452.56 | 375,318 | 421,424 | 28,493,674 | 37.25 | 764,931 |
|      | 26,286,452.56 | 375,318 | 421,424 | 28,493,674 |       | 764,931 |

## TRIMBLE COUNTY CT 5

INTERIM SURVIVOR CURVE.. IOWA 50-R3

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |              |         |         |           |       |        |
|------|--------------|---------|---------|-----------|-------|--------|
| 2002 | 1,645,529.86 | 797,534 | 721,538 | 1,039,179 | 15.99 | 64,989 |
| 2004 | 12,857.15    | 5,684   | 5,142   | 8,615     | 16.08 | 536    |
| 2011 | 24,962.92    | 5,736   | 5,189   | 21,521    | 16.31 | 1,319  |
| 2012 | 68,399.27    | 12,826  | 11,604  | 61,583    | 16.33 | 3,771  |
| 2014 | 138,194.66   | 12,337  | 11,161  | 136,707   | 16.37 | 8,351  |
|      | 1,889,943.86 | 834,117 | 754,635 | 1,267,605 |       | 78,966 |

## TRIMBLE COUNTY CT 6

INTERIM SURVIVOR CURVE.. IOWA 50-R3

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2002 | 4,313,237.34 | 2,090,485 | 1,683,398 | 2,931,766 | 15.99 | 183,350 |
| 2004 | 11,354.12    | 5,019     | 4,042     | 8,107     | 16.08 | 504     |
| 2012 | 5,249.63     | 984       | 792       | 4,825     | 16.33 | 295     |
|      | 4,329,841.09 | 2,096,488 | 1,688,232 | 2,944,698 |       | 184,149 |

## TRIMBLE COUNTY CT 7

INTERIM SURVIVOR CURVE.. IOWA 50-R3

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 3,136,584.26 | 1,297,452 | 1,194,784 | 2,161,361 | 17.93 | 120,544 |
| 2009 | 2,204.23     | 617       | 568       | 1,790     | 18.16 | 99      |
| 2012 | 22,579.92    | 3,858     | 3,553     | 20,608    | 18.26 | 1,129   |
| 2013 | 50,147.90    | 6,407     | 5,900     | 47,758    | 18.29 | 2,611   |
| 2014 | 621,521.71   | 50,043    | 46,083    | 618,945   | 18.31 | 33,804  |
|      | 3,833,038.02 | 1,358,377 | 1,250,888 | 2,850,463 |       | 158,187 |

TRIMBLE COUNTY CT 8  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 3,137,127.45 | 1,297,677 | 1,228,387 | 2,128,340 | 17.93 | 118,703 |
| 2009 | 2,204.23     | 617       | 584       | 1,774     | 18.16 | 98      |
| 2012 | 5,249.63     | 897       | 849       | 4,768     | 18.26 | 261     |
|      | 3,144,581.31 | 1,299,191 | 1,229,820 | 2,134,882 |       | 119,062 |

TRIMBLE COUNTY CT 9  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 3,222,176.42 | 1,332,857 | 1,239,857 | 2,207,872 | 17.93 | 123,138 |
| 2009 | 2,204.19     | 617       | 574       | 1,785     | 18.16 | 98      |
| 2012 | 22,579.92    | 3,858     | 3,589     | 20,572    | 18.26 | 1,127   |
| 2014 | 176,314.04   | 14,196    | 13,205    | 175,451   | 18.31 | 9,582   |
|      | 3,423,274.57 | 1,351,528 | 1,257,225 | 2,405,679 |       | 133,945 |

TRIMBLE COUNTY CT 10  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2004 | 7,144,489.03 | 2,955,327 | 2,496,860 | 5,147,743 | 17.93 | 287,102 |
| 2009 | 2,204.23     | 617       | 521       | 1,837     | 18.16 | 101     |
| 2011 | 49,925.08    | 10,500    | 8,871     | 44,549    | 18.23 | 2,444   |
| 2012 | 5,249.63     | 897       | 758       | 4,859     | 18.26 | 266     |
| 2013 | 59,208.10    | 7,564     | 6,391     | 56,962    | 18.29 | 3,114   |
|      | 7,261,076.07 | 2,974,905 | 2,513,401 | 5,255,950 |       | 293,027 |

BROWN CT 5  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 2001 | 2,262,097.84 | 1,164,863 | 993,869   | 1,403,955 | 15.03 | 93,410 |
| 2002 | 3,069.00     | 1,522     | 1,299     | 1,955     | 15.07 | 130    |
| 2010 | 11,853.65    | 3,297     | 2,813     | 9,752     | 15.32 | 637    |
| 2012 | 33,212.26    | 6,488     | 5,536     | 29,669    | 15.36 | 1,932  |
|      | 2,310,232.75 | 1,176,170 | 1,003,516 | 1,445,331 |       | 96,109 |

BROWN CT 6  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2029  
 NET SALVAGE PERCENT.. -6

|      |              |           |         |           |       |        |
|------|--------------|-----------|---------|-----------|-------|--------|
| 1999 | 1,930,284.42 | 1,129,100 | 966,413 | 1,079,688 | 13.10 | 82,419 |
| 2010 | 44,931.99    | 13,810    | 11,820  | 35,808    | 13.37 | 2,678  |
| 2012 | 41,923.74    | 9,162     | 7,842   | 36,597    | 13.40 | 2,731  |
| 2013 | 9,502.80     | 1,577     | 1,350   | 8,723     | 13.41 | 650    |
|      | 2,026,642.95 | 1,153,649 | 987,425 | 1,160,817 |       | 88,478 |

BROWN CT 7  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2029  
 NET SALVAGE PERCENT.. -6

|      |              |           |         |           |       |        |
|------|--------------|-----------|---------|-----------|-------|--------|
| 1999 | 1,920,146.21 | 1,123,170 | 952,813 | 1,082,542 | 13.10 | 82,637 |
| 2010 | 15,635.77    | 4,806     | 4,077   | 12,497    | 13.37 | 935    |
| 2012 | 41,923.74    | 9,162     | 7,772   | 36,667    | 13.40 | 2,736  |
| 2013 | 9,502.80     | 1,577     | 1,338   | 8,735     | 13.41 | 651    |
|      | 1,987,208.52 | 1,138,715 | 966,000 | 1,140,441 |       | 86,959 |

BROWN CT 8  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2025  
 NET SALVAGE PERCENT.. -6

|      |              |         |         |         |      |        |
|------|--------------|---------|---------|---------|------|--------|
| 1993 | 1,248,083.99 | 930,722 | 775,317 | 547,652 | 9.20 | 59,527 |
| 1995 | 1,075,103.50 | 778,969 | 648,903 | 490,707 | 9.25 | 53,049 |
| 1997 | 302,783.00   | 212,132 | 176,712 | 144,238 | 9.29 | 15,526 |

BROWN CT 8  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2025  
 NET SALVAGE PERCENT.. -6

|      |              |           |           |           |      |         |
|------|--------------|-----------|-----------|-----------|------|---------|
| 2007 | 10,526.68    | 5,267     | 4,388     | 6,771     | 9.43 | 718     |
| 2012 | 530,214.36   | 151,466   | 126,175   | 435,852   | 9.46 | 46,073  |
| 2014 | 159,624.16   | 23,137    | 19,274    | 149,928   | 9.47 | 15,832  |
|      | 3,326,335.69 | 2,101,693 | 1,750,769 | 1,775,147 |      | 190,725 |

BROWN CT 9  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1994 | 1,895,387.28 | 1,177,720 | 1,141,993 | 867,117   | 14.62 | 59,310  |
| 1995 | 1,463,066.43 | 890,312   | 863,304   | 687,546   | 14.69 | 46,804  |
| 1996 | 293,484.00   | 174,598   | 169,301   | 141,792   | 14.76 | 9,607   |
| 1997 | 336,423.00   | 195,386   | 189,459   | 167,149   | 14.82 | 11,279  |
| 2011 | 217,486.58   | 51,928    | 50,353    | 180,183   | 15.34 | 11,746  |
| 2012 | 353,258.42   | 69,004    | 66,911    | 307,543   | 15.36 | 20,022  |
| 2014 | 148,050.77   | 13,853    | 13,433    | 143,501   | 15.39 | 9,324   |
|      | 4,707,156.48 | 2,572,801 | 2,494,754 | 2,494,832 |       | 168,092 |

BROWN CT 10  
 INTERIM SURVIVOR CURVE.. IOWA 50-R3  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1993 | 940,073.23   | 595,684   | 559,270   | 437,207   | 14.54 | 30,069  |
| 1995 | 1,483,977.47 | 903,037   | 847,835   | 725,181   | 14.69 | 49,366  |
| 1997 | 320,442.00   | 186,104   | 174,728   | 164,941   | 14.82 | 11,130  |
| 2012 | 353,258.41   | 69,004    | 64,786    | 309,668   | 15.36 | 20,161  |
| 2014 | 148,140.76   | 13,861    | 13,014    | 144,016   | 15.39 | 9,358   |
|      | 3,245,891.87 | 1,767,690 | 1,659,633 | 1,781,012 |       | 120,084 |

## BROWN CT 11

INTERIM SURVIVOR CURVE.. IOWA 50-R3

PROBABLE RETIREMENT YEAR.. 6-2026

NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1996 | 1,767,686.75 | 1,219,248 | 1,209,195 | 664,553   | 10.21 | 65,088  |
| 1997 | 35,427.00    | 23,987    | 23,789    | 13,763    | 10.23 | 1,345   |
| 2012 | 477,155.79   | 126,355   | 125,313   | 380,472   | 10.45 | 36,409  |
| 2014 | 173,988.88   | 23,131    | 22,940    | 161,488   | 10.46 | 15,439  |
|      | 2,454,258.42 | 1,392,721 | 1,381,238 | 1,220,276 |       | 118,281 |

## HAEFLING UNITS 1, 2 AND 3

INTERIM SURVIVOR CURVE.. IOWA 50-R3

PROBABLE RETIREMENT YEAR.. 6-2020

NET SALVAGE PERCENT.. -10

|      |            |         |         |         |      |         |
|------|------------|---------|---------|---------|------|---------|
| 1970 | 199,408.97 | 199,082 | 40,159  | 179,190 | 4.11 | 43,599  |
| 1971 | 41,999.00  | 41,844  | 8,441   | 37,758  | 4.14 | 9,120   |
| 1973 | 2,825.81   | 2,803   | 565     | 2,543   | 4.19 | 607     |
| 2007 | 19,643.19  | 14,116  | 2,848   | 18,760  | 4.49 | 4,178   |
| 2012 | 552,386.44 | 265,739 | 53,606  | 554,019 | 4.49 | 123,390 |
|      | 816,263.41 | 523,584 | 105,619 | 792,271 |      | 180,894 |

## PADDY'S RUN GENERATOR 13

INTERIM SURVIVOR CURVE.. IOWA 50-R3

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 2001 | 2,416,310.20  | 1,244,274  | 1,132,321  | 1,428,968  | 15.03 | 95,074    |
| 2002 | 5,178.00      | 2,568      | 2,337      | 3,152      | 15.07 | 209       |
| 2012 | 25,073.74     | 4,898      | 4,457      | 22,121     | 15.36 | 1,440     |
| 2014 | 10,513.67     | 984        | 895        | 10,249     | 15.39 | 666       |
| 2015 | 42,575.01     | 1,419      | 1,291      | 43,838     | 15.40 | 2,847     |
|      | 2,499,650.62  | 1,254,143  | 1,141,302  | 1,508,328  |       | 100,236   |
|      | 73,541,848.19 | 23,371,090 | 20,605,881 | 58,671,406 |       | 2,882,125 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.4 3.92

## CANE RUN CC 7

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2055

NET SALVAGE PERCENT.. -10

|      |           |     |    |        |       |     |
|------|-----------|-----|----|--------|-------|-----|
| 2015 | 21,065.55 | 313 | 88 | 23,084 | 33.56 | 688 |
|      | 21,065.55 | 313 | 88 | 23,084 |       | 688 |

## TRIMBLE COUNTY CT 5

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2032

NET SALVAGE PERCENT.. -7

|      |           |        |        |        |       |       |
|------|-----------|--------|--------|--------|-------|-------|
| 2006 | 15,274.16 | 5,950  | 7,024  | 9,319  | 15.46 | 603   |
| 2007 | 13,689.47 | 4,960  | 5,856  | 8,792  | 15.53 | 566   |
|      | 28,963.63 | 10,910 | 12,880 | 18,111 |       | 1,169 |

## TRIMBLE COUNTY CT 7

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |          |       |       |       |       |     |
|------|----------|-------|-------|-------|-------|-----|
| 2004 | 8,888.93 | 3,653 | 3,661 | 5,850 | 16.92 | 346 |
|      | 8,888.93 | 3,653 | 3,661 | 5,850 |       | 346 |

## TRIMBLE COUNTY CT 8

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2034

NET SALVAGE PERCENT.. -7

|      |          |       |       |       |       |     |
|------|----------|-------|-------|-------|-------|-----|
| 2004 | 8,861.01 | 3,641 | 3,649 | 5,832 | 16.92 | 345 |
|      | 8,861.01 | 3,641 | 3,649 | 5,832 |       | 345 |

TRIMBLE COUNTY CT 9  
 INTERIM SURVIVOR CURVE.. IOWA 40-R2  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |          |       |       |       |       |     |
|------|----------|-------|-------|-------|-------|-----|
| 2004 | 9,113.52 | 3,745 | 3,730 | 6,021 | 16.92 | 356 |
|      | 9,113.52 | 3,745 | 3,730 | 6,021 |       | 356 |

TRIMBLE COUNTY CT 10  
 INTERIM SURVIVOR CURVE.. IOWA 40-R2  
 PROBABLE RETIREMENT YEAR.. 6-2034  
 NET SALVAGE PERCENT.. -7

|      |           |        |        |        |       |       |
|------|-----------|--------|--------|--------|-------|-------|
| 2004 | 9,105.52  | 3,742  | 3,657  | 6,086  | 16.92 | 360   |
| 2010 | 26,747.06 | 6,536  | 6,388  | 22,232 | 17.47 | 1,273 |
| 2011 | 6,015.93  | 1,255  | 1,226  | 5,211  | 17.54 | 297   |
|      | 41,868.51 | 11,533 | 11,271 | 33,528 |       | 1,930 |

BROWN CT 5  
 INTERIM SURVIVOR CURVE.. IOWA 40-R2  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 2001 | 2,082,373.17 | 1,063,882 | 1,044,238 | 1,163,078 | 14.23 | 81,734 |
| 2002 | 2,790.00     | 1,371     | 1,346     | 1,612     | 14.32 | 113    |
| 2003 | 998.32       | 470       | 461       | 597       | 14.40 | 41     |
| 2004 | 22,748.93    | 10,223    | 10,034    | 14,080    | 14.47 | 973    |
| 2007 | 30,442.19    | 11,360    | 11,150    | 21,118    | 14.67 | 1,440  |
|      | 2,139,352.61 | 1,087,306 | 1,067,229 | 1,200,485 |       | 84,301 |

BROWN CT 6  
 INTERIM SURVIVOR CURVE.. IOWA 40-R2  
 PROBABLE RETIREMENT YEAR.. 6-2029  
 NET SALVAGE PERCENT.. -6

|      |           |       |       |       |       |     |
|------|-----------|-------|-------|-------|-------|-----|
| 1999 | 15,859.82 | 9,192 | 8,674 | 8,137 | 12.45 | 654 |
| 2001 | 2,144.00  | 1,170 | 1,104 | 1,169 | 12.58 | 93  |
| 2003 | 16,198.37 | 8,200 | 7,738 | 9,432 | 12.70 | 743 |

## BROWN CT 6

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -6

|      |            |        |        |        |       |       |
|------|------------|--------|--------|--------|-------|-------|
| 2005 | 14,757.51  | 6,792  | 6,409  | 9,234  | 12.81 | 721   |
| 2011 | 4,789.15   | 1,260  | 1,189  | 3,887  | 13.05 | 298   |
| 2015 | 48,476.11  | 1,843  | 1,739  | 49,645 | 13.17 | 3,770 |
|      | 102,224.96 | 28,457 | 26,854 | 81,504 |       | 6,279 |

## BROWN CT 7

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2029

NET SALVAGE PERCENT.. -6

|      |           |        |        |        |       |       |
|------|-----------|--------|--------|--------|-------|-------|
| 1999 | 15,776.54 | 9,144  | 9,436  | 7,288  | 12.45 | 585   |
| 2003 | 19,870.85 | 10,059 | 10,380 | 10,683 | 12.70 | 841   |
| 2015 | 48,476.09 | 1,843  | 1,902  | 49,483 | 13.17 | 3,757 |
|      | 84,123.48 | 21,046 | 21,717 | 67,454 |       | 5,183 |

## BROWN CT 8

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2025

NET SALVAGE PERCENT.. -6

|      |            |         |         |         |      |        |
|------|------------|---------|---------|---------|------|--------|
| 1994 | 34,743.72  | 25,314  | 24,732  | 12,097  | 8.82 | 1,372  |
| 1995 | 185,434.00 | 133,091 | 130,030 | 66,530  | 8.87 | 7,501  |
| 2001 | 9,891.00   | 6,280   | 6,136   | 4,349   | 9.08 | 479    |
| 2011 | 55,863.61  | 18,900  | 18,465  | 40,750  | 9.30 | 4,382  |
| 2012 | 5,293.68   | 1,497   | 1,463   | 4,149   | 9.32 | 445    |
|      | 291,226.01 | 185,082 | 180,825 | 127,875 |      | 14,179 |

## BROWN CT 9

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1994 | 196,427.37 | 121,290 | 135,915 | 72,298  | 13.48 | 5,363  |
| 1995 | 548,710.00 | 331,600 | 371,585 | 210,047 | 13.61 | 15,433 |
| 1996 | 5,227.00   | 3,088   | 3,460   | 2,080   | 13.73 | 151    |

## BROWN CT 9

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 2001 | 9,891.00   | 5,053   | 5,662   | 4,822   | 14.23 | 339    |
| 2014 | 66,684.25  | 6,231   | 6,982   | 63,703  | 15.00 | 4,247  |
| 2015 | 33,485.67  | 1,098   | 1,230   | 34,264  | 15.04 | 2,278  |
|      | 860,425.29 | 468,360 | 524,836 | 387,215 |       | 27,811 |

## BROWN CT 10

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2031

NET SALVAGE PERCENT.. -6

|      |            |         |         |         |       |       |
|------|------------|---------|---------|---------|-------|-------|
| 1995 | 228,488.31 | 138,082 | 146,888 | 95,310  | 13.61 | 7,003 |
| 1996 | 3,144.00   | 1,858   | 1,976   | 1,356   | 13.73 | 99    |
| 2001 | 9,891.00   | 5,053   | 5,375   | 5,109   | 14.23 | 359   |
| 2003 | 32,867.56  | 15,484  | 16,471  | 18,368  | 14.40 | 1,276 |
|      | 274,390.87 | 160,477 | 170,711 | 120,143 |       | 8,737 |

## BROWN CT 11

INTERIM SURVIVOR CURVE.. IOWA 40-R2

PROBABLE RETIREMENT YEAR.. 6-2026

NET SALVAGE PERCENT.. -6

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1996 | 149,568.53 | 102,155 | 95,861  | 62,682  | 9.77  | 6,416  |
| 1997 | 21,262.00  | 14,257  | 13,379  | 9,159   | 9.81  | 934    |
| 1999 | 9,687.00   | 6,221   | 5,838   | 4,431   | 9.90  | 448    |
| 2001 | 24,337.00  | 14,832  | 13,918  | 11,879  | 9.98  | 1,190  |
| 2003 | 277,131.30 | 158,272 | 148,520 | 145,239 | 10.05 | 14,452 |
| 2004 | 46,587.64  | 25,588  | 24,011  | 25,372  | 10.08 | 2,517  |
| 2005 | 20,014.16  | 10,518  | 9,870   | 11,345  | 10.11 | 1,122  |
| 2011 | 41,975.19  | 13,235  | 12,420  | 32,074  | 10.25 | 3,129  |
|      | 590,562.82 | 345,078 | 323,816 | 302,181 |       | 30,208 |

HAEFLING UNITS 1, 2 AND 3  
 INTERIM SURVIVOR CURVE.. IOWA 40-R2  
 PROBABLE RETIREMENT YEAR.. 6-2020  
 NET SALVAGE PERCENT.. -10

|      |            |        |        |        |      |        |
|------|------------|--------|--------|--------|------|--------|
| 1970 | 30,264.20  | 29,970 | 17,059 | 16,232 | 3.80 | 4,272  |
| 1971 | 5,384.33   | 5,321  | 3,029  | 2,894  | 3.84 | 754    |
| 1973 | 113.00     | 111    | 63     | 61     | 3.92 | 16     |
| 2013 | 69,229.69  | 27,033 | 15,387 | 60,765 | 4.47 | 13,594 |
|      | 104,991.22 | 62,435 | 35,538 | 79,952 |      | 18,636 |

PADDY'S RUN GENERATOR 13  
 INTERIM SURVIVOR CURVE.. IOWA 40-R2  
 PROBABLE RETIREMENT YEAR.. 6-2031  
 NET SALVAGE PERCENT.. -6

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 2001 | 1,086,962.03 | 555,328   | 545,052   | 607,128   | 14.23 | 42,665  |
| 2002 | 2,588.00     | 1,272     | 1,248     | 1,495     | 14.32 | 104     |
|      | 1,089,550.03 | 556,600   | 546,300   | 608,623   |       | 42,769  |
|      | 5,655,608.44 | 2,948,636 | 2,933,105 | 3,067,858 |       | 242,937 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.6 4.30

SURVIVOR CURVE.. IOWA 70-R3  
NET SALVAGE PERCENT.. 0

|      |              |         |           |         |       |       |
|------|--------------|---------|-----------|---------|-------|-------|
| 1941 | 686,361.06   | 567,229 | 686,361   |         |       |       |
| 1942 | 27,091.62    | 22,231  | 27,092    |         |       |       |
| 1943 | 1,077.00     | 877     | 1,077     |         |       |       |
| 1944 | 860.00       | 695     | 860       |         |       |       |
| 1945 | 5,395.00     | 4,324   | 5,395     |         |       |       |
| 1946 | 38,829.00    | 30,864  | 38,829    |         |       |       |
| 1947 | 65,530.00    | 51,638  | 65,530    |         |       |       |
| 1948 | 33,277.00    | 25,985  | 33,277    |         |       |       |
| 1949 | 228,344.00   | 176,640 | 228,344   |         |       |       |
| 1950 | 22,549.00    | 17,276  | 22,549    |         |       |       |
| 1951 | 104,789.00   | 79,475  | 104,789   |         |       |       |
| 1952 | 186,048.00   | 139,642 | 186,048   |         |       |       |
| 1953 | 409,306.00   | 303,881 | 409,306   |         |       |       |
| 1954 | 108,821.00   | 79,906  | 108,821   |         |       |       |
| 1955 | 85,914.00    | 62,362  | 85,914    |         |       |       |
| 1956 | 259,450.00   | 186,101 | 259,450   |         |       |       |
| 1957 | 32,179.00    | 22,797  | 32,179    |         |       |       |
| 1958 | 373,514.00   | 261,299 | 371,912   | 1,602   | 21.03 | 76    |
| 1959 | 226,833.00   | 156,612 | 222,909   | 3,924   | 21.67 | 181   |
| 1960 | 263,434.00   | 179,435 | 255,394   | 8,040   | 22.32 | 360   |
| 1961 | 327,284.00   | 219,840 | 312,903   | 14,381  | 22.98 | 626   |
| 1962 | 280,359.36   | 185,637 | 264,221   | 16,138  | 23.65 | 682   |
| 1963 | 465,120.00   | 303,458 | 431,918   | 33,202  | 24.33 | 1,365 |
| 1964 | 93,142.00    | 59,850  | 85,186    | 7,956   | 25.02 | 318   |
| 1965 | 287,634.00   | 181,949 | 258,972   | 28,662  | 25.72 | 1,114 |
| 1966 | 415,879.00   | 258,856 | 368,435   | 47,444  | 26.43 | 1,795 |
| 1967 | 611,565.00   | 374,455 | 532,970   | 78,595  | 27.14 | 2,896 |
| 1968 | 128,655.00   | 77,432  | 110,211   | 18,444  | 27.87 | 662   |
| 1969 | 402,094.00   | 237,754 | 338,400   | 63,694  | 28.61 | 2,226 |
| 1970 | 1,682,695.00 | 977,158 | 1,390,809 | 291,886 | 29.35 | 9,945 |
| 1971 | 970,069.00   | 552,804 | 786,817   | 183,252 | 30.11 | 6,086 |
| 1972 | 593,107.00   | 331,547 | 471,898   | 121,209 | 30.87 | 3,926 |
| 1973 | 978,038.00   | 535,965 | 762,850   | 215,188 | 31.64 | 6,801 |
| 1974 | 542,946.00   | 291,486 | 414,878   | 128,068 | 32.42 | 3,950 |
| 1975 | 172,802.00   | 90,844  | 129,300   | 43,502  | 33.20 | 1,310 |
| 1976 | 454,641.00   | 233,881 | 332,888   | 121,753 | 33.99 | 3,582 |
| 1977 | 141,182.00   | 71,015  | 101,077   | 40,105  | 34.79 | 1,153 |
| 1978 | 902,286.00   | 443,410 | 631,115   | 271,171 | 35.60 | 7,617 |
| 1979 | 881,852.00   | 423,033 | 602,112   | 279,740 | 36.42 | 7,681 |
| 1980 | 758,709.00   | 355,076 | 505,387   | 253,322 | 37.24 | 6,802 |
| 1981 | 572,541.00   | 261,159 | 371,713   | 200,828 | 38.07 | 5,275 |
| 1982 | 859,510.00   | 381,743 | 543,343   | 316,167 | 38.91 | 8,126 |
| 1983 | 315,498.00   | 136,339 | 194,054   | 121,444 | 39.75 | 3,055 |

SURVIVOR CURVE.. IOWA 70-R3

NET SALVAGE PERCENT.. 0

|      |               |            |            |            |       |         |
|------|---------------|------------|------------|------------|-------|---------|
| 1984 | 2,222,027.00  | 933,251    | 1,328,315  | 893,712    | 40.60 | 22,013  |
| 1985 | 1,379,271.00  | 562,343    | 800,394    | 578,877    | 41.46 | 13,962  |
| 1986 | 169,584.00    | 67,059     | 95,446     | 74,138     | 42.32 | 1,752   |
| 1987 | 604,324.00    | 231,456    | 329,436    | 274,888    | 43.19 | 6,365   |
| 1988 | 124,766.00    | 46,217     | 65,782     | 58,984     | 44.07 | 1,338   |
| 1989 | 125,746.00    | 44,999     | 64,048     | 61,698     | 44.95 | 1,373   |
| 1990 | 125,552.00    | 43,333     | 61,677     | 63,875     | 45.84 | 1,393   |
| 1991 | 308,966.00    | 102,710    | 146,189    | 162,777    | 46.73 | 3,483   |
| 1992 | 56,034.00     | 17,907     | 25,487     | 30,547     | 47.63 | 641     |
| 1993 | 47,759.00     | 14,641     | 20,839     | 26,920     | 48.54 | 555     |
| 1994 | 84,416.00     | 24,782     | 35,273     | 49,143     | 49.45 | 994     |
| 1995 | 414,604.00    | 116,325    | 165,568    | 249,036    | 50.36 | 4,945   |
| 1996 | 75,397.00     | 20,153     | 28,684     | 46,713     | 51.29 | 911     |
| 1997 | 64,154.96     | 16,304     | 23,206     | 40,949     | 52.21 | 784     |
| 1998 | 315,419.00    | 75,972     | 108,133    | 207,286    | 53.14 | 3,901   |
| 1999 | 347,323.37    | 78,992     | 112,431    | 234,892    | 54.08 | 4,343   |
| 2000 | 70,004.00     | 14,981     | 21,323     | 48,681     | 55.02 | 885     |
| 2003 | 349,837.18    | 60,672     | 86,356     | 263,481    | 57.86 | 4,554   |
| 2005 | 545.00        | 80         | 114        | 431        | 59.77 | 7       |
| 2009 | 353,837.52    | 32,150     | 45,760     | 308,078    | 63.64 | 4,841   |
| 2010 | 152,130.15    | 11,714     | 16,673     | 135,457    | 64.61 | 2,097   |
| 2011 | 24,821.33     | 1,564      | 2,226      | 22,595     | 65.59 | 344     |
| 2012 | 3,922,392.56  | 192,746    | 274,339    | 3,648,054  | 66.56 | 54,809  |
| 2013 | 1,801,301.84  | 63,298     | 90,093     | 1,711,209  | 67.54 | 25,336  |
| 2014 | 291,572.35    | 6,164      | 8,773      | 282,799    | 68.52 | 4,127   |
|      | 29,428,995.30 | 12,133,773 | 17,044,058 | 12,384,937 |       | 253,363 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 48.9 0.86

SURVIVOR CURVE.. IOWA 70-R3  
NET SALVAGE PERCENT.. -25

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1940 | 1,901.21   | 1,978   | 2,377   |         |       |        |
| 1941 | 42,347.02  | 43,746  | 52,934  |         |       |        |
| 1947 | 3,222.45   | 3,174   | 3,909   | 119     | 14.84 | 8      |
| 1948 | 1,400.50   | 1,367   | 1,683   | 68      | 15.34 | 4      |
| 1949 | 24,234.72  | 23,434  | 28,859  | 1,434   | 15.85 | 90     |
| 1950 | 22,123.18  | 21,187  | 26,092  | 1,562   | 16.37 | 95     |
| 1951 | 26,145.14  | 24,787  | 30,525  | 2,156   | 16.91 | 127    |
| 1952 | 2,055.05   | 1,928   | 2,374   | 195     | 17.46 | 11     |
| 1953 | 28,141.84  | 26,117  | 32,163  | 3,014   | 18.03 | 167    |
| 1954 | 46,002.37  | 42,224  | 51,998  | 5,505   | 18.60 | 296    |
| 1955 | 13,433.92  | 12,189  | 15,011  | 1,781   | 19.19 | 93     |
| 1956 | 161,112.14 | 144,455 | 177,895 | 23,495  | 19.79 | 1,187  |
| 1957 | 13,238.93  | 11,724  | 14,438  | 2,111   | 20.41 | 103    |
| 1958 | 49,232.11  | 43,052  | 53,018  | 8,522   | 21.03 | 405    |
| 1959 | 37,746.86  | 32,577  | 40,118  | 7,066   | 21.67 | 326    |
| 1960 | 37,268.81  | 31,732  | 39,078  | 7,508   | 22.32 | 336    |
| 1961 | 17,168.99  | 14,416  | 17,753  | 3,708   | 22.98 | 161    |
| 1962 | 12,553.11  | 10,390  | 12,795  | 2,896   | 23.65 | 122    |
| 1963 | 11,844.93  | 9,660   | 11,896  | 2,910   | 24.33 | 120    |
| 1964 | 42,399.73  | 34,056  | 41,940  | 11,060  | 25.02 | 442    |
| 1965 | 32,209.35  | 25,468  | 31,364  | 8,898   | 25.72 | 346    |
| 1966 | 45,936.12  | 35,740  | 44,013  | 13,407  | 26.43 | 507    |
| 1967 | 12,722.00  | 9,737   | 11,991  | 3,912   | 27.14 | 144    |
| 1968 | 13,800.95  | 10,383  | 12,787  | 4,464   | 27.87 | 160    |
| 1969 | 39,890.18  | 29,483  | 36,308  | 13,555  | 28.61 | 474    |
| 1970 | 70,548.61  | 51,210  | 63,065  | 25,121  | 29.35 | 856    |
| 1971 | 125,888.81 | 89,674  | 110,432 | 46,929  | 30.11 | 1,559  |
| 1972 | 199,094.35 | 139,117 | 171,321 | 77,547  | 30.87 | 2,512  |
| 1973 | 26,126.25  | 17,896  | 22,039  | 10,619  | 31.64 | 336    |
| 1974 | 32,497.65  | 21,808  | 26,856  | 13,766  | 32.42 | 425    |
| 1975 | 83,479.24  | 54,857  | 67,556  | 36,793  | 33.20 | 1,108  |
| 1976 | 43,600.10  | 28,036  | 34,526  | 19,974  | 33.99 | 588    |
| 1977 | 226,179.21 | 142,210 | 175,130 | 107,594 | 34.79 | 3,093  |
| 1978 | 201,284.69 | 123,647 | 152,270 | 99,336  | 35.60 | 2,790  |
| 1979 | 212,287.33 | 127,295 | 156,762 | 108,597 | 36.42 | 2,982  |
| 1980 | 195,674.53 | 114,470 | 140,968 | 103,625 | 37.24 | 2,783  |
| 1981 | 966,223.83 | 550,917 | 678,448 | 529,332 | 38.07 | 13,904 |
| 1982 | 700,284.66 | 388,781 | 478,779 | 396,577 | 38.91 | 10,192 |
| 1983 | 431,367.27 | 233,014 | 286,954 | 252,255 | 39.75 | 6,346  |
| 1984 | 212,916.21 | 111,781 | 137,657 | 128,488 | 40.60 | 3,165  |
| 1985 | 112,188.04 | 57,175  | 70,410  | 69,825  | 41.46 | 1,684  |
| 1986 | 53,056.45  | 26,225  | 32,296  | 34,025  | 42.32 | 804    |
| 1987 | 133,190.84 | 63,765  | 78,526  | 87,963  | 43.19 | 2,037  |

SURVIVOR CURVE.. IOWA 70-R3  
NET SALVAGE PERCENT.. -25

|                                                                   |               |           |           |            |       |         |
|-------------------------------------------------------------------|---------------|-----------|-----------|------------|-------|---------|
| 1988                                                              | 114,353.09    | 52,950    | 65,207    | 77,734     | 44.07 | 1,764   |
| 1989                                                              | 17,100.34     | 7,649     | 9,420     | 11,955     | 44.95 | 266     |
| 1990                                                              | 171,913.94    | 74,168    | 91,337    | 123,555    | 45.84 | 2,695   |
| 1991                                                              | 7,702.35      | 3,201     | 3,942     | 5,686      | 46.73 | 122     |
| 1992                                                              | 141,734.20    | 56,617    | 69,723    | 107,445    | 47.63 | 2,256   |
| 1993                                                              | 102,402.67    | 39,242    | 48,326    | 79,677     | 48.54 | 1,641   |
| 1994                                                              | 299,706.89    | 109,981   | 135,440   | 239,194    | 49.45 | 4,837   |
| 1995                                                              | 479,982.26    | 168,336   | 207,304   | 392,674    | 50.36 | 7,797   |
| 1996                                                              | 105,458.55    | 35,235    | 43,392    | 88,431     | 51.29 | 1,724   |
| 1997                                                              | 95,464.07     | 30,327    | 37,347    | 81,983     | 52.21 | 1,570   |
| 1998                                                              | 633,320.49    | 190,677   | 234,817   | 556,834    | 53.14 | 10,479  |
| 1999                                                              | 27,077.02     | 7,698     | 9,480     | 24,366     | 54.08 | 451     |
| 2000                                                              | 204,160.00    | 54,613    | 67,255    | 187,945    | 55.02 | 3,416   |
| 2001                                                              | 150,801.95    | 37,808    | 46,560    | 141,942    | 55.96 | 2,536   |
| 2002                                                              | 81,986.71     | 19,164    | 23,600    | 78,883     | 56.91 | 1,386   |
| 2003                                                              | 38,594.54     | 8,367     | 10,304    | 37,939     | 57.86 | 656     |
| 2004                                                              | 293,527.04    | 58,654    | 72,232    | 294,677    | 58.81 | 5,011   |
| 2005                                                              | 191,745.22    | 35,027    | 43,135    | 196,547    | 59.77 | 3,288   |
| 2007                                                              | 199,665.65    | 29,593    | 36,443    | 213,139    | 61.70 | 3,454   |
| 2008                                                              | 5,336,706.92  | 698,508   | 860,206   | 5,810,678  | 62.67 | 92,719  |
| 2009                                                              | 2,352,857.19  | 267,226   | 329,086   | 2,611,985  | 63.64 | 41,043  |
| 2010                                                              | 130,562.84    | 12,567    | 15,476    | 147,728    | 64.61 | 2,286   |
| 2011                                                              | 1,453,389.24  | 114,454   | 140,949   | 1,675,788  | 65.59 | 25,549  |
| 2012                                                              | 891,090.53    | 54,735    | 67,406    | 1,046,457  | 66.56 | 15,722  |
| 2013                                                              | 3,666,932.75  | 161,070   | 198,356   | 4,385,310  | 67.54 | 64,929  |
| 2014                                                              | 2,085,586.37  | 55,112    | 67,869    | 2,539,114  | 68.52 | 37,057  |
| 2015                                                              | 1,276,621.32  | 11,170    | 13,756    | 1,582,021  | 69.51 | 22,760  |
|                                                                   | 25,314,463.82 | 5,381,031 | 6,625,682 | 25,017,398 |       | 420,302 |
| COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 59.5 |               |           |           |            |       | 1.66    |

SURVIVOR CURVE.. IOWA 65-R4

NET SALVAGE PERCENT.. -25

|      |            |        |        |         |       |       |
|------|------------|--------|--------|---------|-------|-------|
| 1956 | 17,016.61  | 17,197 | 18,185 | 3,086   | 12.45 | 248   |
| 1958 | 9,243.36   | 9,121  | 9,645  | 1,909   | 13.69 | 139   |
| 1960 | 35.08      | 34     | 36     | 8       | 15.00 | 1     |
| 1962 | 26.03      | 24     | 25     | 8       | 16.36 |       |
| 1968 | 50.32      | 43     | 45     | 18      | 20.69 | 1     |
| 1974 | 6,614.02   | 5,032  | 5,321  | 2,947   | 25.44 | 116   |
| 1988 | 4,541.07   | 2,364  | 2,500  | 3,176   | 37.93 | 84    |
| 1997 | 77,868.93  | 27,524 | 29,106 | 68,230  | 46.62 | 1,464 |
| 2011 | 77,830.59  | 6,721  | 7,107  | 90,181  | 60.51 | 1,490 |
|      | 193,226.01 | 68,060 | 71,970 | 169,563 |       | 3,543 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 47.9 1.83

SURVIVOR CURVE.. IOWA 60-R2  
NET SALVAGE PERCENT.. -15

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1929 | 1,329.06     | 1,352     | 1,370     | 158       | 6.93  | 23      |
| 1940 | 614.96       | 585       | 593       | 114       | 10.35 | 11      |
| 1941 | 1,577.30     | 1,491     | 1,511     | 303       | 10.69 | 28      |
| 1942 | 3,185.97     | 2,990     | 3,030     | 634       | 11.04 | 57      |
| 1943 | 6,406.69     | 5,968     | 6,048     | 1,320     | 11.40 | 116     |
| 1944 | 2,571.36     | 2,377     | 2,409     | 548       | 11.76 | 47      |
| 1945 | 16,249.99    | 14,906    | 15,106    | 3,581     | 12.14 | 295     |
| 1946 | 23,097.96    | 21,020    | 21,302    | 5,261     | 12.52 | 420     |
| 1947 | 10,076.59    | 9,095     | 9,217     | 2,371     | 12.91 | 184     |
| 1948 | 18,358.68    | 16,429    | 16,650    | 4,462     | 13.31 | 335     |
| 1949 | 460,870.87   | 408,896   | 414,388   | 115,614   | 13.71 | 8,433   |
| 1950 | 679,885.12   | 597,738   | 605,766   | 176,102   | 14.13 | 12,463  |
| 1951 | 389,755.98   | 339,450   | 344,009   | 104,210   | 14.56 | 7,157   |
| 1952 | 102,589.77   | 88,504    | 89,693    | 28,285    | 14.99 | 1,887   |
| 1953 | 2,060,125.68 | 1,759,493 | 1,783,126 | 586,019   | 15.44 | 37,955  |
| 1954 | 192,644.52   | 162,833   | 165,020   | 56,521    | 15.90 | 3,555   |
| 1955 | 1,293,855.69 | 1,082,219 | 1,096,755 | 391,179   | 16.36 | 23,911  |
| 1956 | 1,178,902.86 | 975,223   | 988,322   | 367,416   | 16.84 | 21,818  |
| 1957 | 1,586,495.86 | 1,297,800 | 1,315,231 | 509,239   | 17.32 | 29,402  |
| 1958 | 15,987.39    | 12,925    | 13,099    | 5,286     | 17.82 | 297     |
| 1959 | 595,989.03   | 476,118   | 482,513   | 202,874   | 18.32 | 11,074  |
| 1960 | 350,377.01   | 276,412   | 280,125   | 122,809   | 18.84 | 6,519   |
| 1961 | 519,477.18   | 404,636   | 410,071   | 187,328   | 19.36 | 9,676   |
| 1962 | 358,532.14   | 275,560   | 279,261   | 133,051   | 19.90 | 6,686   |
| 1963 | 992,783.17   | 752,757   | 762,868   | 378,833   | 20.44 | 18,534  |
| 1964 | 1,103,159.69 | 824,612   | 835,688   | 432,946   | 21.00 | 20,616  |
| 1965 | 992,755.06   | 731,433   | 741,257   | 400,411   | 21.56 | 18,572  |
| 1966 | 768,602.09   | 557,736   | 565,227   | 318,665   | 22.14 | 14,393  |
| 1967 | 284,326.58   | 203,160   | 205,889   | 121,087   | 22.72 | 5,330   |
| 1968 | 456,958.19   | 321,344   | 325,660   | 199,842   | 23.31 | 8,573   |
| 1969 | 2,819,648.41 | 1,949,870 | 1,976,060 | 1,266,536 | 23.92 | 52,949  |
| 1970 | 1,956,880.52 | 1,330,376 | 1,348,245 | 902,168   | 24.53 | 36,778  |
| 1971 | 3,018,845.94 | 2,016,452 | 2,043,536 | 1,428,137 | 25.15 | 56,785  |
| 1972 | 1,533,551.57 | 1,005,825 | 1,019,335 | 744,249   | 25.78 | 28,869  |
| 1973 | 838,327.57   | 539,719   | 546,968   | 417,109   | 26.41 | 15,794  |
| 1974 | 1,647,063.80 | 1,039,874 | 1,053,841 | 840,282   | 27.06 | 31,053  |
| 1975 | 1,309,959.20 | 810,728   | 821,617   | 684,836   | 27.71 | 24,714  |
| 1976 | 468,961.96   | 284,214   | 288,031   | 251,275   | 28.38 | 8,854   |
| 1977 | 7,943,911.51 | 4,712,364 | 4,775,658 | 4,359,840 | 29.05 | 150,081 |
| 1978 | 2,083,272.53 | 1,208,663 | 1,224,897 | 1,170,866 | 29.73 | 39,383  |
| 1979 | 3,795,491.58 | 2,151,854 | 2,180,756 | 2,184,059 | 30.42 | 71,797  |
| 1980 | 6,499,049.23 | 3,598,686 | 3,647,021 | 3,826,886 | 31.11 | 123,011 |
| 1981 | 3,247,892.39 | 1,754,851 | 1,778,421 | 1,956,655 | 31.81 | 61,511  |

SURVIVOR CURVE.. IOWA 60-R2  
NET SALVAGE PERCENT.. -15

|      |                |            |            |             |       |           |
|------|----------------|------------|------------|-------------|-------|-----------|
| 1982 | 9,635,152.70   | 5,074,835  | 5,142,997  | 5,937,429   | 32.52 | 182,578   |
| 1983 | 1,605,263.83   | 823,340    | 834,399    | 1,011,654   | 33.24 | 30,435    |
| 1984 | 3,100,245.72   | 1,546,727  | 1,567,502  | 1,997,781   | 33.97 | 58,810    |
| 1985 | 6,924,282.01   | 3,357,726  | 3,402,825  | 4,560,099   | 34.70 | 131,415   |
| 1986 | 408,753.93     | 192,413    | 194,997    | 275,070     | 35.44 | 7,762     |
| 1987 | 322,854.77     | 147,336    | 149,315    | 221,968     | 36.19 | 6,133     |
| 1988 | 2,290,454.44   | 1,012,334  | 1,025,931  | 1,608,092   | 36.94 | 43,533    |
| 1989 | 1,656,388.49   | 707,974    | 717,483    | 1,187,364   | 37.70 | 31,495    |
| 1990 | 1,380,098.71   | 569,504    | 577,153    | 1,009,961   | 38.47 | 26,253    |
| 1991 | 1,158,687.52   | 460,815    | 467,004    | 865,487     | 39.25 | 22,051    |
| 1992 | 7,182,903.62   | 2,749,289  | 2,786,216  | 5,474,123   | 40.03 | 136,751   |
| 1993 | 2,367,410.60   | 870,744    | 882,439    | 1,840,083   | 40.81 | 45,089    |
| 1994 | 1,521,675.18   | 536,352    | 543,556    | 1,206,370   | 41.61 | 28,992    |
| 1995 | 3,696,636.77   | 1,246,304  | 1,263,044  | 2,988,088   | 42.41 | 70,457    |
| 1996 | 2,312,766.67   | 744,259    | 754,255    | 1,905,427   | 43.21 | 44,097    |
| 1997 | 3,894,099.17   | 1,192,683  | 1,208,703  | 3,269,511   | 44.02 | 74,273    |
| 1998 | 3,843,836.90   | 1,116,906  | 1,131,908  | 3,288,504   | 44.84 | 73,339    |
| 1999 | 1,059,125.44   | 290,894    | 294,801    | 923,193     | 45.67 | 20,214    |
| 2000 | 3,361,549.26   | 870,458    | 882,150    | 2,983,632   | 46.49 | 64,178    |
| 2001 | 156,600.10     | 38,030     | 38,541     | 141,549     | 47.33 | 2,991     |
| 2002 | 698,980.26     | 158,491    | 160,620    | 643,207     | 48.17 | 13,353    |
| 2003 | 13,062,138.98  | 2,751,481  | 2,788,437  | 12,233,023  | 49.01 | 249,603   |
| 2004 | 2,377,597.37   | 461,621    | 467,821    | 2,266,416   | 49.87 | 45,446    |
| 2005 | 3,340,402.36   | 594,159    | 602,139    | 3,239,324   | 50.72 | 63,867    |
| 2006 | 2,976,240.72   | 480,304    | 486,755    | 2,935,922   | 51.58 | 56,920    |
| 2007 | 2,708,418.47   | 391,920    | 397,184    | 2,717,497   | 52.45 | 51,811    |
| 2008 | 6,520,763.07   | 834,850    | 846,063    | 6,652,815   | 53.32 | 124,771   |
| 2009 | 10,938,738.65  | 1,216,065  | 1,232,399  | 11,347,150  | 54.20 | 209,357   |
| 2010 | 10,711,770.63  | 1,010,120  | 1,023,687  | 11,294,849  | 55.08 | 205,063   |
| 2011 | 7,037,833.48   | 544,936    | 552,255    | 7,541,254   | 55.96 | 134,762   |
| 2012 | 35,675,668.49  | 2,153,918  | 2,182,849  | 38,844,170  | 56.85 | 683,275   |
| 2013 | 13,590,385.40  | 586,085    | 593,957    | 15,034,986  | 57.75 | 260,346   |
| 2014 | 23,688,207.28  | 617,563    | 625,858    | 26,615,580  | 58.64 | 453,881   |
| 2015 | 14,899,307.63  | 128,507    | 130,233    | 17,003,971  | 59.55 | 285,541   |
|      | 257,735,637.27 | 69,507,481 | 70,441,066 | 225,954,917 |       | 4,908,788 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 46.0 1.90

SURVIVOR CURVE.. IOWA 45-R2

NET SALVAGE PERCENT.. -15

|      |              |         |           |
|------|--------------|---------|-----------|
| 1956 | 47,196.60    | 46,050  | 54,276    |
| 1957 | 4,105.00     | 3,972   | 4,721     |
| 1958 | 16,541.06    | 15,865  | 19,022    |
| 1959 | 668.56       | 635     | 769       |
| 1963 | 18.00        | 16      | 21        |
| 1964 | 520.00       | 470     | 598       |
| 1965 | 4,631.00     | 4,139   | 5,326     |
| 1966 | 126.37       | 112     | 145       |
| 1969 | 12,502.99    | 10,624  | 14,378    |
| 1970 | 395.87       | 332     | 455       |
| 1971 | 595.00       | 491     | 684       |
| 1972 | 279.00       | 227     | 321       |
| 1974 | 20,933.98    | 16,483  | 24,074    |
| 1975 | 119,759.61   | 92,673  | 137,724   |
| 1976 | 17,902.00    | 13,606  | 20,587    |
| 1977 | 1,712.00     | 1,277   | 1,969     |
| 1978 | 17,378.00    | 12,706  | 19,985    |
| 1979 | 4,878.00     | 3,494   | 5,610     |
| 1980 | 38,794.04    | 27,204  | 44,613    |
| 1981 | 1,017.00     | 698     | 1,170     |
| 1982 | 1,475.00     | 988     | 1,696     |
| 1984 | 158,135.22   | 100,828 | 181,856   |
| 1985 | 39,869.71    | 24,759  | 45,850    |
| 1988 | 1,170.11     | 666     | 1,346     |
| 1989 | 2,677.45     | 1,477   | 3,079     |
| 1990 | 23,387.00    | 12,473  | 26,895    |
| 1991 | 51,555.00    | 26,561  | 59,288    |
| 1992 | 424,824.23   | 210,945 | 488,548   |
| 1993 | 7,293.25     | 3,485   | 8,387     |
| 1994 | 1,060,360.12 | 486,412 | 1,219,414 |
| 1995 | 846,562.36   | 372,109 | 973,547   |
| 1996 | 69,429.47    | 29,152  | 79,844    |
| 1997 | 1,379,250.62 | 551,976 | 1,586,138 |
| 1998 | 1,310,019.29 | 498,162 | 1,506,522 |
| 1999 | 43,011.56    | 15,487  | 49,463    |
| 2001 | 142,678.00   | 45,542  | 164,080   |
| 2002 | 355,960.00   | 106,252 | 409,354   |
| 2003 | 340,447.80   | 94,398  | 391,514   |

|              |           |           |
|--------------|-----------|-----------|
| 6,568,060.27 | 2,832,746 | 7,553,269 |
|--------------|-----------|-----------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 0.0 0.00

SURVIVOR CURVE.. IOWA 70-R4  
NET SALVAGE PERCENT.. -40

|      |               |           |            |           |       |         |
|------|---------------|-----------|------------|-----------|-------|---------|
| 1941 | 411,762.97    | 507,621   | 576,468    |           |       |         |
| 1942 | 1,388.10      | 1,700     | 1,943      |           |       |         |
| 1949 | 360,382.06    | 417,972   | 497,439    | 7,096     | 12.01 | 591     |
| 1951 | 20,488.00     | 23,295    | 27,724     | 959       | 13.15 | 73      |
| 1953 | 20,743.65     | 23,075    | 27,462     | 1,579     | 14.38 | 110     |
| 1956 | 19,906.16     | 21,367    | 25,429     | 2,440     | 16.33 | 149     |
| 1958 | 986,158.80    | 1,031,518 | 1,227,636  | 152,986   | 17.70 | 8,643   |
| 1959 | 17,524.00     | 18,088    | 21,527     | 3,007     | 18.39 | 164     |
| 1960 | 16,344.36     | 16,638    | 19,801     | 3,081     | 19.10 | 161     |
| 1961 | 630,143.58    | 632,538   | 752,800    | 129,401   | 19.81 | 6,532   |
| 1962 | 252,963.20    | 250,231   | 297,806    | 56,342    | 20.54 | 2,743   |
| 1963 | 276,404.84    | 269,329   | 320,535    | 66,432    | 21.28 | 3,122   |
| 1964 | 49,946.80     | 47,919    | 57,030     | 12,896    | 22.03 | 585     |
| 1965 | 56,872.95     | 53,711    | 63,923     | 15,699    | 22.78 | 689     |
| 1966 | 72,558.00     | 67,406    | 80,222     | 21,359    | 23.55 | 907     |
| 1967 | 140,496.00    | 128,329   | 152,728    | 43,966    | 24.33 | 1,807   |
| 1969 | 503,586.20    | 443,860   | 528,249    | 176,772   | 25.93 | 6,817   |
| 1970 | 2,450,234.08  | 2,119,943 | 2,522,999  | 907,329   | 26.74 | 33,932  |
| 1971 | 1,216,527.88  | 1,032,596 | 1,228,919  | 474,220   | 27.56 | 17,207  |
| 1972 | 272,111.12    | 226,451   | 269,505    | 111,451   | 28.39 | 3,926   |
| 1973 | 977,622.68    | 797,155   | 948,715    | 419,957   | 29.23 | 14,367  |
| 1974 | 226,225.99    | 180,573   | 214,905    | 101,811   | 30.09 | 3,384   |
| 1975 | 192,029.00    | 149,975   | 178,489    | 90,352    | 30.95 | 2,919   |
| 1976 | 465,378.15    | 355,364   | 422,928    | 228,601   | 31.82 | 7,184   |
| 1977 | 971,068.22    | 724,421   | 862,152    | 497,344   | 32.70 | 15,209  |
| 1978 | 5,770,262.52  | 4,201,882 | 5,000,769  | 3,077,599 | 33.59 | 91,622  |
| 1979 | 105,174.77    | 74,716    | 88,921     | 58,324    | 34.48 | 1,692   |
| 1980 | 12,532,292.00 | 8,674,878 | 10,324,197 | 7,221,012 | 35.39 | 204,041 |
| 1981 | 138,335.27    | 93,238    | 110,965    | 82,704    | 36.30 | 2,278   |
| 1982 | 6,445,195.05  | 4,225,509 | 5,028,888  | 3,994,385 | 37.22 | 107,318 |
| 1984 | 9,911,845.74  | 6,131,507 | 7,297,266  | 6,579,318 | 39.07 | 168,398 |
| 1985 | 4,464,870.00  | 2,678,038 | 3,187,202  | 3,063,616 | 40.01 | 76,571  |
| 1986 | 1,888,194.87  | 1,097,041 | 1,305,617  | 1,337,856 | 40.95 | 32,670  |
| 1987 | 1,778,980.00  | 999,790   | 1,189,876  | 1,300,696 | 41.90 | 31,043  |
| 1988 | 11,777.06     | 6,393     | 7,608      | 8,880     | 42.86 | 207     |
| 1989 | 1,632,118.38  | 854,897   | 1,017,435  | 1,267,531 | 43.81 | 28,932  |
| 1990 | 238,275.00    | 120,187   | 143,038    | 190,547   | 44.78 | 4,255   |
| 1992 | 44,670.00     | 20,807    | 24,763     | 37,775    | 46.71 | 809     |
| 1994 | 0.01          |           |            |           |       |         |
| 1996 | 108,099.00    | 41,900    | 49,866     | 101,473   | 50.62 | 2,005   |
| 1997 | 1,549,505.00  | 570,224   | 678,639    | 1,490,668 | 51.60 | 28,889  |
| 1999 | 106,700.00    | 35,061    | 41,727     | 107,653   | 53.57 | 2,010   |
| 2000 | 30,847.86     | 9,526     | 11,337     | 31,850    | 54.56 | 584     |

SURVIVOR CURVE.. IOWA 70-R4

NET SALVAGE PERCENT.. -40

|      |              |         |         |            |       |         |
|------|--------------|---------|---------|------------|-------|---------|
| 2001 | 42,618.00    | 12,317  | 14,659  | 45,006     | 55.55 | 810     |
| 2002 | 452,193.36   | 121,733 | 144,878 | 488,193    | 56.54 | 8,634   |
| 2003 | 2,222,893.40 | 553,945 | 659,264 | 2,452,787  | 57.54 | 42,628  |
| 2004 | 831,149.91   | 190,669 | 226,920 | 936,690    | 58.53 | 16,004  |
| 2005 | 1,603.60     | 336     | 400     | 1,845      | 59.52 | 31      |
| 2009 | 1,570,011.47 | 203,778 | 242,521 | 1,955,495  | 63.51 | 30,790  |
| 2010 | 841,844.22   | 92,436  | 110,011 | 1,068,571  | 64.51 | 16,564  |
| 2011 | 61,080.35    | 5,485   | 6,528   | 78,984     | 65.51 | 1,206   |
| 2012 | 8,105,126.65 | 567,359 | 675,228 | 10,671,949 | 66.50 | 160,480 |
| 2013 | 3,112,137.44 | 155,588 | 185,170 | 4,171,822  | 67.50 | 61,805  |
| 2014 | 895,946.95   | 26,880  | 31,990  | 1,222,336  | 68.50 | 17,844  |
| 2015 | 900,683.97   | 9,003   | 10,715  | 1,250,243  | 69.50 | 17,989  |

|               |            |            |            |           |
|---------------|------------|------------|------------|-----------|
| 76,403,298.64 | 41,316,198 | 49,143,732 | 57,820,886 | 1,289,330 |
|---------------|------------|------------|------------|-----------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 44.8 1.69

SURVIVOR CURVE.. IOWA 58-R2

NET SALVAGE PERCENT.. -75

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 1941 | 49,501.34    | 72,439    | 79,128    | 7,499     | 9.50  | 789    |
| 1942 | 23,167.41    | 33,672    | 36,781    | 3,762     | 9.83  | 383    |
| 1943 | 8,711.34     | 12,572    | 13,733    | 1,512     | 10.17 | 149    |
| 1944 | 278.28       | 399       | 436       | 51        | 10.52 | 5      |
| 1945 | 3,917.29     | 5,571     | 6,085     | 770       | 10.87 | 71     |
| 1946 | 2,071.16     | 2,923     | 3,193     | 432       | 11.23 | 38     |
| 1947 | 43,007.56    | 60,211    | 65,771    | 9,492     | 11.60 | 818    |
| 1948 | 9,448.45     | 13,120    | 14,331    | 2,204     | 11.98 | 184    |
| 1949 | 72,294.42    | 99,555    | 108,748   | 17,767    | 12.36 | 1,437  |
| 1950 | 4,479.31     | 6,114     | 6,679     | 1,160     | 12.76 | 91     |
| 1951 | 143,235.10   | 193,744   | 211,634   | 39,027    | 13.17 | 2,963  |
| 1952 | 78,634.67    | 105,391   | 115,122   | 22,489    | 13.58 | 1,656  |
| 1953 | 210,762.63   | 279,743   | 305,574   | 63,261    | 14.01 | 4,515  |
| 1954 | 14,385.25    | 18,907    | 20,653    | 4,521     | 14.44 | 313    |
| 1955 | 245,747.30   | 319,653   | 349,169   | 80,889    | 14.89 | 5,432  |
| 1956 | 178,925.18   | 230,305   | 251,571   | 61,548    | 15.34 | 4,012  |
| 1957 | 52,287.22    | 66,560    | 72,706    | 18,797    | 15.81 | 1,189  |
| 1958 | 373,755.56   | 470,481   | 513,924   | 140,148   | 16.28 | 8,609  |
| 1959 | 410,130.07   | 510,204   | 557,315   | 160,413   | 16.77 | 9,565  |
| 1960 | 320,076.26   | 393,348   | 429,668   | 130,465   | 17.27 | 7,554  |
| 1961 | 369,663.62   | 448,711   | 490,144   | 156,767   | 17.77 | 8,822  |
| 1962 | 231,678.89   | 277,587   | 303,218   | 102,220   | 18.29 | 5,589  |
| 1963 | 537,569.39   | 635,493   | 694,172   | 246,574   | 18.82 | 13,102 |
| 1964 | 333,354.15   | 388,746   | 424,642   | 158,728   | 19.35 | 8,203  |
| 1965 | 602,793.34   | 692,956   | 756,941   | 297,947   | 19.90 | 14,972 |
| 1966 | 565,212.28   | 640,199   | 699,313   | 289,808   | 20.46 | 14,165 |
| 1967 | 792,125.50   | 883,590   | 965,178   | 421,042   | 21.03 | 20,021 |
| 1968 | 245,101.70   | 269,191   | 294,047   | 134,881   | 21.60 | 6,244  |
| 1969 | 1,649,051.79 | 1,781,747 | 1,946,268 | 939,573   | 22.19 | 42,342 |
| 1970 | 803,293.08   | 853,396   | 932,196   | 473,567   | 22.79 | 20,780 |
| 1971 | 601,618.65   | 628,246   | 686,256   | 366,577   | 23.39 | 15,672 |
| 1972 | 1,122,083.06 | 1,150,755 | 1,257,012 | 706,633   | 24.01 | 29,431 |
| 1973 | 2,519,769.01 | 2,537,017 | 2,771,277 | 1,638,319 | 24.63 | 66,517 |
| 1974 | 1,134,205.72 | 1,120,076 | 1,223,500 | 761,360   | 25.27 | 30,129 |
| 1975 | 1,011,951.71 | 979,812   | 1,070,285 | 700,630   | 25.91 | 27,041 |
| 1976 | 1,561,506.76 | 1,481,280 | 1,618,057 | 1,114,580 | 26.56 | 41,965 |
| 1977 | 638,078.25   | 592,588   | 647,306   | 469,331   | 27.22 | 17,242 |
| 1978 | 1,361,062.08 | 1,236,518 | 1,350,694 | 1,031,165 | 27.89 | 36,973 |
| 1979 | 1,340,209.40 | 1,190,062 | 1,299,948 | 1,045,418 | 28.57 | 36,591 |
| 1980 | 1,185,133.59 | 1,028,053 | 1,122,980 | 951,004   | 29.25 | 32,513 |
| 1981 | 1,960,635.57 | 1,659,355 | 1,812,574 | 1,618,538 | 29.95 | 54,041 |
| 1982 | 1,408,631.89 | 1,162,421 | 1,269,755 | 1,195,351 | 30.65 | 39,000 |
| 1983 | 1,440,317.61 | 1,157,716 | 1,264,616 | 1,255,940 | 31.36 | 40,049 |

SURVIVOR CURVE.. IOWA 58-R2

NET SALVAGE PERCENT.. -75

|      |               |           |           |            |       |           |
|------|---------------|-----------|-----------|------------|-------|-----------|
| 1984 | 2,273,009.79  | 1,777,664 | 1,941,808 | 2,035,959  | 32.08 | 63,465    |
| 1985 | 1,580,351.03  | 1,201,604 | 1,312,556 | 1,453,058  | 32.80 | 44,301    |
| 1986 | 3,527,168.76  | 2,604,197 | 2,844,660 | 3,327,885  | 33.53 | 99,251    |
| 1987 | 590,855.70    | 423,050   | 462,113   | 571,884    | 34.27 | 16,688    |
| 1988 | 2,372,872.15  | 1,645,272 | 1,797,191 | 2,355,335  | 35.02 | 67,257    |
| 1989 | 2,317,960.70  | 1,554,019 | 1,697,512 | 2,358,919  | 35.78 | 65,928    |
| 1990 | 1,505,268.28  | 974,661   | 1,064,658 | 1,569,561  | 36.54 | 42,955    |
| 1991 | 1,468,700.81  | 916,851   | 1,001,510 | 1,568,716  | 37.31 | 42,045    |
| 1992 | 2,489,377.34  | 1,496,209 | 1,634,364 | 2,722,046  | 38.08 | 71,482    |
| 1993 | 707,926.13    | 408,827   | 446,577   | 792,294    | 38.86 | 20,388    |
| 1994 | 1,419,981.90  | 786,194   | 858,789   | 1,626,179  | 39.65 | 41,013    |
| 1995 | 2,994,768.95  | 1,585,827 | 1,732,257 | 3,508,589  | 40.45 | 86,739    |
| 1996 | 3,231,991.65  | 1,633,392 | 1,784,214 | 3,871,771  | 41.25 | 93,861    |
| 1997 | 2,553,646.78  | 1,228,183 | 1,341,589 | 3,127,293  | 42.06 | 74,353    |
| 1998 | 2,053,898.99  | 937,615   | 1,024,191 | 2,570,132  | 42.87 | 59,952    |
| 1999 | 3,471,370.10  | 1,498,799 | 1,637,193 | 4,437,705  | 43.69 | 101,573   |
| 2000 | 1,032,772.53  | 420,047   | 458,833   | 1,348,519  | 44.52 | 30,290    |
| 2001 | 3,399,636.14  | 1,297,556 | 1,417,368 | 4,531,995  | 45.35 | 99,934    |
| 2002 | 1,384,479.67  | 493,339   | 538,892   | 1,883,947  | 46.19 | 40,787    |
| 2003 | 6,370,205.61  | 2,108,506 | 2,303,199 | 8,844,661  | 47.03 | 188,064   |
| 2004 | 1,508,743.00  | 460,680   | 503,218   | 2,137,082  | 47.88 | 44,634    |
| 2005 | 6,460,010.00  | 1,806,881 | 1,973,722 | 9,331,296  | 48.73 | 191,490   |
| 2006 | 2,936,712.52  | 745,191   | 814,000   | 4,325,247  | 49.59 | 87,220    |
| 2007 | 8,318,033.57  | 1,892,353 | 2,067,087 | 12,489,472 | 50.46 | 247,512   |
| 2008 | 1,876,246.58  | 378,153   | 413,070   | 2,870,362  | 51.32 | 55,931    |
| 2009 | 15,459,085.06 | 2,705,340 | 2,955,142 | 24,098,257 | 52.20 | 461,652   |
| 2010 | 8,925,672.90  | 1,325,038 | 1,447,388 | 14,172,540 | 53.08 | 267,003   |
| 2011 | 5,709,054.76  | 695,962   | 760,225   | 9,230,621  | 53.96 | 171,064   |
| 2012 | 45,400,179.38 | 4,314,947 | 4,713,375 | 74,736,939 | 54.85 | 1,362,570 |
| 2013 | 11,920,916.11 | 809,222   | 883,943   | 19,977,660 | 55.75 | 358,344   |
| 2014 | 12,994,487.43 | 533,261   | 582,500   | 22,157,853 | 56.64 | 391,205   |
| 2015 | 34,884,598.58 | 473,733   | 517,476   | 60,530,572 | 57.55 | 1,051,791 |

|                |            |            |             |           |
|----------------|------------|------------|-------------|-----------|
| 228,799,845.74 | 66,823,000 | 72,993,220 | 327,406,510 | 6,711,919 |
|----------------|------------|------------|-------------|-----------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 48.8 2.93

SURVIVOR CURVE.. IOWA 65-R3  
NET SALVAGE PERCENT.. -75

|      |               |           |            |           |       |         |
|------|---------------|-----------|------------|-----------|-------|---------|
| 1941 | 624,600.94    | 936,833   | 1,005,979  | 87,073    | 9.29  | 9,373   |
| 1942 | 70,238.60     | 104,707   | 112,435    | 10,483    | 9.63  | 1,089   |
| 1943 | 16,512.85     | 24,456    | 26,261     | 2,636     | 9.99  | 264     |
| 1944 | 222.83        | 328       | 352        | 38        | 10.36 | 4       |
| 1945 | 6,864.73      | 10,027    | 10,767     | 1,246     | 10.75 | 116     |
| 1946 | 20,588.38     | 29,849    | 32,052     | 3,978     | 11.15 | 357     |
| 1947 | 214,275.52    | 308,292   | 331,047    | 43,935    | 11.56 | 3,801   |
| 1948 | 47,452.06     | 67,723    | 72,722     | 10,319    | 11.99 | 861     |
| 1949 | 1,225,264.33  | 1,734,175 | 1,862,172  | 282,041   | 12.43 | 22,690  |
| 1950 | 88,276.76     | 123,873   | 133,016    | 21,468    | 12.88 | 1,667   |
| 1951 | 478,658.06    | 665,615   | 714,743    | 122,909   | 13.35 | 9,207   |
| 1952 | 253,646.28    | 349,370   | 375,156    | 68,725    | 13.84 | 4,966   |
| 1953 | 1,162,064.09  | 1,585,282 | 1,702,289  | 331,323   | 14.33 | 23,121  |
| 1954 | 174,476.23    | 235,577   | 252,965    | 52,368    | 14.85 | 3,526   |
| 1955 | 608,653.13    | 813,109   | 873,123    | 192,020   | 15.38 | 12,485  |
| 1956 | 937,573.94    | 1,238,901 | 1,330,342  | 310,412   | 15.92 | 19,498  |
| 1957 | 123,937.58    | 161,900   | 173,850    | 43,041    | 16.48 | 2,612   |
| 1958 | 1,887,154.10  | 2,436,236 | 2,616,051  | 686,469   | 17.05 | 40,262  |
| 1959 | 772,716.10    | 985,482   | 1,058,219  | 294,034   | 17.63 | 16,678  |
| 1960 | 576,221.76    | 725,576   | 779,130    | 229,258   | 18.23 | 12,576  |
| 1961 | 1,158,183.34  | 1,439,347 | 1,545,583  | 481,238   | 18.84 | 25,543  |
| 1962 | 577,895.63    | 708,549   | 760,846    | 250,471   | 19.46 | 12,871  |
| 1963 | 1,448,584.98  | 1,751,118 | 1,880,365  | 654,659   | 20.10 | 32,570  |
| 1964 | 971,917.59    | 1,157,892 | 1,243,354  | 457,502   | 20.75 | 22,048  |
| 1965 | 1,262,198.14  | 1,481,297 | 1,590,629  | 618,218   | 21.41 | 28,875  |
| 1966 | 1,602,269.72  | 1,851,491 | 1,988,147  | 815,825   | 22.08 | 36,949  |
| 1967 | 916,997.36    | 1,042,844 | 1,119,815  | 484,930   | 22.76 | 21,306  |
| 1968 | 297,658.29    | 332,976   | 357,552    | 163,350   | 23.45 | 6,966   |
| 1969 | 2,269,124.29  | 2,494,999 | 2,679,151  | 1,291,817 | 24.16 | 53,469  |
| 1970 | 3,221,341.14  | 3,480,385 | 3,737,267  | 1,900,080 | 24.87 | 76,400  |
| 1971 | 1,738,361.40  | 1,844,475 | 1,980,613  | 1,061,519 | 25.59 | 41,482  |
| 1972 | 1,856,575.22  | 1,932,899 | 2,075,563  | 1,173,444 | 26.33 | 44,567  |
| 1973 | 3,238,666.32  | 3,307,310 | 3,551,417  | 2,116,249 | 27.07 | 78,177  |
| 1974 | 991,690.21    | 992,682   | 1,065,950  | 669,508   | 27.82 | 24,066  |
| 1975 | 1,317,277.75  | 1,291,647 | 1,386,981  | 918,255   | 28.58 | 32,129  |
| 1976 | 2,506,725.98  | 2,405,968 | 2,583,549  | 1,803,221 | 29.35 | 61,439  |
| 1977 | 1,621,233.45  | 1,522,022 | 1,634,360  | 1,202,799 | 30.13 | 39,920  |
| 1978 | 6,122,982.85  | 5,619,704 | 6,034,486  | 4,680,734 | 30.91 | 151,431 |
| 1979 | 2,003,773.68  | 1,795,907 | 1,928,460  | 1,578,144 | 31.71 | 49,768  |
| 1980 | 11,194,599.03 | 9,792,336 | 10,515,093 | 9,075,455 | 32.51 | 279,159 |
| 1981 | 4,221,188.75  | 3,600,315 | 3,866,049  | 3,521,031 | 33.32 | 105,673 |
| 1982 | 6,044,678.61  | 5,022,206 | 5,392,887  | 5,185,301 | 34.14 | 151,883 |
| 1983 | 1,731,795.63  | 1,400,611 | 1,503,988  | 1,526,654 | 34.96 | 43,669  |

SURVIVOR CURVE.. IOWA 65-R3  
NET SALVAGE PERCENT.. -75

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 1984 | 7,376,631.79  | 5,799,158 | 6,227,185 | 6,681,921  | 35.80 | 186,646 |
| 1985 | 3,673,869.95  | 2,805,156 | 3,012,200 | 3,417,072  | 36.64 | 93,261  |
| 1986 | 5,144,212.24  | 3,810,074 | 4,091,290 | 4,911,081  | 37.49 | 130,997 |
| 1987 | 8,070,624.52  | 5,792,792 | 6,220,349 | 7,903,244  | 38.34 | 206,136 |
| 1988 | 1,683,670.65  | 1,169,053 | 1,255,339 | 1,691,085  | 39.21 | 43,129  |
| 1989 | 828,642.35    | 555,949   | 596,983   | 853,141    | 40.08 | 21,286  |
| 1990 | 1,292,730.03  | 837,043   | 898,824   | 1,363,454  | 40.95 | 33,296  |
| 1991 | 835,854.17    | 521,410   | 559,894   | 902,851    | 41.83 | 21,584  |
| 1992 | 2,015,043.28  | 1,208,719 | 1,297,933 | 2,228,393  | 42.72 | 52,163  |
| 1993 | 310,447.57    | 178,697   | 191,886   | 351,397    | 43.62 | 8,056   |
| 1994 | 1,172,361.60  | 646,428   | 694,140   | 1,357,493  | 44.52 | 30,492  |
| 1995 | 2,831,606.29  | 1,491,945 | 1,602,063 | 3,353,248  | 45.43 | 73,811  |
| 1996 | 2,053,849.85  | 1,031,834 | 1,107,992 | 2,486,245  | 46.34 | 53,652  |
| 1997 | 1,059,699.88  | 506,123   | 543,479   | 1,310,996  | 47.26 | 27,740  |
| 1998 | 1,575,075.94  | 713,269   | 765,914   | 1,990,469  | 48.18 | 41,313  |
| 1999 | 1,525,005.27  | 652,405   | 700,558   | 1,968,201  | 49.11 | 40,077  |
| 2000 | 1,770,196.87  | 712,504   | 765,093   | 2,332,752  | 50.05 | 46,608  |
| 2001 | 2,885,029.66  | 1,088,219 | 1,168,539 | 3,880,263  | 50.99 | 76,099  |
| 2002 | 715,884.24    | 251,913   | 270,506   | 982,291    | 51.93 | 18,916  |
| 2003 | 4,336,663.35  | 1,415,075 | 1,519,520 | 6,069,641  | 52.88 | 114,781 |
| 2004 | 838,350.06    | 252,123   | 270,732   | 1,196,381  | 53.83 | 22,225  |
| 2005 | 2,753,852.53  | 757,729   | 813,656   | 4,005,586  | 54.78 | 73,121  |
| 2006 | 1,458,250.35  | 363,549   | 390,382   | 2,161,556  | 55.74 | 38,779  |
| 2007 | 2,832,666.14  | 632,237   | 678,901   | 4,278,265  | 56.71 | 75,441  |
| 2008 | 835,594.27    | 164,902   | 177,073   | 1,285,217  | 57.67 | 22,286  |
| 2009 | 5,328,616.25  | 912,459   | 979,806   | 8,345,272  | 58.64 | 142,314 |
| 2010 | 6,679,746.54  | 969,298   | 1,040,841 | 10,648,715 | 59.61 | 178,640 |
| 2011 | 4,002,620.29  | 475,261   | 510,339   | 6,494,247  | 60.59 | 107,183 |
| 2012 | 12,390,049.23 | 1,147,442 | 1,232,133 | 20,450,453 | 61.56 | 332,204 |
| 2013 | 4,896,967.54  | 324,363   | 348,304   | 8,221,389  | 62.54 | 131,458 |
| 2014 | 4,262,613.58  | 169,854   | 182,391   | 7,277,183  | 63.52 | 114,565 |
| 2015 | 13,501,170.31 | 178,148   | 191,297   | 23,435,751 | 64.51 | 363,289 |

178,542,714.22 106,341,422 114,190,318 198,259,432 4,527,061

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 43.8 2.54

SURVIVOR CURVE.. IOWA 50-R4

NET SALVAGE PERCENT.. 0

|      |            |         |         |         |       |       |
|------|------------|---------|---------|---------|-------|-------|
| 1962 | 16,102.50  | 14,212  | 15,803  | 300     | 5.87  | 51    |
| 1969 | 629.49     | 514     | 572     | 57      | 9.14  | 6     |
| 1972 | 1,023.52   | 798     | 887     | 137     | 11.00 | 12    |
| 1973 | 66,872.27  | 51,264  | 57,005  | 9,867   | 11.67 | 846   |
| 1974 | 1,183.38   | 891     | 991     | 192     | 12.35 | 16    |
| 1980 | 26,278.29  | 17,496  | 19,455  | 6,823   | 16.71 | 408   |
| 1984 | 275.00     | 165     | 183     | 92      | 19.92 | 5     |
| 1997 | 318,959.12 | 116,675 | 129,741 | 189,218 | 31.71 | 5,967 |
| 1998 | 449.82     | 156     | 173     | 277     | 32.67 | 8     |
| 1999 | 702.00     | 230     | 256     | 446     | 33.64 | 13    |
| 2002 | 3,451.41   | 926     | 1,030   | 2,421   | 36.58 | 66    |
| 2003 | 12,833.46  | 3,193   | 3,550   | 9,283   | 37.56 | 247   |
|      | 448,760.26 | 206,520 | 229,646 | 219,114 |       | 7,645 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 28.7 1.70

SURVIVOR CURVE.. IOWA 40-R3

NET SALVAGE PERCENT.. 0

|      |              |         |         |         |       |       |
|------|--------------|---------|---------|---------|-------|-------|
| 1962 | 13,218.53    | 12,062  | 13,219  |         |       |       |
| 1969 | 87,624.88    | 75,576  | 87,625  |         |       |       |
| 1972 | 15,875.19    | 13,268  | 15,875  |         |       |       |
| 1973 | 78,405.34    | 64,743  | 78,405  |         |       |       |
| 1974 | 136,383.31   | 111,186 | 136,383 |         |       |       |
| 1980 | 204,862.86   | 151,496 | 204,863 |         |       |       |
| 1982 | 13,871.63    | 9,842   | 13,872  |         |       |       |
| 1984 | 2,212.12     | 1,499   | 2,210   | 2       | 12.89 |       |
| 1988 | 123,767.49   | 75,282  | 110,986 | 12,781  | 15.67 | 816   |
| 1992 | 116,241.28   | 61,928  | 91,298  | 24,943  | 18.69 | 1,335 |
| 1997 | 313,023.53   | 134,757 | 198,667 | 114,357 | 22.78 | 5,020 |
| 2009 | 55,822.59    | 8,820   | 13,003  | 42,820  | 33.68 | 1,271 |
| 2015 | 11,994.57    | 147     | 217     | 11,778  | 39.51 | 298   |
|      | 1,173,303.32 | 720,606 | 966,623 | 206,680 |       | 8,740 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 23.6 0.74

SURVIVOR CURVE.. IOWA 70-R4  
NET SALVAGE PERCENT.. 0

|      |            |         |         |        |       |     |
|------|------------|---------|---------|--------|-------|-----|
| 1941 | 373,772.94 | 329,133 | 373,773 |        |       |     |
| 1942 | 41,173.38  | 36,027  | 41,173  |        |       |     |
| 1943 | 911.00     | 792     | 911     |        |       |     |
| 1944 | 850.00     | 734     | 850     |        |       |     |
| 1945 | 2,100.00   | 1,799   | 2,100   |        |       |     |
| 1946 | 3,262.00   | 2,774   | 3,262   |        |       |     |
| 1947 | 4,434.00   | 3,739   | 4,434   |        |       |     |
| 1948 | 3,258.00   | 2,724   | 3,258   |        |       |     |
| 1949 | 4,314.00   | 3,574   | 4,314   |        |       |     |
| 1950 | 59,904.00  | 49,147  | 59,904  |        |       |     |
| 1951 | 18,663.00  | 15,157  | 18,663  |        |       |     |
| 1952 | 27,550.00  | 22,134  | 27,550  |        |       |     |
| 1953 | 33,233.00  | 26,406  | 33,233  |        |       |     |
| 1954 | 24,267.00  | 19,060  | 24,267  |        |       |     |
| 1955 | 40,298.35  | 31,277  | 40,298  |        |       |     |
| 1956 | 21,633.00  | 16,586  | 21,633  |        |       |     |
| 1957 | 19,771.00  | 14,967  | 19,771  |        |       |     |
| 1958 | 27,040.00  | 20,203  | 27,040  |        |       |     |
| 1959 | 19,357.00  | 14,272  | 19,357  |        |       |     |
| 1960 | 33,627.00  | 24,452  | 33,627  |        |       |     |
| 1961 | 18,106.00  | 12,982  | 18,106  |        |       |     |
| 1962 | 10,562.32  | 7,463   | 10,562  |        |       |     |
| 1963 | 21,516.00  | 14,975  | 21,338  | 178    | 21.28 | 8   |
| 1964 | 20,398.00  | 13,979  | 19,919  | 479    | 22.03 | 22  |
| 1965 | 35,563.00  | 23,990  | 34,184  | 1,379  | 22.78 | 61  |
| 1966 | 5,187.00   | 3,442   | 4,905   | 282    | 23.55 | 12  |
| 1967 | 19,695.00  | 12,850  | 18,310  | 1,385  | 24.33 | 57  |
| 1968 | 15,350.00  | 9,841   | 14,023  | 1,327  | 25.12 | 53  |
| 1969 | 41,542.00  | 26,154  | 37,267  | 4,275  | 25.93 | 165 |
| 1970 | 24,874.00  | 15,372  | 21,904  | 2,970  | 26.74 | 111 |
| 1971 | 46,508.00  | 28,197  | 40,178  | 6,330  | 27.56 | 230 |
| 1972 | 16,301.00  | 9,690   | 13,807  | 2,494  | 28.39 | 88  |
| 1973 | 8,970.00   | 5,224   | 7,444   | 1,526  | 29.23 | 52  |
| 1974 | 43,465.00  | 24,781  | 35,311  | 8,154  | 30.09 | 271 |
| 1975 | 27,337.00  | 15,250  | 21,730  | 5,607  | 30.95 | 181 |
| 1976 | 6,205.00   | 3,384   | 4,822   | 1,383  | 31.82 | 43  |
| 1977 | 15,472.00  | 8,244   | 11,747  | 3,725  | 32.70 | 114 |
| 1978 | 17,820.00  | 9,269   | 13,207  | 4,613  | 33.59 | 137 |
| 1979 | 31,886.00  | 16,180  | 23,055  | 8,831  | 34.48 | 256 |
| 1980 | 10,670.00  | 5,276   | 7,518   | 3,152  | 35.39 | 89  |
| 1981 | 1,808.00   | 870     | 1,240   | 568    | 36.30 | 16  |
| 1982 | 61,168.00  | 28,644  | 40,815  | 20,353 | 37.22 | 547 |
| 1984 | 14,670.00  | 6,482   | 9,236   | 5,434  | 39.07 | 139 |

SURVIVOR CURVE.. IOWA 70-R4

NET SALVAGE PERCENT.. 0

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1985 | 33,531.00    | 14,366    | 20,470    | 13,061  | 40.01 | 326    |
| 1986 | 779.00       | 323       | 460       | 319     | 40.95 | 8      |
| 1987 | 16,266.00    | 6,530     | 9,305     | 6,961   | 41.90 | 166    |
| 1988 | 4,886.00     | 1,894     | 2,699     | 2,187   | 42.86 | 51     |
| 1989 | 7,350.00     | 2,750     | 3,919     | 3,431   | 43.81 | 78     |
| 1990 | 38,364.00    | 13,822    | 19,695    | 18,669  | 44.78 | 417    |
| 1991 | 12,981.00    | 4,499     | 6,411     | 6,570   | 45.74 | 144    |
| 1992 | 5,140.00     | 1,710     | 2,437     | 2,703   | 46.71 | 58     |
| 1993 | 38,715.00    | 12,345    | 17,590    | 21,125  | 47.68 | 443    |
| 1994 | 23,233.00    | 7,083     | 10,093    | 13,140  | 48.66 | 270    |
| 1995 | 54,744.00    | 15,923    | 22,689    | 32,055  | 49.64 | 646    |
| 1996 | 143,362.00   | 39,691    | 56,556    | 86,806  | 50.62 | 1,715  |
| 1997 | 100,670.04   | 26,462    | 37,706    | 62,964  | 51.60 | 1,220  |
| 1998 | 11,034.00    | 2,744     | 3,910     | 7,124   | 52.59 | 135    |
| 1999 | 28,534.63    | 6,697     | 9,543     | 18,992  | 53.57 | 355    |
| 2000 | 5,450.00     | 1,202     | 1,713     | 3,737   | 54.56 | 68     |
| 2001 | 1,400.00     | 289       | 412       | 988     | 55.55 | 18     |
| 2003 | 113.00       | 20        | 28        | 85      | 57.54 | 1      |
| 2004 | 74,362.56    | 12,185    | 17,362    | 57,001  | 58.53 | 974    |
| 2009 | 58,265.05    | 5,402     | 7,697     | 50,568  | 63.51 | 796    |
| 2010 | 3,796.63     | 298       | 425       | 3,372   | 64.51 | 52     |
| 2011 | 22,282.80    | 1,429     | 2,036     | 20,247  | 65.51 | 309    |
| 2012 | 209,177.61   | 10,459    | 14,903    | 194,275 | 66.50 | 2,921  |
|      | 2,168,929.31 | 1,125,619 | 1,458,105 | 710,824 |       | 13,823 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 51.4 0.64

SURVIVOR CURVE.. IOWA 60-R2.5  
NET SALVAGE PERCENT.. -25

|      |            |         |        |         |       |       |
|------|------------|---------|--------|---------|-------|-------|
| 1940 | 238.90     | 255     | 233    | 66      | 8.83  | 7     |
| 1941 | 503.83     | 534     | 488    | 142     | 9.11  | 16    |
| 1945 | 56.00      | 58      | 53     | 17      | 10.29 | 2     |
| 1946 | 11,183.46  | 11,505  | 10,524 | 3,455   | 10.62 | 325   |
| 1947 | 4,642.00   | 4,744   | 4,339  | 1,464   | 10.95 | 134   |
| 1948 | 2,742.00   | 2,782   | 2,545  | 882     | 11.30 | 78    |
| 1949 | 5,131.61   | 5,168   | 4,727  | 1,688   | 11.66 | 145   |
| 1950 | 13,026.82  | 13,019  | 11,909 | 4,375   | 12.03 | 364   |
| 1951 | 5,204.70   | 5,159   | 4,719  | 1,787   | 12.42 | 144   |
| 1952 | 5,293.78   | 5,203   | 4,759  | 1,858   | 12.82 | 145   |
| 1953 | 202.30     | 197     | 180    | 73      | 13.23 | 6     |
| 1954 | 16,676.06  | 16,099  | 14,726 | 6,119   | 13.66 | 448   |
| 1955 | 20,624.35  | 19,718  | 18,037 | 7,743   | 14.11 | 549   |
| 1956 | 18,449.76  | 17,462  | 15,973 | 7,089   | 14.57 | 487   |
| 1957 | 12,480.07  | 11,690  | 10,693 | 4,907   | 15.04 | 326   |
| 1958 | 26,992.10  | 25,007  | 22,875 | 10,865  | 15.53 | 700   |
| 1959 | 11,277.90  | 10,331  | 9,450  | 4,647   | 16.03 | 290   |
| 1960 | 16,138.04  | 14,608  | 13,362 | 6,811   | 16.55 | 412   |
| 1961 | 16,723.37  | 14,953  | 13,678 | 7,226   | 17.08 | 423   |
| 1962 | 28,657.49  | 25,302  | 23,144 | 12,678  | 17.62 | 720   |
| 1963 | 39,606.77  | 34,507  | 31,565 | 17,943  | 18.18 | 987   |
| 1964 | 33,481.83  | 28,773  | 26,320 | 15,532  | 18.75 | 828   |
| 1965 | 27,875.09  | 23,613  | 21,600 | 13,244  | 19.34 | 685   |
| 1966 | 20,756.17  | 17,327  | 15,850 | 10,095  | 19.93 | 507   |
| 1967 | 29,960.66  | 24,630  | 22,530 | 14,921  | 20.54 | 726   |
| 1968 | 38,002.13  | 30,750  | 28,128 | 19,375  | 21.16 | 916   |
| 1969 | 52,376.58  | 41,694  | 38,139 | 27,332  | 21.79 | 1,254 |
| 1970 | 14,931.52  | 11,684  | 10,688 | 7,976   | 22.44 | 355   |
| 1971 | 76,589.72  | 58,895  | 53,873 | 41,864  | 23.09 | 1,813 |
| 1972 | 44,762.96  | 33,796  | 30,914 | 25,040  | 23.76 | 1,054 |
| 1973 | 54,026.62  | 40,036  | 36,622 | 30,911  | 24.43 | 1,265 |
| 1974 | 63,345.57  | 46,044  | 42,118 | 37,064  | 25.11 | 1,476 |
| 1975 | 48,572.11  | 34,597  | 31,647 | 29,068  | 25.81 | 1,126 |
| 1976 | 26,172.81  | 18,261  | 16,704 | 16,012  | 26.51 | 604   |
| 1977 | 72,116.85  | 49,235  | 45,037 | 45,109  | 27.23 | 1,657 |
| 1978 | 67,478.67  | 45,056  | 41,214 | 43,134  | 27.95 | 1,543 |
| 1979 | 95,377.11  | 62,234  | 56,927 | 62,294  | 28.68 | 2,172 |
| 1980 | 158,265.95 | 100,829 | 92,231 | 105,601 | 29.42 | 3,589 |
| 1981 | 59,640.98  | 37,065  | 33,904 | 40,647  | 30.17 | 1,347 |
| 1982 | 103,233.38 | 62,543  | 57,210 | 71,832  | 30.92 | 2,323 |
| 1983 | 13,444.28  | 7,929   | 7,253  | 9,552   | 31.69 | 301   |
| 1984 | 68,778.00  | 39,461  | 36,096 | 49,876  | 32.46 | 1,537 |
| 1985 | 8,631.87   | 4,812   | 4,402  | 6,388   | 33.24 | 192   |

SURVIVOR CURVE.. IOWA 60-R2.5

NET SALVAGE PERCENT.. -25

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 1986 | 50,245.96     | 27,185    | 24,867    | 37,940     | 34.03 | 1,115   |
| 1987 | 80,691.35     | 42,330    | 38,720    | 62,144     | 34.82 | 1,785   |
| 1988 | 9,583.49      | 4,866     | 4,451     | 7,528      | 35.63 | 211     |
| 1989 | 21,186.00     | 10,399    | 9,512     | 16,970     | 36.44 | 466     |
| 1990 | 89,521.00     | 42,430    | 38,812    | 73,089     | 37.25 | 1,962   |
| 1991 | 232,064.00    | 105,975   | 96,938    | 193,142    | 38.08 | 5,072   |
| 1992 | 133,283.06    | 58,561    | 53,567    | 113,037    | 38.91 | 2,905   |
| 1993 | 45,318.28     | 19,128    | 17,497    | 39,151     | 39.74 | 985     |
| 1994 | 559,184.42    | 226,120   | 206,839   | 492,142    | 40.59 | 12,125  |
| 1995 | 40,486.86     | 15,655    | 14,320    | 36,289     | 41.44 | 876     |
| 1997 | 163,072.85    | 57,212    | 52,333    | 151,508    | 43.16 | 3,510   |
| 1998 | 81,469.76     | 27,106    | 24,795    | 77,042     | 44.03 | 1,750   |
| 2000 | 66,743.00     | 19,773    | 18,087    | 65,342     | 45.78 | 1,427   |
| 2001 | 270,942.78    | 75,244    | 68,828    | 269,850    | 46.67 | 5,782   |
| 2002 | 141,181.00    | 36,589    | 33,469    | 143,007    | 47.56 | 3,007   |
| 2003 | 212,582.75    | 51,153    | 46,791    | 218,937    | 48.45 | 4,519   |
| 2004 | 15,786.36     | 3,503     | 3,204     | 16,529     | 49.35 | 335     |
| 2005 | 134,777.18    | 27,348    | 25,016    | 143,455    | 50.26 | 2,854   |
| 2006 | 137,673.95    | 25,327    | 23,167    | 148,925    | 51.17 | 2,910   |
| 2007 | 632,246.14    | 104,321   | 95,426    | 694,882    | 52.08 | 13,343  |
| 2008 | 39,332.05     | 5,736     | 5,247     | 43,918     | 53.00 | 829     |
| 2009 | 376,899.45    | 47,739    | 43,668    | 427,456    | 53.92 | 7,928   |
| 2010 | 1,748,743.89  | 187,618   | 171,620   | 2,014,310  | 54.85 | 36,724  |
| 2011 | 662,257.08    | 58,361    | 53,384    | 774,437    | 55.77 | 13,886  |
| 2012 | 736,752.19    | 50,495    | 46,189    | 874,751    | 56.71 | 15,425  |
| 2013 | 793,055.08    | 38,989    | 35,665    | 955,654    | 57.64 | 16,580  |
| 2014 | 1,147,920.41  | 33,964    | 31,068    | 1,403,833  | 58.58 | 23,964  |
| 2015 | 662,124.22    | 6,481     | 5,928     | 821,727    | 59.53 | 13,804  |
|      | 10,718,796.73 | 2,467,173 | 2,256,794 | 11,141,702 |       | 230,057 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 48.4 2.15

SURVIVOR CURVE.. IOWA 54-R2

NET SALVAGE PERCENT.. -20

|      |              |           |           |         |       |        |
|------|--------------|-----------|-----------|---------|-------|--------|
| 1930 | 15,555.43    | 17,280    | 16,212    | 2,455   | 4.01  | 612    |
| 1931 | 729.35       | 806       | 756       | 119     | 4.30  | 28     |
| 1934 | 1,455.51     | 1,579     | 1,481     | 266     | 5.17  | 51     |
| 1935 | 3,176.82     | 3,427     | 3,215     | 597     | 5.46  | 109    |
| 1937 | 2,952.72     | 3,147     | 2,952     | 591     | 6.04  | 98     |
| 1939 | 12,360.53    | 13,011    | 12,207    | 2,626   | 6.63  | 396    |
| 1940 | 20,935.23    | 21,898    | 20,544    | 4,578   | 6.93  | 661    |
| 1941 | 36,231.37    | 37,656    | 35,328    | 8,150   | 7.23  | 1,127  |
| 1942 | 8,428.73     | 8,702     | 8,164     | 1,950   | 7.54  | 259    |
| 1943 | 3,934.21     | 4,036     | 3,786     | 935     | 7.84  | 119    |
| 1944 | 10,947.83    | 11,152    | 10,463    | 2,674   | 8.16  | 328    |
| 1945 | 22,095.81    | 22,356    | 20,974    | 5,541   | 8.47  | 654    |
| 1946 | 19,892.98    | 19,981    | 18,746    | 5,126   | 8.80  | 582    |
| 1947 | 32,135.31    | 32,043    | 30,062    | 8,500   | 9.13  | 931    |
| 1948 | 137,378.61   | 135,944   | 127,540   | 37,314  | 9.47  | 3,940  |
| 1949 | 128,858.17   | 126,538   | 118,716   | 35,914  | 9.81  | 3,661  |
| 1950 | 96,435.66    | 93,929    | 88,122    | 27,601  | 10.17 | 2,714  |
| 1951 | 49,455.90    | 47,774    | 44,821    | 14,526  | 10.53 | 1,379  |
| 1952 | 225,772.23   | 216,240   | 202,872   | 68,055  | 10.90 | 6,244  |
| 1953 | 322,649.00   | 306,301   | 287,366   | 99,813  | 11.28 | 8,849  |
| 1954 | 363,371.02   | 341,729   | 320,604   | 115,441 | 11.68 | 9,884  |
| 1955 | 255,309.63   | 237,836   | 223,133   | 83,239  | 12.08 | 6,891  |
| 1956 | 500,562.62   | 461,739   | 433,195   | 167,480 | 12.49 | 13,409 |
| 1957 | 173,267.34   | 158,213   | 148,432   | 59,489  | 12.91 | 4,608  |
| 1958 | 326,971.75   | 295,436   | 277,172   | 115,194 | 13.34 | 8,635  |
| 1959 | 183,873.55   | 164,341   | 154,182   | 66,466  | 13.78 | 4,823  |
| 1960 | 320,917.58   | 283,550   | 266,021   | 119,080 | 14.24 | 8,362  |
| 1961 | 436,362.45   | 381,091   | 357,532   | 166,103 | 14.70 | 11,300 |
| 1962 | 716,323.13   | 617,949   | 579,748   | 279,840 | 15.18 | 18,435 |
| 1963 | 714,897.33   | 609,093   | 571,439   | 286,438 | 15.66 | 18,291 |
| 1964 | 540,627.11   | 454,607   | 426,504   | 222,249 | 16.16 | 13,753 |
| 1965 | 768,070.75   | 637,161   | 597,772   | 323,913 | 16.67 | 19,431 |
| 1966 | 775,871.38   | 634,666   | 595,431   | 335,615 | 17.19 | 19,524 |
| 1967 | 690,294.92   | 556,530   | 522,126   | 306,228 | 17.72 | 17,281 |
| 1968 | 866,204.61   | 687,957   | 645,428   | 394,018 | 18.26 | 21,578 |
| 1969 | 1,454,949.96 | 1,137,445 | 1,067,129 | 678,811 | 18.82 | 36,069 |
| 1970 | 447,206.14   | 344,050   | 322,781   | 213,866 | 19.38 | 11,035 |
| 1971 | 1,025,259.41 | 775,785   | 727,827   | 502,484 | 19.95 | 25,187 |
| 1972 | 897,923.42   | 667,656   | 626,382   | 451,126 | 20.54 | 21,963 |
| 1973 | 1,284,663.07 | 938,369   | 880,360   | 661,236 | 21.13 | 31,294 |
| 1974 | 1,279,217.89 | 917,061   | 860,369   | 674,692 | 21.74 | 31,035 |
| 1975 | 1,018,426.59 | 716,292   | 672,011   | 550,101 | 22.35 | 24,613 |
| 1976 | 900,410.18   | 620,678   | 582,308   | 498,184 | 22.98 | 21,679 |

SURVIVOR CURVE.. IOWA 54-R2  
NET SALVAGE PERCENT.. -20

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 1977 | 1,314,022.89  | 887,407   | 832,548   | 744,279    | 23.61 | 31,524  |
| 1978 | 1,781,805.86  | 1,177,574 | 1,104,777 | 1,033,390  | 24.26 | 42,596  |
| 1979 | 319,366.51    | 206,451   | 193,688   | 189,552    | 24.91 | 7,609   |
| 1980 | 2,303,384.07  | 1,455,223 | 1,365,262 | 1,398,799  | 25.57 | 54,705  |
| 1981 | 1,906,111.86  | 1,175,850 | 1,103,160 | 1,184,174  | 26.24 | 45,129  |
| 1982 | 1,840,756.23  | 1,107,325 | 1,038,871 | 1,170,036  | 26.93 | 43,447  |
| 1983 | 904,278.72    | 530,110   | 497,339   | 587,795    | 27.62 | 21,281  |
| 1984 | 2,434,345.23  | 1,389,213 | 1,303,333 | 1,617,881  | 28.32 | 57,129  |
| 1985 | 321,673.52    | 178,564   | 167,525   | 218,483    | 29.02 | 7,529   |
| 1986 | 1,448,830.85  | 781,082   | 732,796   | 1,005,801  | 29.74 | 33,820  |
| 1987 | 3,219,958.60  | 1,684,412 | 1,580,283 | 2,283,667  | 30.46 | 74,973  |
| 1988 | 220,988.50    | 112,017   | 105,092   | 160,094    | 31.19 | 5,133   |
| 1989 | 2,372,671.60  | 1,163,141 | 1,091,236 | 1,755,970  | 31.94 | 54,977  |
| 1990 | 1,507,932.86  | 714,416   | 670,251   | 1,139,268  | 32.68 | 34,861  |
| 1991 | 3,540,874.19  | 1,617,783 | 1,517,773 | 2,731,276  | 33.44 | 81,677  |
| 1992 | 4,756,373.26  | 2,092,823 | 1,963,446 | 3,744,202  | 34.20 | 109,480 |
| 1993 | 1,686,952.31  | 713,399   | 669,297   | 1,355,046  | 34.97 | 38,749  |
| 1994 | 5,872,031.10  | 2,381,414 | 2,234,197 | 4,812,240  | 35.75 | 134,608 |
| 1995 | 3,713,046.69  | 1,440,647 | 1,351,587 | 3,104,069  | 36.54 | 84,950  |
| 1996 | 9,964.23      | 3,691     | 3,463     | 8,494      | 37.33 | 228     |
| 1997 | 5,714,713.73  | 2,015,397 | 1,890,807 | 4,966,849  | 38.13 | 130,261 |
| 1998 | 4,781,179.72  | 1,601,141 | 1,502,160 | 4,235,256  | 38.93 | 108,792 |
| 1999 | 2,417,232.41  | 765,982   | 718,630   | 2,182,049  | 39.74 | 54,908  |
| 2000 | 1,218,266.69  | 363,857   | 341,364   | 1,120,556  | 40.56 | 27,627  |
| 2001 | 6,399,383.48  | 1,793,261 | 1,682,403 | 5,996,857  | 41.39 | 144,887 |
| 2002 | 4,370,900.20  | 1,144,214 | 1,073,479 | 4,171,601  | 42.22 | 98,806  |
| 2003 | 4,452,469.89  | 1,082,431 | 1,015,516 | 4,327,448  | 43.06 | 100,498 |
| 2004 | 873,793.19    | 196,121   | 183,997   | 864,555    | 43.90 | 19,694  |
| 2005 | 3,325,354.65  | 683,560   | 641,303   | 3,349,123  | 44.75 | 74,841  |
| 2006 | 2,314,030.88  | 431,437   | 404,766   | 2,372,071  | 45.61 | 52,008  |
| 2007 | 2,007,739.11  | 335,951   | 315,183   | 2,094,104  | 46.47 | 45,064  |
| 2008 | 599,194.72    | 88,815    | 83,325    | 635,709    | 47.33 | 13,431  |
| 2009 | 14,297,621.07 | 1,839,589 | 1,725,867 | 15,431,278 | 48.21 | 320,085 |
| 2010 | 16,335,795.12 | 1,786,025 | 1,675,614 | 17,927,340 | 49.08 | 365,268 |
| 2011 | 7,308,925.55  | 654,558   | 614,093   | 8,156,618  | 49.97 | 163,230 |
| 2012 | 10,253,428.60 | 717,699   | 673,331   | 11,630,783 | 50.85 | 228,727 |
| 2013 | 10,447,078.54 | 522,396   | 490,102   | 12,046,392 | 51.75 | 232,781 |
| 2014 | 11,105,751.65 | 333,173   | 312,576   | 13,014,326 | 52.65 | 247,186 |
| 2015 | 6,438,165.38  | 64,356    | 60,378    | 7,665,420  | 53.55 | 143,145 |

173,228,756.89    50,995,539    47,843,031    160,031,477    3,967,466

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 40.3    2.29

SURVIVOR CURVE.. IOWA 50-R1.5  
NET SALVAGE PERCENT.. -50

|      |              |           |           |           |       |        |
|------|--------------|-----------|-----------|-----------|-------|--------|
| 1941 | 39,382.10    | 50,519    | 59,073    |           |       |        |
| 1942 | 2,785.61     | 3,550     | 4,178     |           |       |        |
| 1943 | 5,097.53     | 6,452     | 7,646     |           |       |        |
| 1944 | 9,886.80     | 12,425    | 14,830    |           |       |        |
| 1945 | 33,159.32    | 41,373    | 49,739    |           |       |        |
| 1946 | 84,808.39    | 105,052   | 127,213   |           |       |        |
| 1947 | 143,668.38   | 176,626   | 215,503   |           |       |        |
| 1948 | 159,504.60   | 194,612   | 239,257   |           |       |        |
| 1949 | 285,208.94   | 345,245   | 427,813   |           |       |        |
| 1950 | 462,615.98   | 555,556   | 693,924   |           |       |        |
| 1951 | 454,992.54   | 541,896   | 682,489   |           |       |        |
| 1952 | 508,633.22   | 600,594   | 760,524   | 2,426     | 10.64 | 228    |
| 1953 | 168,070.27   | 196,693   | 249,070   | 3,035     | 10.99 | 276    |
| 1954 | 97,546.06    | 113,134   | 143,260   | 3,059     | 11.34 | 270    |
| 1955 | 233,803.17   | 268,640   | 340,175   | 10,530    | 11.70 | 900    |
| 1956 | 401,026.31   | 456,328   | 577,842   | 23,697    | 12.07 | 1,963  |
| 1957 | 536,481.77   | 604,347   | 765,277   | 39,446    | 12.45 | 3,168  |
| 1958 | 359,433.34   | 400,696   | 507,396   | 31,754    | 12.84 | 2,473  |
| 1959 | 507,072.27   | 559,199   | 708,107   | 52,501    | 13.24 | 3,965  |
| 1960 | 150,349.13   | 163,956   | 207,615   | 17,909    | 13.65 | 1,312  |
| 1961 | 592,707.31   | 638,879   | 809,004   | 80,057    | 14.07 | 5,690  |
| 1962 | 540,075.82   | 575,343   | 728,549   | 81,565    | 14.49 | 5,629  |
| 1963 | 729,390.32   | 767,392   | 971,739   | 122,346   | 14.93 | 8,195  |
| 1964 | 845,588.59   | 878,228   | 1,112,089 | 156,294   | 15.38 | 10,162 |
| 1965 | 858,182.09   | 879,465   | 1,113,655 | 173,618   | 15.84 | 10,961 |
| 1966 | 941,548.56   | 951,623   | 1,205,028 | 207,295   | 16.31 | 12,710 |
| 1967 | 919,429.97   | 916,028   | 1,159,954 | 219,191   | 16.79 | 13,055 |
| 1968 | 1,069,462.49 | 1,049,784 | 1,329,328 | 274,866   | 17.28 | 15,907 |
| 1969 | 1,181,859.83 | 1,142,386 | 1,446,589 | 326,201   | 17.78 | 18,347 |
| 1970 | 835,562.56   | 794,871   | 1,006,535 | 246,809   | 18.29 | 13,494 |
| 1971 | 1,404,520.39 | 1,314,210 | 1,664,167 | 442,614   | 18.81 | 23,531 |
| 1972 | 1,216,907.24 | 1,118,946 | 1,416,907 | 408,454   | 19.35 | 21,109 |
| 1973 | 1,846,293.82 | 1,667,757 | 2,111,859 | 657,582   | 19.89 | 33,061 |
| 1974 | 1,804,898.20 | 1,600,584 | 2,026,799 | 680,548   | 20.44 | 33,295 |
| 1975 | 1,407,829.76 | 1,224,812 | 1,550,964 | 560,781   | 21.00 | 26,704 |
| 1976 | 1,678,853.94 | 1,431,391 | 1,812,552 | 705,729   | 21.58 | 32,703 |
| 1977 | 1,786,765.58 | 1,492,307 | 1,889,689 | 790,459   | 22.16 | 35,671 |
| 1978 | 1,842,666.63 | 1,506,380 | 1,907,510 | 856,490   | 22.75 | 37,648 |
| 1979 | 2,522,979.93 | 2,017,122 | 2,554,256 | 1,230,214 | 23.35 | 52,686 |
| 1980 | 2,613,531.68 | 2,041,691 | 2,585,367 | 1,334,931 | 23.96 | 55,715 |
| 1981 | 2,860,831.18 | 2,181,670 | 2,762,621 | 1,528,626 | 24.58 | 62,190 |
| 1982 | 3,179,965.83 | 2,364,941 | 2,994,694 | 1,775,255 | 25.21 | 70,419 |
| 1983 | 3,669,562.25 | 2,659,699 | 3,367,943 | 2,136,400 | 25.84 | 82,678 |

SURVIVOR CURVE.. IOWA 50-R1.5  
NET SALVAGE PERCENT.. -50

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 1984 | 2,991,572.33  | 2,109,956 | 2,671,810 | 1,815,548  | 26.49 | 68,537  |
| 1985 | 3,368,563.38  | 2,310,161 | 2,925,327 | 2,127,518  | 27.14 | 78,390  |
| 1986 | 4,431,626.37  | 2,951,463 | 3,737,400 | 2,910,040  | 27.80 | 104,678 |
| 1987 | 4,569,918.39  | 2,951,710 | 3,737,712 | 3,117,166  | 28.47 | 109,489 |
| 1988 | 4,815,348.29  | 3,013,445 | 3,815,887 | 3,407,135  | 29.14 | 116,923 |
| 1989 | 5,102,888.46  | 3,087,758 | 3,909,988 | 3,744,345  | 29.83 | 125,523 |
| 1990 | 5,146,362.11  | 3,007,534 | 3,808,402 | 3,911,141  | 30.52 | 128,150 |
| 1991 | 5,130,094.56  | 2,890,295 | 3,659,943 | 4,035,199  | 31.22 | 129,250 |
| 1992 | 6,579,633.24  | 3,568,793 | 4,519,117 | 5,350,333  | 31.92 | 167,617 |
| 1993 | 6,561,609.05  | 3,419,254 | 4,329,757 | 5,512,657  | 32.63 | 168,944 |
| 1994 | 8,287,655.84  | 4,139,684 | 5,242,029 | 7,189,455  | 33.35 | 215,576 |
| 1995 | 9,005,843.54  | 4,303,893 | 5,449,965 | 8,058,800  | 34.07 | 236,537 |
| 1996 | 7,853,400.16  | 3,581,150 | 4,534,764 | 7,245,336  | 34.80 | 208,199 |
| 1997 | 8,797,655.79  | 3,819,062 | 4,836,029 | 8,360,455  | 35.53 | 235,307 |
| 1998 | 7,696,222.27  | 3,170,074 | 4,014,224 | 7,530,109  | 36.27 | 207,613 |
| 1999 | 7,459,313.97  | 2,904,657 | 3,678,130 | 7,510,841  | 37.02 | 202,886 |
| 2000 | 7,107,332.71  | 2,607,680 | 3,302,072 | 7,358,927  | 37.77 | 194,835 |
| 2001 | 6,263,578.19  | 2,157,176 | 2,731,604 | 6,663,763  | 38.52 | 172,995 |
| 2002 | 7,285,069.52  | 2,342,878 | 2,966,756 | 7,960,848  | 39.28 | 202,669 |
| 2003 | 10,597,393.96 | 3,163,322 | 4,005,674 | 11,890,417 | 40.05 | 296,889 |
| 2004 | 4,463,082.69  | 1,229,133 | 1,556,435 | 5,138,189  | 40.82 | 125,874 |
| 2005 | 5,002,953.85  | 1,262,245 | 1,598,365 | 5,906,066  | 41.59 | 142,007 |
| 2006 | 6,290,113.12  | 1,439,807 | 1,823,209 | 7,611,961  | 42.37 | 179,654 |
| 2007 | 4,234,788.67  | 870,249   | 1,101,985 | 5,250,198  | 43.15 | 121,673 |
| 2008 | 23,434,556.73 | 4,260,402 | 5,394,893 | 29,756,942 | 43.94 | 677,218 |
| 2009 | 33,359,927.81 | 5,274,205 | 6,678,658 | 43,361,234 | 44.73 | 969,399 |
| 2010 | 15,138,104.70 | 2,030,020 | 2,570,588 | 20,136,569 | 45.53 | 442,270 |
| 2011 | 15,348,256.03 | 1,689,843 | 2,139,827 | 20,882,557 | 46.33 | 450,735 |
| 2012 | 24,065,080.01 | 2,064,784 | 2,614,610 | 33,483,010 | 47.14 | 710,289 |
| 2013 | 15,655,391.86 | 962,807   | 1,219,190 | 22,263,898 | 47.95 | 464,315 |
| 2014 | 21,504,931.62 | 793,532   | 1,004,839 | 31,252,558 | 48.77 | 640,815 |
| 2015 | 16,256,031.40 | 199,949   | 253,193   | 24,130,854 | 49.59 | 486,607 |

354,797,240.32 120,189,323 152,141,111 380,054,749 9,477,978

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 40.1 2.67

SURVIVOR CURVE.. IOWA 47-R1

NET SALVAGE PERCENT.. -30

|      |              |           |           |           |       |
|------|--------------|-----------|-----------|-----------|-------|
| 1941 | 72,252.21    | 81,317    | 93,928    |           |       |
| 1942 | 19,204.65    | 21,444    | 24,966    |           |       |
| 1943 | 12,543.65    | 13,892    | 16,307    |           |       |
| 1944 | 20,020.85    | 21,985    | 26,027    |           |       |
| 1945 | 53,861.88    | 58,653    | 70,020    |           |       |
| 1946 | 111,529.54   | 120,371   | 144,988   |           |       |
| 1947 | 107,573.80   | 115,061   | 139,846   |           |       |
| 1948 | 245,169.62   | 259,859   | 318,721   |           |       |
| 1949 | 291,533.25   | 306,098   | 378,993   |           |       |
| 1950 | 333,751.64   | 347,011   | 433,877   |           |       |
| 1951 | 267,775.57   | 275,670   | 348,108   |           |       |
| 1952 | 365,196.64   | 372,128   | 472,409   | 2,347     | 10.16 |
| 1953 | 314,613.44   | 317,276   | 402,776   | 6,221     | 10.54 |
| 1954 | 277,667.27   | 277,024   | 351,676   | 9,291     | 10.93 |
| 1955 | 393,521.63   | 388,365   | 493,022   | 18,556    | 11.32 |
| 1956 | 420,072.46   | 409,920   | 520,385   | 25,709    | 11.72 |
| 1957 | 401,712.02   | 387,444   | 491,852   | 30,374    | 12.13 |
| 1958 | 420,923.27   | 401,202   | 509,318   | 37,882    | 12.54 |
| 1959 | 386,812.49   | 364,199   | 462,343   | 40,513    | 12.96 |
| 1960 | 317,378.91   | 295,136   | 374,669   | 37,924    | 13.38 |
| 1961 | 485,939.88   | 446,103   | 566,319   | 65,403    | 13.81 |
| 1962 | 533,121.24   | 482,929   | 613,069   | 79,989    | 14.25 |
| 1963 | 742,622.84   | 663,671   | 842,517   | 122,893   | 14.69 |
| 1964 | 872,558.78   | 768,688   | 975,834   | 158,492   | 15.15 |
| 1965 | 1,160,545.95 | 1,007,954 | 1,279,578 | 229,132   | 15.60 |
| 1966 | 959,392.18   | 820,776   | 1,041,959 | 205,251   | 16.07 |
| 1967 | 1,088,941.85 | 917,452   | 1,164,687 | 250,937   | 16.54 |
| 1968 | 1,370,656.33 | 1,136,591 | 1,442,880 | 338,973   | 17.02 |
| 1969 | 1,463,853.90 | 1,194,443 | 1,516,322 | 386,688   | 17.50 |
| 1970 | 1,143,596.58 | 917,309   | 1,164,506 | 322,170   | 18.00 |
| 1971 | 2,030,548.62 | 1,600,669 | 2,032,017 | 607,696   | 18.50 |
| 1972 | 1,614,599.94 | 1,250,006 | 1,586,858 | 512,122   | 19.01 |
| 1973 | 1,894,137.46 | 1,439,704 | 1,827,676 | 634,703   | 19.52 |
| 1974 | 2,412,888.69 | 1,799,306 | 2,284,183 | 852,572   | 20.04 |
| 1975 | 1,575,440.78 | 1,151,713 | 1,462,077 | 585,996   | 20.57 |
| 1976 | 1,595,696.28 | 1,142,686 | 1,450,617 | 623,788   | 21.11 |
| 1977 | 2,219,559.11 | 1,555,678 | 1,974,902 | 910,525   | 21.66 |
| 1978 | 2,646,789.26 | 1,814,864 | 2,303,934 | 1,136,892 | 22.21 |
| 1979 | 3,141,266.53 | 2,105,242 | 2,672,563 | 1,411,083 | 22.77 |
| 1980 | 3,024,088.76 | 1,979,024 | 2,512,332 | 1,418,983 | 23.34 |
| 1981 | 2,837,957.07 | 1,812,501 | 2,300,934 | 1,388,410 | 23.91 |
| 1982 | 3,023,316.43 | 1,882,383 | 2,389,648 | 1,540,663 | 24.49 |
| 1983 | 3,140,604.10 | 1,904,129 | 2,417,254 | 1,665,531 | 25.08 |

SURVIVOR CURVE.. IOWA 47-R1  
NET SALVAGE PERCENT.. -30

|      |               |           |           |            |       |           |
|------|---------------|-----------|-----------|------------|-------|-----------|
| 1984 | 2,806,244.64  | 1,654,859 | 2,100,811 | 1,547,307  | 25.68 | 60,253    |
| 1985 | 2,579,753.85  | 1,478,470 | 1,876,888 | 1,476,792  | 26.28 | 56,195    |
| 1986 | 3,478,412.55  | 1,934,801 | 2,456,191 | 2,065,745  | 26.89 | 76,822    |
| 1987 | 3,895,200.15  | 2,099,840 | 2,665,705 | 2,398,055  | 27.51 | 87,170    |
| 1988 | 4,431,790.51  | 2,313,115 | 2,936,453 | 2,824,875  | 28.13 | 100,422   |
| 1989 | 5,695,742.90  | 2,873,599 | 3,647,977 | 3,756,489  | 28.76 | 130,615   |
| 1990 | 4,889,429.80  | 2,381,563 | 3,023,347 | 3,332,912  | 29.39 | 113,403   |
| 1991 | 4,473,559.93  | 2,099,791 | 2,665,643 | 3,149,985  | 30.03 | 104,895   |
| 1992 | 5,190,747.37  | 2,343,098 | 2,974,516 | 3,773,456  | 30.68 | 122,994   |
| 1993 | 4,783,545.41  | 2,073,284 | 2,631,993 | 3,586,616  | 31.33 | 114,479   |
| 1994 | 6,122,311.14  | 2,543,459 | 3,228,871 | 4,730,133  | 31.98 | 147,909   |
| 1995 | 7,462,226.13  | 2,963,914 | 3,762,630 | 5,938,264  | 32.64 | 181,932   |
| 1996 | 6,471,562.83  | 2,450,548 | 3,110,922 | 5,302,110  | 33.31 | 159,175   |
| 1997 | 6,423,727.09  | 2,315,105 | 2,938,980 | 5,411,865  | 33.97 | 159,313   |
| 1998 | 5,156,659.88  | 1,761,520 | 2,236,214 | 4,467,444  | 34.65 | 128,931   |
| 1999 | 5,538,851.65  | 1,789,398 | 2,271,605 | 4,928,902  | 35.32 | 139,550   |
| 2000 | 4,543,916.50  | 1,382,496 | 1,755,051 | 4,152,040  | 36.00 | 115,334   |
| 2001 | 9,210,683.04  | 2,629,107 | 3,337,599 | 8,636,289  | 36.68 | 235,450   |
| 2002 | 5,791,447.38  | 1,542,593 | 1,958,291 | 5,570,591  | 37.37 | 149,066   |
| 2003 | 3,559,974.66  | 880,286   | 1,117,506 | 3,510,461  | 38.06 | 92,235    |
| 2004 | 6,895,432.82  | 1,573,462 | 1,997,479 | 6,966,584  | 38.75 | 179,783   |
| 2005 | 2,315,397.57  | 483,529   | 613,830   | 2,396,187  | 39.45 | 60,740    |
| 2006 | 4,138,382.71  | 784,066   | 995,356   | 4,384,542  | 40.15 | 109,204   |
| 2007 | 4,394,621.87  | 747,547   | 948,996   | 4,764,012  | 40.85 | 116,622   |
| 2008 | 20,874,073.27 | 3,140,755 | 3,987,126 | 23,149,169 | 41.56 | 557,006   |
| 2009 | 42,894,719.73 | 5,612,002 | 7,124,325 | 48,638,811 | 42.27 | 1,150,670 |
| 2010 | 11,588,279.78 | 1,288,489 | 1,635,711 | 13,429,053 | 42.98 | 312,449   |
| 2011 | 13,280,509.90 | 1,212,152 | 1,538,803 | 15,725,860 | 43.70 | 359,859   |
| 2012 | 20,086,909.59 | 1,427,858 | 1,812,637 | 24,300,345 | 44.43 | 546,936   |
| 2013 | 12,404,951.65 | 631,350   | 801,486   | 15,324,951 | 45.16 | 339,348   |
| 2014 | 26,710,505.46 | 820,173   | 1,041,193 | 33,682,464 | 45.89 | 733,983   |
| 2015 | 24,036,835.16 | 245,921   | 312,192   | 30,935,694 | 46.63 | 663,429   |

337,937,644.27    94,106,026    119,403,224    319,915,714    8,351,144

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 38.3    2.47

SURVIVOR CURVE.. IOWA 50-R4

NET SALVAGE PERCENT.. 0

|      |              |         |         |           |       |        |
|------|--------------|---------|---------|-----------|-------|--------|
| 1966 | 2,177.50     | 1,849   | 1,636   | 542       | 7.55  | 72     |
| 1967 | 2,766.65     | 2,321   | 2,054   | 713       | 8.05  | 89     |
| 1968 | 978.07       | 810     | 717     | 261       | 8.58  | 30     |
| 1973 | 23,444.43    | 17,973  | 15,902  | 7,542     | 11.67 | 646    |
| 1974 | 276,752.56   | 208,395 | 184,387 | 92,366    | 12.35 | 7,479  |
| 1976 | 18,557.11    | 13,458  | 11,908  | 6,649     | 13.74 | 484    |
| 1979 | 407,636.17   | 277,600 | 245,618 | 162,018   | 15.95 | 10,158 |
| 1980 | 218,176.00   | 145,262 | 128,527 | 89,649    | 16.71 | 5,365  |
| 1981 | 14.49        | 9       | 8       | 6         | 17.49 |        |
| 1982 | 64,154.00    | 40,686  | 35,999  | 28,155    | 18.29 | 1,539  |
| 1983 | 61,681.09    | 38,119  | 33,727  | 27,954    | 19.10 | 1,464  |
| 1986 | 44,082.77    | 25,030  | 22,146  | 21,937    | 21.61 | 1,015  |
| 1987 | 66,410.57    | 36,552  | 32,341  | 34,070    | 22.48 | 1,516  |
| 1989 | 19,761.59    | 10,177  | 9,005   | 10,757    | 24.25 | 444    |
| 1995 | 104,460.14   | 42,223  | 37,359  | 67,101    | 29.79 | 2,252  |
| 1998 | 5,323.27     | 1,845   | 1,632   | 3,691     | 32.67 | 113    |
| 2001 | 2,842.29     | 819     | 725     | 2,117     | 35.60 | 59     |
| 2003 | 124,493.17   | 30,974  | 27,406  | 97,087    | 37.56 | 2,585  |
| 2004 | 45,591.40    | 10,440  | 9,237   | 36,354    | 38.55 | 943    |
| 2005 | 26,268.24    | 5,495   | 4,862   | 21,406    | 39.54 | 541    |
| 2008 | 3,671.25     | 549     | 486     | 3,185     | 42.52 | 75     |
| 2009 | 31,753.72    | 4,122   | 3,647   | 28,107    | 43.51 | 646    |
| 2010 | 97,394.76    | 10,694  | 9,462   | 87,933    | 44.51 | 1,976  |
| 2011 | 52,912.65    | 4,752   | 4,204   | 48,709    | 45.51 | 1,070  |
| 2012 | 54,026.80    | 3,782   | 3,346   | 50,681    | 46.50 | 1,090  |
| 2014 | 204,076.52   | 6,122   | 5,417   | 198,660   | 48.50 | 4,096  |
| 2015 | 91,114.48    | 911     | 806     | 90,308    | 49.50 | 1,824  |
|      | 2,050,521.69 | 940,969 | 832,564 | 1,217,958 |       | 47,571 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.6 2.32

SURVIVOR CURVE.. IOWA 48-R2  
NET SALVAGE PERCENT.. -20

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 1967 | 2,500.28      | 2,185     | 2,445     | 555        | 13.04 | 43      |
| 1968 | 15,640.76     | 13,482    | 15,089    | 3,680      | 13.52 | 272     |
| 1970 | 18,653.98     | 15,618    | 17,480    | 4,905      | 14.51 | 338     |
| 1971 | 12,220.86     | 10,076    | 11,277    | 3,388      | 15.02 | 226     |
| 1972 | 95,302.52     | 77,338    | 86,557    | 27,806     | 15.54 | 1,789   |
| 1973 | 49,085.47     | 39,170    | 43,839    | 15,064     | 16.08 | 937     |
| 1974 | 281,136.77    | 220,481   | 246,762   | 90,602     | 16.63 | 5,448   |
| 1975 | 230,859.88    | 177,821   | 199,017   | 78,015     | 17.19 | 4,538   |
| 1976 | 248,527.81    | 187,824   | 210,212   | 88,021     | 17.77 | 4,953   |
| 1977 | 181,159.27    | 134,285   | 150,291   | 67,100     | 18.35 | 3,657   |
| 1978 | 265,936.62    | 193,137   | 216,159   | 102,965    | 18.95 | 5,434   |
| 1979 | 340,191.28    | 241,876   | 270,707   | 137,523    | 19.56 | 7,031   |
| 1980 | 405,190.75    | 281,809   | 315,400   | 170,829    | 20.18 | 8,465   |
| 1981 | 228,364.99    | 155,232   | 173,735   | 100,303    | 20.81 | 4,820   |
| 1982 | 268,888.24    | 178,473   | 199,747   | 122,919    | 21.45 | 5,730   |
| 1983 | 326,723.35    | 211,474   | 236,681   | 155,387    | 22.11 | 7,028   |
| 1984 | 340,728.87    | 214,913   | 240,530   | 168,345    | 22.77 | 7,393   |
| 1985 | 286,726.74    | 176,051   | 197,036   | 147,036    | 23.44 | 6,273   |
| 1986 | 520,197.42    | 310,427   | 347,429   | 276,808    | 24.13 | 11,472  |
| 1987 | 848,549.12    | 491,738   | 550,352   | 467,907    | 24.82 | 18,852  |
| 1988 | 983,128.62    | 552,514   | 618,373   | 561,381    | 25.52 | 21,998  |
| 1989 | 1,324,658.51  | 720,943   | 806,878   | 782,712    | 26.23 | 29,840  |
| 1990 | 689,050.09    | 362,438   | 405,640   | 421,220    | 26.96 | 15,624  |
| 1991 | 1,080,496.93  | 548,616   | 614,010   | 682,586    | 27.69 | 24,651  |
| 1992 | 952,792.93    | 466,156   | 521,721   | 621,631    | 28.43 | 21,865  |
| 1993 | 1,080,605.28  | 508,420   | 569,023   | 727,703    | 29.18 | 24,938  |
| 1994 | 1,702,290.51  | 769,013   | 860,678   | 1,182,071  | 29.93 | 39,495  |
| 1995 | 3,416,001.89  | 1,477,434 | 1,653,541 | 2,445,661  | 30.70 | 79,663  |
| 1996 | 3,307,903.72  | 1,367,011 | 1,529,956 | 2,439,528  | 31.47 | 77,519  |
| 1997 | 3,449,088.41  | 1,357,230 | 1,519,009 | 2,619,897  | 32.26 | 81,212  |
| 1998 | 3,468,047.45  | 1,296,190 | 1,450,693 | 2,710,964  | 33.05 | 82,026  |
| 1999 | 3,949,268.73  | 1,397,046 | 1,563,571 | 3,175,551  | 33.85 | 93,812  |
| 2000 | 3,944,614.69  | 1,316,491 | 1,473,414 | 3,260,124  | 34.65 | 94,087  |
| 2001 | 8,298,706.82  | 2,601,645 | 2,911,756 | 7,046,692  | 35.46 | 198,722 |
| 2002 | 5,473,522.80  | 1,603,764 | 1,794,929 | 4,773,298  | 36.28 | 131,568 |
| 2003 | 9,031,651.75  | 2,458,921 | 2,752,019 | 8,085,963  | 37.11 | 217,892 |
| 2004 | 5,209,396.59  | 1,308,892 | 1,464,909 | 4,786,367  | 37.95 | 126,123 |
| 2005 | 3,483,875.96  | 802,183   | 897,802   | 3,282,849  | 38.79 | 84,631  |
| 2006 | 2,098,340.02  | 438,561   | 490,837   | 2,027,171  | 39.64 | 51,140  |
| 2007 | 2,386,276.21  | 448,028   | 501,432   | 2,362,099  | 40.49 | 58,338  |
| 2008 | 17,345,995.67 | 2,883,737 | 3,227,472 | 17,587,723 | 41.35 | 425,338 |
| 2009 | 36,106,160.94 | 5,217,485 | 5,839,399 | 37,487,994 | 42.22 | 887,920 |
| 2010 | 4,735,344.01  | 581,254   | 650,538   | 5,031,875  | 43.09 | 116,776 |

SURVIVOR CURVE.. IOWA 48-R2

NET SALVAGE PERCENT.. -20

|      |               |         |         |            |       |         |
|------|---------------|---------|---------|------------|-------|---------|
| 2011 | 6,997,262.94  | 704,988 | 789,021 | 7,607,695  | 43.97 | 173,020 |
| 2012 | 9,242,764.28  | 725,594 | 812,083 | 10,279,234 | 44.86 | 229,140 |
| 2013 | 3,355,687.12  | 188,778 | 211,280 | 3,815,545  | 45.75 | 83,400  |
| 2014 | 20,090,636.96 | 677,938 | 758,747 | 23,350,017 | 46.65 | 500,536 |
| 2015 | 13,223,505.98 | 148,844 | 166,586 | 15,701,621 | 47.55 | 330,213 |

|                |            |            |             |  |  |           |
|----------------|------------|------------|-------------|--|--|-----------|
| 181,393,660.79 | 36,263,524 | 40,586,062 | 177,086,331 |  |  | 4,406,186 |
|----------------|------------|------------|-------------|--|--|-----------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 40.2 2.43

SURVIVOR CURVE.. IOWA 46-R2

NET SALVAGE PERCENT.. -5

|      |              |           |           |           |        |
|------|--------------|-----------|-----------|-----------|--------|
| 1941 | 16,874.55    | 16,586    | 17,718    |           |        |
| 1942 | 1,433.77     | 1,400     | 1,505     |           |        |
| 1943 | 1,283.53     | 1,245     | 1,348     |           |        |
| 1944 | 2,669.42     | 2,571     | 2,803     |           |        |
| 1945 | 4,274.72     | 4,089     | 4,488     |           |        |
| 1946 | 10,300.71    | 9,786     | 10,816    |           |        |
| 1947 | 8,455.53     | 7,977     | 8,878     |           |        |
| 1948 | 13,118.27    | 12,289    | 13,774    |           |        |
| 1949 | 251,367.08   | 233,754   | 263,935   |           |        |
| 1950 | 23,565.43    | 21,758    | 24,744    |           |        |
| 1951 | 22,579.76    | 20,694    | 23,709    |           |        |
| 1952 | 58,514.32    | 53,226    | 61,440    |           |        |
| 1953 | 172,381.63   | 155,621   | 181,001   |           |        |
| 1954 | 22,381.25    | 20,047    | 23,500    |           |        |
| 1955 | 71,123.70    | 63,186    | 74,680    |           |        |
| 1956 | 22,841.99    | 20,126    | 23,984    |           |        |
| 1957 | 71,644.34    | 62,585    | 75,227    |           |        |
| 1958 | 114,901.24   | 99,481    | 120,646   |           |        |
| 1959 | 157,057.42   | 134,760   | 164,910   |           |        |
| 1960 | 195,026.28   | 165,737   | 204,778   |           |        |
| 1961 | 188,426.77   | 158,536   | 197,848   |           |        |
| 1962 | 562,878.26   | 468,834   | 591,022   |           |        |
| 1963 | 320,021.28   | 263,704   | 336,022   |           |        |
| 1964 | 390,461.28   | 318,185   | 409,984   |           |        |
| 1965 | 645,736.80   | 520,159   | 678,024   |           |        |
| 1966 | 576,219.72   | 458,510   | 605,002   | 29        | 11.14  |
| 1967 | 1,069,253.69 | 840,084   | 1,108,486 | 14,230    | 11.58  |
| 1968 | 788,335.85   | 611,279   | 806,579   | 21,174    | 12.03  |
| 1969 | 1,151,639.25 | 880,893   | 1,162,334 | 46,887    | 12.49  |
| 1970 | 1,603,214.51 | 1,209,101 | 1,595,403 | 87,972    | 12.96  |
| 1971 | 1,551,855.66 | 1,153,014 | 1,521,396 | 108,052   | 13.45  |
| 1972 | 1,751,268.02 | 1,281,187 | 1,690,520 | 148,311   | 13.95  |
| 1973 | 3,152,701.15 | 2,269,004 | 2,993,939 | 316,397   | 14.47  |
| 1974 | 3,763,959.91 | 2,663,399 | 3,514,341 | 437,817   | 15.00  |
| 1975 | 1,743,193.87 | 1,212,005 | 1,599,234 | 231,120   | 15.54  |
| 1976 | 2,323,199.37 | 1,586,120 | 2,092,877 | 346,482   | 16.09  |
| 1977 | 4,080,226.60 | 2,732,615 | 3,605,671 | 678,567   | 16.66  |
| 1978 | 4,315,584.24 | 2,834,051 | 3,739,516 | 791,847   | 17.23  |
| 1979 | 4,369,445.38 | 2,810,604 | 3,708,577 | 879,341   | 17.82  |
| 1980 | 2,937,982.56 | 1,848,924 | 2,439,646 | 645,236   | 18.43  |
| 1981 | 2,011,700.08 | 1,237,989 | 1,633,520 | 478,765   | 19.04  |
| 1982 | 4,646,486.34 | 2,792,582 | 3,684,798 | 1,194,013 | 19.67  |
| 1983 | 5,226,656.37 | 3,066,140 | 4,045,756 | 1,442,233 | 20.30  |
|      |              |           |           |           | 3      |
|      |              |           |           |           | 1,229  |
|      |              |           |           |           | 1,760  |
|      |              |           |           |           | 3,754  |
|      |              |           |           |           | 6,788  |
|      |              |           |           |           | 8,034  |
|      |              |           |           |           | 10,632 |
|      |              |           |           |           | 21,866 |
|      |              |           |           |           | 29,188 |
|      |              |           |           |           | 14,873 |
|      |              |           |           |           | 21,534 |
|      |              |           |           |           | 40,730 |
|      |              |           |           |           | 45,957 |
|      |              |           |           |           | 49,346 |
|      |              |           |           |           | 35,010 |
|      |              |           |           |           | 25,145 |
|      |              |           |           |           | 60,702 |
|      |              |           |           |           | 71,046 |

SURVIVOR CURVE.. IOWA 46-R2

NET SALVAGE PERCENT.. -5

|      |               |           |           |            |       |         |
|------|---------------|-----------|-----------|------------|-------|---------|
| 1984 | 3,655,635.48  | 2,090,287 | 2,758,123 | 1,080,294  | 20.95 | 51,565  |
| 1985 | 5,244,790.64  | 2,919,938 | 3,852,843 | 1,654,187  | 21.61 | 76,547  |
| 1986 | 5,988,873.32  | 3,242,571 | 4,278,556 | 2,009,761  | 22.28 | 90,205  |
| 1987 | 5,761,058.26  | 3,029,818 | 3,997,829 | 2,051,282  | 22.96 | 89,342  |
| 1988 | 6,600,546.42  | 3,367,358 | 4,443,211 | 2,487,363  | 23.65 | 105,174 |
| 1989 | 6,523,152.09  | 3,222,121 | 4,251,572 | 2,597,738  | 24.36 | 106,639 |
| 1990 | 6,417,040.61  | 3,065,741 | 4,045,229 | 2,692,664  | 25.07 | 107,406 |
| 1991 | 5,925,561.61  | 2,733,565 | 3,606,925 | 2,614,915  | 25.79 | 101,393 |
| 1992 | 6,758,610.24  | 3,005,243 | 3,965,403 | 3,131,138  | 26.52 | 118,067 |
| 1993 | 8,393,828.90  | 3,590,540 | 4,737,699 | 4,075,821  | 27.26 | 149,517 |
| 1994 | 9,037,366.70  | 3,711,145 | 4,896,837 | 4,592,398  | 28.01 | 163,956 |
| 1995 | 9,174,458.28  | 3,608,301 | 4,761,135 | 4,872,046  | 28.77 | 169,345 |
| 1996 | 8,601,748.86  | 3,233,759 | 4,266,928 | 4,764,908  | 29.53 | 161,358 |
| 1997 | 9,140,735.81  | 3,273,704 | 4,319,635 | 5,278,138  | 30.31 | 174,139 |
| 1998 | 8,806,739.52  | 2,997,255 | 3,954,863 | 5,292,213  | 31.09 | 170,222 |
| 1999 | 7,140,099.56  | 2,299,662 | 3,034,392 | 4,462,713  | 31.89 | 139,941 |
| 2000 | 9,733,724.37  | 2,957,276 | 3,902,110 | 6,318,301  | 32.69 | 193,279 |
| 2001 | 9,967,169.52  | 2,846,205 | 3,755,553 | 6,709,975  | 33.49 | 200,358 |
| 2002 | 5,552,804.82  | 1,481,691 | 1,955,084 | 3,875,361  | 34.31 | 112,951 |
| 2003 | 13,086,544.82 | 3,246,968 | 4,284,357 | 9,456,515  | 35.13 | 269,186 |
| 2004 | 4,510,571.41  | 1,032,659 | 1,362,588 | 3,373,512  | 35.97 | 93,787  |
| 2005 | 191,437.68    | 40,202    | 53,046    | 147,964    | 36.80 | 4,021   |
| 2006 | 18,497,333.40 | 3,525,518 | 4,651,903 | 14,770,297 | 37.65 | 392,305 |
| 2007 | 11,344,595.79 | 1,942,104 | 2,562,596 | 9,349,230  | 38.50 | 242,837 |
| 2008 | 9,342,791.67  | 1,416,064 | 1,868,489 | 7,941,442  | 39.36 | 201,764 |
| 2009 | 16,205,575.29 | 2,134,299 | 2,816,197 | 14,199,657 | 40.23 | 352,962 |
| 2010 | 2,101,353.39  | 235,028   | 310,118   | 1,896,303  | 41.10 | 46,139  |
| 2011 | 14,063,163.54 | 1,290,429 | 1,702,715 | 13,063,607 | 41.98 | 311,186 |
| 2012 | 7,245,096.86  | 519,278   | 685,185   | 6,922,167  | 42.86 | 161,506 |
| 2013 | 5,010,844.73  | 257,334   | 339,551   | 4,921,836  | 43.75 | 112,499 |
| 2014 | 16,704,347.49 | 514,786   | 679,257   | 16,860,308 | 44.65 | 377,610 |
| 2015 | 914,157.13    | 9,387     | 12,386    | 947,479    | 45.55 | 20,801  |

|                |             |             |             |           |
|----------------|-------------|-------------|-------------|-----------|
| 308,054,000.11 | 107,164,073 | 141,176,694 | 182,280,006 | 5,515,604 |
|----------------|-------------|-------------|-------------|-----------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 33.0 1.79

SURVIVOR CURVE.. IOWA 48-R1

NET SALVAGE PERCENT.. -25

|      |              |           |           |           |        |
|------|--------------|-----------|-----------|-----------|--------|
| 1948 | 15,027.91    | 15,110    | 18,785    |           |        |
| 1949 | 29,532.25    | 29,417    | 36,915    |           |        |
| 1950 | 24,785.16    | 24,443    | 30,981    |           |        |
| 1951 | 22,356.38    | 21,827    | 27,945    |           |        |
| 1952 | 38,120.26    | 36,839    | 47,650    |           |        |
| 1953 | 17,867.25    | 17,086    | 22,334    |           |        |
| 1954 | 2,339.39     | 2,213     | 2,924     |           |        |
| 1955 | 26,155.09    | 24,466    | 32,694    |           |        |
| 1956 | 92,925.07    | 85,956    | 116,156   |           |        |
| 1957 | 115,431.48   | 105,512   | 144,289   |           |        |
| 1958 | 99,976.91    | 90,292    | 124,971   |           |        |
| 1959 | 150,813.11   | 134,554   | 188,516   |           |        |
| 1960 | 43,611.56    | 38,410    | 54,514    |           |        |
| 1961 | 171,532.95   | 149,152   | 214,416   |           |        |
| 1962 | 158,198.52   | 135,705   | 197,748   |           |        |
| 1963 | 172,256.12   | 145,746   | 215,320   |           |        |
| 1964 | 184,744.54   | 154,098   | 230,931   |           |        |
| 1965 | 121,090.55   | 99,553    | 151,363   |           |        |
| 1966 | 192,361.46   | 155,743   | 240,452   |           |        |
| 1967 | 243,352.54   | 193,985   | 304,191   |           |        |
| 1968 | 181,618.75   | 142,505   | 227,023   |           |        |
| 1969 | 235,824.42   | 181,965   | 294,781   |           |        |
| 1970 | 165,486.50   | 125,538   | 206,858   |           |        |
| 1971 | 367,341.53   | 273,881   | 459,177   |           |        |
| 1972 | 414,097.89   | 303,130   | 517,622   |           |        |
| 1973 | 481,911.81   | 346,248   | 602,390   |           |        |
| 1974 | 762,688.53   | 537,457   | 948,904   | 4,457     | 20.94  |
| 1975 | 614,971.99   | 424,715   | 749,853   | 18,862    | 21.48  |
| 1976 | 984,013.99   | 665,747   | 1,175,406 | 54,611    | 22.02  |
| 1977 | 1,234,019.91 | 817,214   | 1,442,828 | 99,697    | 22.57  |
| 1978 | 1,146,067.77 | 742,251   | 1,310,477 | 122,108   | 23.13  |
| 1979 | 1,249,104.39 | 790,777   | 1,396,152 | 165,228   | 23.69  |
| 1980 | 915,976.55   | 566,051   | 999,388   | 145,583   | 24.27  |
| 1981 | 1,338,766.10 | 807,092   | 1,424,957 | 248,501   | 24.85  |
| 1982 | 1,347,036.70 | 791,738   | 1,397,849 | 285,947   | 25.43  |
| 1983 | 2,220,449.87 | 1,270,403 | 2,242,953 | 532,609   | 26.03  |
| 1984 | 2,069,188.35 | 1,151,529 | 2,033,076 | 553,409   | 26.63  |
| 1985 | 2,002,079.98 | 1,082,900 | 1,911,908 | 590,692   | 27.23  |
| 1986 | 2,055,374.12 | 1,078,532 | 1,904,197 | 665,021   | 27.85  |
| 1987 | 1,594,617.90 | 811,023   | 1,431,897 | 561,375   | 28.47  |
| 1988 | 2,264,065.32 | 1,114,939 | 1,968,475 | 861,607   | 29.09  |
| 1989 | 2,471,019.85 | 1,176,298 | 2,076,807 | 1,011,968 | 29.72  |
| 1990 | 2,343,029.20 | 1,076,329 | 1,900,307 | 1,028,480 | 30.36  |
|      |              |           |           |           | 213    |
|      |              |           |           |           | 878    |
|      |              |           |           |           | 2,480  |
|      |              |           |           |           | 4,417  |
|      |              |           |           |           | 5,279  |
|      |              |           |           |           | 6,975  |
|      |              |           |           |           | 5,998  |
|      |              |           |           |           | 10,000 |
|      |              |           |           |           | 11,244 |
|      |              |           |           |           | 20,461 |
|      |              |           |           |           | 20,781 |
|      |              |           |           |           | 21,693 |
|      |              |           |           |           | 23,879 |
|      |              |           |           |           | 19,718 |
|      |              |           |           |           | 29,619 |
|      |              |           |           |           | 34,050 |
|      |              |           |           |           | 33,876 |

SURVIVOR CURVE.. IOWA 48-R1  
NET SALVAGE PERCENT.. -25

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1991 | 2,583,899.24  | 1,143,246  | 2,018,452  | 1,211,422  | 31.01 | 39,066    |
| 1992 | 2,528,831.07  | 1,076,713  | 1,900,985  | 1,260,054  | 31.65 | 39,812    |
| 1993 | 3,299,020.38  | 1,347,980  | 2,379,919  | 1,743,856  | 32.31 | 53,973    |
| 1994 | 3,815,211.08  | 1,494,275  | 2,638,209  | 2,130,805  | 32.96 | 64,648    |
| 1995 | 4,620,071.37  | 1,728,946  | 3,052,532  | 2,722,557  | 33.63 | 80,956    |
| 1996 | 4,841,911.94  | 1,728,684  | 3,052,069  | 3,000,321  | 34.29 | 87,498    |
| 1997 | 5,202,671.98  | 1,766,762  | 3,119,298  | 3,384,042  | 34.96 | 96,798    |
| 1998 | 5,260,594.29  | 1,693,254  | 2,989,516  | 3,586,227  | 35.64 | 100,624   |
| 1999 | 4,309,241.73  | 1,311,841  | 2,316,114  | 3,070,438  | 36.31 | 84,562    |
| 2000 | 2,763,589.89  | 792,390    | 1,399,000  | 2,055,487  | 36.99 | 55,569    |
| 2001 | 3,002,551.79  | 806,936    | 1,424,682  | 2,328,508  | 37.68 | 61,797    |
| 2002 | 3,037,287.74  | 762,473    | 1,346,180  | 2,450,430  | 38.36 | 63,880    |
| 2003 | 1,238,259.63  | 288,607    | 509,549    | 1,038,276  | 39.05 | 26,588    |
| 2004 | 183,156.33    | 39,351     | 69,476     | 159,469    | 39.75 | 4,012     |
| 2006 | 26,485.90     | 4,732      | 8,355      | 24,752     | 41.14 | 602       |
| 2007 | 12,776.61     | 2,046      | 3,612      | 12,359     | 41.85 | 295       |
| 2008 | 2,118,838.83  | 300,716    | 530,927    | 2,117,622  | 42.55 | 49,768    |
| 2009 | 29,434.60     | 3,626      | 6,402      | 30,391     | 43.27 | 702       |
| 2010 | 3,721,987.97  | 389,646    | 687,937    | 3,964,548  | 43.98 | 90,144    |
| 2011 | 2,370,584.51  | 203,722    | 359,680    | 2,603,551  | 44.70 | 58,245    |
| 2012 | 6,543,792.37  | 437,943    | 773,208    | 7,406,532  | 45.43 | 163,032   |
| 2013 | 2,383,531.96  | 114,201    | 201,627    | 2,777,788  | 46.16 | 60,177    |
| 2014 | 387,812.58    | 11,208     | 19,788     | 464,978    | 46.89 | 9,916     |
| 2015 | 212,594.34    | 2,049      | 3,618      | 262,125    | 47.63 | 5,503     |
|      | 94,875,368.05 | 35,389,716 | 61,837,515 | 56,756,695 |       | 1,549,728 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 36.6 1.63

INTERIM SURVIVOR CURVE.. IOWA 28-L1  
 PROBABLE RETIREMENT YEAR.. 6-2020  
 NET SALVAGE PERCENT.. 0

|      |              |           |           |        |      |        |
|------|--------------|-----------|-----------|--------|------|--------|
| 1932 | 256.00       | 246       | 256       |        |      |        |
| 1940 | 84.00        | 78        | 84        |        |      |        |
| 1941 | 4,518.76     | 4,156     | 4,519     |        |      |        |
| 1942 | 5,492.19     | 5,033     | 5,492     |        |      |        |
| 1946 | 143.78       | 130       | 144       |        |      |        |
| 1947 | 189.09       | 171       | 189       |        |      |        |
| 1948 | 45.02        | 41        | 45        |        |      |        |
| 1949 | 43,375.25    | 38,959    | 43,375    |        |      |        |
| 1950 | 124,031.65   | 111,136   | 124,032   |        |      |        |
| 1951 | 199,643.26   | 178,451   | 199,643   |        |      |        |
| 1952 | 162,426.96   | 144,896   | 162,427   |        |      |        |
| 1953 | 94,499.81    | 84,128    | 94,500    |        |      |        |
| 1954 | 145,402.38   | 129,183   | 145,402   |        |      |        |
| 1955 | 148,806.24   | 131,988   | 148,806   |        |      |        |
| 1956 | 124,118.11   | 109,863   | 124,118   |        |      |        |
| 1957 | 195,127.61   | 172,423   | 195,128   |        |      |        |
| 1958 | 282,971.70   | 249,626   | 282,972   |        |      |        |
| 1959 | 226,794.66   | 199,806   | 226,795   |        |      |        |
| 1960 | 248,850.24   | 218,859   | 248,716   | 134    | 3.36 | 40     |
| 1961 | 259,542.58   | 227,951   | 259,048   | 495    | 3.39 | 146    |
| 1962 | 261,810.20   | 229,532   | 260,845   | 965    | 3.43 | 281    |
| 1963 | 311,696.72   | 272,887   | 310,114   | 1,583  | 3.46 | 458    |
| 1964 | 331,941.96   | 290,194   | 329,782   | 2,160  | 3.49 | 619    |
| 1965 | 415,091.60   | 362,342   | 411,773   | 3,319  | 3.52 | 943    |
| 1966 | 351,607.77   | 306,465   | 348,273   | 3,335  | 3.55 | 939    |
| 1967 | 333,427.36   | 290,162   | 329,746   | 3,681  | 3.58 | 1,028  |
| 1968 | 410,706.62   | 356,999   | 405,701   | 5,006  | 3.60 | 1,391  |
| 1969 | 499,200.25   | 433,186   | 492,281   | 6,919  | 3.63 | 1,906  |
| 1970 | 447,345.28   | 387,687   | 440,575   | 6,770  | 3.65 | 1,855  |
| 1971 | 590,644.41   | 510,966   | 580,672   | 9,972  | 3.68 | 2,710  |
| 1972 | 729,034.35   | 629,791   | 715,707   | 13,327 | 3.70 | 3,602  |
| 1973 | 772,207.56   | 666,091   | 756,959   | 15,249 | 3.72 | 4,099  |
| 1974 | 1,506,963.97 | 1,297,270 | 1,474,243 | 32,721 | 3.75 | 8,726  |
| 1975 | 632,224.04   | 543,321   | 617,441   | 14,783 | 3.77 | 3,921  |
| 1976 | 987,281.74   | 846,979   | 962,524   | 24,758 | 3.79 | 6,532  |
| 1977 | 1,674,450.03 | 1,433,798 | 1,629,396 | 45,054 | 3.81 | 11,825 |
| 1978 | 1,244,419.61 | 1,063,406 | 1,208,475 | 35,945 | 3.83 | 9,385  |
| 1979 | 1,565,320.23 | 1,334,780 | 1,516,870 | 48,450 | 3.85 | 12,584 |
| 1980 | 635,533.38   | 540,966   | 614,764   | 20,769 | 3.86 | 5,381  |
| 1981 | 564,719.97   | 479,526   | 544,943   | 19,777 | 3.88 | 5,097  |
| 1982 | 710,972.55   | 602,151   | 684,296   | 26,677 | 3.90 | 6,840  |
| 1983 | 1,300,880.56 | 1,098,685 | 1,248,567 | 52,314 | 3.92 | 13,345 |

INTERIM SURVIVOR CURVE.. IOWA 28-L1  
 PROBABLE RETIREMENT YEAR.. 6-2020  
 NET SALVAGE PERCENT.. 0

|      |               |            |            |           |      |           |
|------|---------------|------------|------------|-----------|------|-----------|
| 1984 | 903,737.50    | 761,381    | 865,248    | 38,490    | 3.93 | 9,794     |
| 1985 | 905,107.05    | 760,127    | 863,823    | 41,284    | 3.95 | 10,452    |
| 1986 | 1,114,093.39  | 932,830    | 1,060,086  | 54,007    | 3.96 | 13,638    |
| 1987 | 1,151,398.41  | 960,543    | 1,091,580  | 59,818    | 3.98 | 15,030    |
| 1988 | 1,221,553.73  | 1,014,952  | 1,153,411  | 68,143    | 4.00 | 17,036    |
| 1989 | 1,177,299.65  | 974,510    | 1,107,452  | 69,848    | 4.01 | 17,418    |
| 1990 | 1,495,505.99  | 1,232,746  | 1,400,917  | 94,589    | 4.02 | 23,530    |
| 1991 | 1,553,505.30  | 1,274,061  | 1,447,868  | 105,637   | 4.04 | 26,148    |
| 1992 | 2,274,577.07  | 1,856,032  | 2,109,231  | 165,346   | 4.05 | 40,826    |
| 1993 | 1,203,958.30  | 976,579    | 1,109,804  | 94,154    | 4.07 | 23,134    |
| 1994 | 1,483,991.15  | 1,196,364  | 1,359,572  | 124,419   | 4.08 | 30,495    |
| 1995 | 1,888,267.11  | 1,512,275  | 1,718,579  | 169,688   | 4.09 | 41,489    |
| 1996 | 1,888,549.61  | 1,500,264  | 1,704,929  | 183,621   | 4.11 | 44,677    |
| 1997 | 2,294,899.50  | 1,808,289  | 2,054,975  | 239,924   | 4.12 | 58,234    |
| 1998 | 1,983,536.61  | 1,548,488  | 1,759,732  | 223,805   | 4.13 | 54,190    |
| 1999 | 1,775,684.50  | 1,371,983  | 1,559,148  | 216,536   | 4.14 | 52,303    |
| 2000 | 2,191,344.41  | 1,673,749  | 1,902,081  | 289,263   | 4.15 | 69,702    |
| 2001 | 2,290,366.87  | 1,724,898  | 1,960,208  | 330,159   | 4.17 | 79,175    |
| 2002 | 2,298,261.99  | 1,704,897  | 1,937,479  | 360,783   | 4.18 | 86,312    |
| 2003 | 1,530,578.47  | 1,115,042  | 1,267,156  | 263,422   | 4.20 | 62,720    |
| 2004 | 507,456.67    | 361,979    | 411,360    | 96,097    | 4.22 | 22,772    |
| 2005 | 85,774.69     | 59,624     | 67,758     | 18,017    | 4.25 | 4,239     |
| 2006 | 3,478,669.70  | 2,347,372  | 2,667,600  | 811,070   | 4.27 | 189,946   |
| 2007 | 323,978.33    | 210,719    | 239,465    | 84,513    | 4.30 | 19,654    |
| 2009 | 1,810,784.76  | 1,067,983  | 1,213,677  | 597,108   | 4.34 | 137,582   |
| 2010 | 1,444,365.45  | 792,307    | 900,393    | 543,972   | 4.37 | 124,479   |
| 2011 | 567,383.89    | 283,045    | 321,658    | 245,726   | 4.39 | 55,974    |
| 2012 | 1,706,714.95  | 745,459    | 847,154    | 859,561   | 4.41 | 194,912   |
| 2013 | 4,944,354.99  | 1,760,685  | 2,000,877  | 2,943,478 | 4.43 | 664,442   |
| 2014 | 49,712.95     | 12,428     | 14,124     | 35,589    | 4.44 | 8,016     |
| 2015 | 123,596.02    | 12,235     | 13,904     | 109,692   | 4.46 | 24,595    |
|      |               |            |            |           |      |           |
|      | 66,212,808.46 | 49,538,154 | 56,280,887 | 9,931,921 |      | 2,326,567 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.3 3.51

SURVIVOR CURVE.. IOWA 28-L1

NET SALVAGE PERCENT.. 0

|      |            |         |         |         |       |        |
|------|------------|---------|---------|---------|-------|--------|
| 1941 | 41,613.33  | 37,794  | 31,527  | 10,086  | 2.57  | 3,925  |
| 1942 | 61.84      | 56      | 47      | 15      | 2.74  | 5      |
| 1943 | 12,390.22  | 11,103  | 9,262   | 3,128   | 2.91  | 1,075  |
| 1944 | 6,909.10   | 6,147   | 5,128   | 1,781   | 3.09  | 576    |
| 1945 | 20,694.86  | 18,285  | 15,253  | 5,442   | 3.26  | 1,669  |
| 1946 | 30,134.62  | 26,432  | 22,049  | 8,086   | 3.44  | 2,351  |
| 1947 | 62,014.51  | 53,997  | 45,044  | 16,971  | 3.62  | 4,688  |
| 1948 | 67,799.84  | 58,599  | 48,883  | 18,917  | 3.80  | 4,978  |
| 1949 | 12,850.15  | 11,024  | 9,196   | 3,654   | 3.98  | 918    |
| 1950 | 18,892.89  | 16,086  | 13,419  | 5,474   | 4.16  | 1,316  |
| 1951 | 17,696.32  | 14,947  | 12,469  | 5,227   | 4.35  | 1,202  |
| 1952 | 28,242.39  | 23,663  | 19,739  | 8,503   | 4.54  | 1,873  |
| 1953 | 10,013.44  | 8,322   | 6,942   | 3,071   | 4.73  | 649    |
| 1954 | 15,256.87  | 12,576  | 10,491  | 4,766   | 4.92  | 969    |
| 1955 | 33,172.75  | 27,119  | 22,622  | 10,551  | 5.11  | 2,065  |
| 1956 | 34,207.47  | 27,720  | 23,124  | 11,083  | 5.31  | 2,087  |
| 1957 | 20,350.16  | 16,345  | 13,635  | 6,715   | 5.51  | 1,219  |
| 1958 | 23,825.97  | 18,967  | 15,822  | 8,004   | 5.71  | 1,402  |
| 1959 | 49,498.70  | 39,051  | 32,576  | 16,923  | 5.91  | 2,863  |
| 1960 | 35,876.50  | 28,035  | 23,387  | 12,490  | 6.12  | 2,041  |
| 1961 | 39,613.81  | 30,658  | 25,575  | 14,039  | 6.33  | 2,218  |
| 1962 | 47,064.07  | 36,071  | 30,090  | 16,974  | 6.54  | 2,595  |
| 1963 | 56,092.75  | 42,570  | 35,511  | 20,582  | 6.75  | 3,049  |
| 1964 | 48,988.23  | 36,794  | 30,693  | 18,295  | 6.97  | 2,625  |
| 1965 | 75,388.21  | 56,029  | 46,739  | 28,649  | 7.19  | 3,985  |
| 1966 | 83,377.48  | 61,312  | 51,146  | 32,231  | 7.41  | 4,350  |
| 1967 | 66,872.27  | 48,626  | 40,563  | 26,309  | 7.64  | 3,444  |
| 1968 | 99,293.50  | 71,385  | 59,549  | 39,744  | 7.87  | 5,050  |
| 1969 | 107,597.36 | 76,471  | 63,791  | 43,806  | 8.10  | 5,408  |
| 1970 | 90,708.21  | 63,690  | 53,130  | 37,578  | 8.34  | 4,506  |
| 1971 | 125,934.75 | 87,390  | 72,900  | 53,035  | 8.57  | 6,188  |
| 1972 | 51,409.73  | 35,216  | 29,377  | 22,033  | 8.82  | 2,498  |
| 1973 | 112,116.72 | 75,839  | 63,264  | 48,853  | 9.06  | 5,392  |
| 1974 | 181,179.13 | 120,937 | 100,884 | 80,295  | 9.31  | 8,625  |
| 1975 | 94,918.39  | 62,476  | 52,117  | 42,801  | 9.57  | 4,472  |
| 1976 | 24,100.09  | 15,648  | 13,053  | 11,047  | 9.82  | 1,125  |
| 1977 | 162,837.51 | 104,157 | 86,887  | 75,951  | 10.09 | 7,527  |
| 1978 | 229,932.64 | 144,940 | 120,908 | 109,025 | 10.35 | 10,534 |
| 1979 | 174,665.38 | 108,417 | 90,440  | 84,225  | 10.62 | 7,931  |
| 1980 | 199,272.43 | 121,698 | 101,519 | 97,753  | 10.90 | 8,968  |
| 1981 | 197,888.25 | 118,873 | 99,163  | 98,725  | 11.18 | 8,831  |
| 1982 | 293,082.24 | 173,127 | 144,421 | 148,661 | 11.46 | 12,972 |
| 1983 | 134,941.75 | 78,315  | 65,330  | 69,612  | 11.75 | 5,924  |

SURVIVOR CURVE.. IOWA 28-L1

NET SALVAGE PERCENT.. 0

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 1984 | 183,906.37    | 104,827   | 87,446    | 96,460    | 12.04 | 8,012   |
| 1985 | 189,041.95    | 105,729   | 88,198    | 100,844   | 12.34 | 8,172   |
| 1986 | 243,615.01    | 133,552   | 111,408   | 132,207   | 12.65 | 10,451  |
| 1987 | 208,299.79    | 111,961   | 93,397    | 114,903   | 12.95 | 8,873   |
| 1988 | 201,506.25    | 106,006   | 88,429    | 113,077   | 13.27 | 8,521   |
| 1989 | 157,975.47    | 81,300    | 67,820    | 90,155    | 13.59 | 6,634   |
| 1990 | 64,723.61     | 32,547    | 27,150    | 37,574    | 13.92 | 2,699   |
| 1991 | 53,139.92     | 26,095    | 21,768    | 31,372    | 14.25 | 2,202   |
| 1992 | 432,512.57    | 207,143   | 172,797   | 259,716   | 14.59 | 17,801  |
| 1993 | 258,057.50    | 120,366   | 100,408   | 157,650   | 14.94 | 10,552  |
| 1994 | 252,915.96    | 114,806   | 95,770    | 157,146   | 15.29 | 10,278  |
| 1995 | 20,024.02     | 8,832     | 7,368     | 12,656    | 15.65 | 809     |
| 1997 | 612,562.43    | 253,993   | 211,878   | 400,684   | 16.39 | 24,447  |
| 1998 | 274,102.55    | 109,934   | 91,706    | 182,397   | 16.77 | 10,876  |
| 1999 | 24,261.50     | 9,393     | 7,836     | 16,426    | 17.16 | 957     |
| 2000 | 217,767.05    | 81,197    | 67,734    | 150,033   | 17.56 | 8,544   |
| 2001 | 102,670.74    | 36,778    | 30,680    | 71,991    | 17.97 | 4,006   |
| 2002 | 17,093.36     | 5,848     | 4,878     | 12,215    | 18.42 | 663     |
| 2003 | 390,798.50    | 127,287   | 106,182   | 284,616   | 18.88 | 15,075  |
| 2005 | 206,936.97    | 59,641    | 49,752    | 157,185   | 19.93 | 7,887   |
| 2006 | 129,130.33    | 34,589    | 28,854    | 100,276   | 20.50 | 4,892   |
| 2007 | 826,592.78    | 203,102   | 169,425   | 657,168   | 21.12 | 31,116  |
| 2008 | 45,006.34     | 9,982     | 8,327     | 36,679    | 21.79 | 1,683   |
| 2009 | 889,518.03    | 175,048   | 146,023   | 743,495   | 22.49 | 33,059  |
| 2010 | 123,028.74    | 20,915    | 17,447    | 105,582   | 23.24 | 4,543   |
| 2011 | 410,617.37    | 58,221    | 48,567    | 362,050   | 24.03 | 15,067  |
| 2012 | 405,634.75    | 45,634    | 38,068    | 367,567   | 24.85 | 14,791  |
| 2013 | 236,457.39    | 19,340    | 16,133    | 220,324   | 25.71 | 8,570   |
|      | 10,416,674.08 | 4,630,973 | 3,863,114 | 6,553,560 |       | 447,268 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 14.7 4.29

SURVIVOR CURVE.. IOWA 15-S2.5

NET SALVAGE PERCENT.. 0

|      |            |        |       |         |       |        |
|------|------------|--------|-------|---------|-------|--------|
| 2015 | 698,893.34 | 23,294 | 4,284 | 694,609 | 14.50 | 47,904 |
|------|------------|--------|-------|---------|-------|--------|

|  |            |        |       |         |  |        |
|--|------------|--------|-------|---------|--|--------|
|  | 698,893.34 | 23,294 | 4,284 | 694,609 |  | 47,904 |
|--|------------|--------|-------|---------|--|--------|

|                                                              |      |      |
|--------------------------------------------------------------|------|------|
| COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. | 14.5 | 6.85 |
|--------------------------------------------------------------|------|------|

SURVIVOR CURVE.. IOWA 28-01

NET SALVAGE PERCENT.. -10

|      |              |         |           |         |       |
|------|--------------|---------|-----------|---------|-------|
| 1964 | 83.89        | 85      | 92        |         |       |
| 1965 | 66.43        | 66      | 73        |         |       |
| 1968 | 12.47        | 12      | 14        |         |       |
| 1970 | 9,031.33     | 8,072   | 9,934     |         |       |
| 1971 | 5,339.00     | 4,667   | 5,873     |         |       |
| 1972 | 1,592.19     | 1,360   | 1,751     |         |       |
| 1973 | 43,992.72    | 36,726  | 48,392    |         |       |
| 1974 | 1,502.79     | 1,225   | 1,653     |         |       |
| 1975 | 1,694.31     | 1,348   | 1,864     |         |       |
| 1976 | 142,236.37   | 110,361 | 156,460   |         |       |
| 1977 | 148,854.53   | 112,571 | 163,740   |         |       |
| 1978 | 43,733.74    | 32,214  | 48,107    |         |       |
| 1979 | 160,871.41   | 115,340 | 176,959   |         |       |
| 1980 | 80,134.38    | 55,880  | 88,148    |         |       |
| 1981 | 347,072.75   | 235,203 | 381,780   |         |       |
| 1982 | 323,830.63   | 213,091 | 356,214   |         |       |
| 1983 | 346,719.60   | 221,344 | 381,392   |         |       |
| 1984 | 327,136.68   | 202,416 | 359,850   |         |       |
| 1985 | 220,670.72   | 132,205 | 242,738   |         |       |
| 1986 | 341,756.13   | 198,037 | 375,932   |         |       |
| 1987 | 159,052.33   | 89,041  | 174,958   |         |       |
| 1988 | 195,933.46   | 105,839 | 215,527   |         |       |
| 1989 | 562,083.85   | 292,582 | 618,292   |         |       |
| 1990 | 540,376.98   | 270,673 | 594,415   |         |       |
| 1991 | 476,735.40   | 229,429 | 524,409   |         |       |
| 1992 | 778,536.83   | 359,376 | 856,391   |         |       |
| 1993 | 1,204,616.79 | 532,403 | 1,325,078 |         |       |
| 1994 | 1,306,338.06 | 551,697 | 1,415,380 | 21,592  | 17.25 |
| 1995 | 1,677,194.50 | 675,368 | 1,732,659 | 112,255 | 17.75 |
| 1996 | 1,541,740.94 | 590,535 | 1,515,019 | 180,896 | 18.25 |
| 1997 | 1,567,237.49 | 569,528 | 1,461,126 | 262,835 | 18.75 |
| 1998 | 1,991,701.26 | 684,647 | 1,756,464 | 434,407 | 19.25 |
| 1999 | 1,931,763.00 | 626,092 | 1,606,240 | 518,699 | 19.75 |
| 2000 | 427,938.23   | 130,294 | 334,270   | 136,462 | 20.25 |
| 2001 | 94,517.53    | 26,921  | 69,066    | 34,903  | 20.75 |
| 2003 | 1,642.18     | 403     | 1,034     | 772     | 21.75 |
| 2006 | 8,816.12     | 1,645   | 4,220     | 5,478   | 23.25 |
| 2007 | 7,242.67     | 1,209   | 3,102     | 4,865   | 23.75 |
| 2008 | 1,721.13     | 254     | 652       | 1,241   | 24.25 |

SURVIVOR CURVE.. IOWA 28-01

NET SALVAGE PERCENT.. -10

|      |           |     |       |        |       |     |
|------|-----------|-----|-------|--------|-------|-----|
| 2011 | 3,024.65  | 267 | 685   | 2,642  | 25.75 | 103 |
| 2012 | 5,205.53  | 358 | 918   | 4,808  | 26.25 | 183 |
| 2014 | 24,340.74 | 717 | 1,839 | 24,936 | 27.25 | 915 |

|               |           |            |           |        |
|---------------|-----------|------------|-----------|--------|
| 17,054,091.74 | 7,421,501 | 17,012,710 | 1,746,791 | 90,485 |
|---------------|-----------|------------|-----------|--------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 19.3 0.53

SURVIVOR CURVE.. IOWA 28-L0.5  
NET SALVAGE PERCENT.. -10

|      |              |         |         |         |       |        |
|------|--------------|---------|---------|---------|-------|--------|
| 1941 | 41,076.95    | 35,648  | 33,795  | 11,390  | 5.91  | 1,927  |
| 1942 | 4,029.94     | 3,480   | 3,299   | 1,134   | 6.02  | 188    |
| 1943 | 209.71       | 180     | 171     | 60      | 6.12  | 10     |
| 1944 | 1,079.79     | 924     | 876     | 312     | 6.22  | 50     |
| 1945 | 768.80       | 655     | 621     | 225     | 6.32  | 36     |
| 1946 | 4,292.27     | 3,637   | 3,448   | 1,273   | 6.43  | 198    |
| 1947 | 8,668.75     | 7,308   | 6,928   | 2,608   | 6.54  | 399    |
| 1948 | 14,478.70    | 12,144  | 11,513  | 4,414   | 6.65  | 664    |
| 1949 | 8,669.40     | 7,234   | 6,858   | 2,678   | 6.76  | 396    |
| 1950 | 6,816.54     | 5,656   | 5,362   | 2,136   | 6.88  | 310    |
| 1951 | 10,701.80    | 8,829   | 8,370   | 3,402   | 7.00  | 486    |
| 1952 | 8,588.11     | 7,045   | 6,679   | 2,768   | 7.12  | 389    |
| 1953 | 26,886.57    | 21,917  | 20,778  | 8,797   | 7.25  | 1,213  |
| 1954 | 32,945.12    | 26,675  | 25,289  | 10,951  | 7.39  | 1,482  |
| 1955 | 51,458.10    | 41,381  | 39,230  | 17,374  | 7.53  | 2,307  |
| 1956 | 43,799.36    | 34,982  | 33,164  | 15,015  | 7.67  | 1,958  |
| 1957 | 39,844.80    | 31,588  | 29,946  | 13,883  | 7.82  | 1,775  |
| 1958 | 52,805.95    | 41,553  | 39,393  | 18,694  | 7.97  | 2,346  |
| 1959 | 54,347.49    | 42,424  | 40,219  | 19,563  | 8.13  | 2,406  |
| 1960 | 69,688.55    | 53,961  | 51,156  | 25,501  | 8.29  | 3,076  |
| 1961 | 76,191.02    | 58,488  | 55,448  | 28,362  | 8.46  | 3,352  |
| 1962 | 87,922.10    | 66,906  | 63,428  | 33,286  | 8.63  | 3,857  |
| 1963 | 135,706.71   | 102,361 | 97,041  | 52,236  | 8.80  | 5,936  |
| 1964 | 179,809.90   | 134,357 | 127,373 | 70,418  | 8.98  | 7,842  |
| 1965 | 60,513.96    | 44,765  | 42,438  | 24,127  | 9.17  | 2,631  |
| 1966 | 307,750.16   | 225,360 | 213,646 | 124,879 | 9.36  | 13,342 |
| 1967 | 193,235.19   | 140,061 | 132,781 | 79,778  | 9.55  | 8,354  |
| 1968 | 148,659.02   | 106,584 | 101,044 | 62,481  | 9.75  | 6,408  |
| 1969 | 192,188.27   | 136,281 | 129,198 | 82,209  | 9.95  | 8,262  |
| 1970 | 26,167.89    | 18,340  | 17,387  | 11,398  | 10.16 | 1,122  |
| 1971 | 182,510.45   | 126,407 | 119,837 | 80,924  | 10.37 | 7,804  |
| 1972 | 50,953.82    | 34,851  | 33,040  | 23,009  | 10.59 | 2,173  |
| 1973 | 111,085.64   | 75,019  | 71,120  | 51,074  | 10.81 | 4,725  |
| 1974 | 186,696.68   | 124,392 | 117,926 | 87,440  | 11.04 | 7,920  |
| 1975 | 113,908.64   | 74,866  | 70,975  | 54,325  | 11.27 | 4,820  |
| 1976 | 88,366.64    | 57,281  | 54,304  | 42,899  | 11.50 | 3,730  |
| 1977 | 125,285.70   | 80,030  | 75,870  | 61,944  | 11.74 | 5,276  |
| 1978 | 145,082.33   | 91,252  | 86,509  | 73,082  | 11.99 | 6,095  |
| 1979 | 333,194.11   | 206,296 | 195,573 | 170,941 | 12.24 | 13,966 |
| 1980 | 61,598.79    | 37,509  | 35,559  | 32,200  | 12.50 | 2,576  |
| 1981 | 1,045,858.37 | 626,175 | 593,628 | 556,816 | 12.76 | 43,638 |
| 1982 | 458,933.77   | 270,083 | 256,045 | 248,782 | 13.02 | 19,108 |
| 1983 | 195,437.83   | 112,943 | 107,073 | 107,909 | 13.29 | 8,120  |

SURVIVOR CURVE.. IOWA 28-L0.5  
NET SALVAGE PERCENT.. -10

|      |               |            |            |            |       |           |
|------|---------------|------------|------------|------------|-------|-----------|
| 1984 | 870,408.00    | 493,431    | 467,784    | 489,665    | 13.57 | 36,084    |
| 1985 | 930,846.77    | 517,454    | 490,558    | 533,373    | 13.85 | 38,511    |
| 1986 | 625,183.91    | 340,413    | 322,719    | 364,983    | 14.14 | 25,812    |
| 1988 | 178,175.94    | 92,887     | 88,059     | 107,935    | 14.73 | 7,328     |
| 1989 | 1,122,501.63  | 571,517    | 541,811    | 692,941    | 15.04 | 46,073    |
| 1990 | 740,066.91    | 367,790    | 348,673    | 465,401    | 15.35 | 30,319    |
| 1991 | 587,593.72    | 284,628    | 269,834    | 376,519    | 15.67 | 24,028    |
| 1992 | 417,023.52    | 196,761    | 186,534    | 272,192    | 15.99 | 17,023    |
| 1993 | 969,302.45    | 444,768    | 421,650    | 644,583    | 16.32 | 39,497    |
| 1994 | 1,528,527.70  | 680,959    | 645,565    | 1,035,815  | 16.66 | 62,174    |
| 1995 | 600,454.85    | 259,484    | 245,997    | 414,503    | 17.00 | 24,383    |
| 1996 | 933,533.18    | 390,587    | 370,285    | 656,601    | 17.35 | 37,844    |
| 1997 | 1,287,919.21  | 520,641    | 493,580    | 923,131    | 17.71 | 52,125    |
| 1998 | 912,390.42    | 355,576    | 337,094    | 666,535    | 18.08 | 36,866    |
| 1999 | 2,614,443.57  | 980,879    | 929,896    | 1,945,992  | 18.45 | 105,474   |
| 2000 | 2,971,656.54  | 1,070,539  | 1,014,895  | 2,253,927  | 18.83 | 119,699   |
| 2001 | 2,434,615.19  | 838,800    | 795,201    | 1,882,876  | 19.23 | 97,913    |
| 2002 | 1,985,302.15  | 652,027    | 618,136    | 1,565,696  | 19.64 | 79,720    |
| 2003 | 5,111,538.88  | 1,592,403  | 1,509,634  | 4,113,059  | 20.07 | 204,936   |
| 2004 | 1,903,209.90  | 559,266    | 530,197    | 1,563,334  | 20.52 | 76,186    |
| 2005 | 396,543.57    | 109,049    | 103,381    | 332,817    | 21.00 | 15,848    |
| 2006 | 318,362.08    | 81,172     | 76,953     | 273,245    | 21.51 | 12,703    |
| 2007 | 42,005.95     | 9,836      | 9,325      | 36,882     | 22.04 | 1,673     |
| 2008 | 2,808,783.88  | 594,760    | 563,846    | 2,525,816  | 22.61 | 111,712   |
| 2009 | 8,358,582.52  | 1,572,893  | 1,491,139  | 7,703,302  | 23.21 | 331,896   |
| 2010 | 17,156,153.84 | 2,803,779  | 2,658,046  | 16,213,723 | 23.84 | 680,106   |
| 2011 | 4,672,804.56  | 640,660    | 607,360    | 4,532,725  | 24.51 | 184,934   |
| 2012 | 6,355,945.80  | 696,637    | 660,428    | 6,331,112  | 25.21 | 251,135   |
| 2013 | 2,005,001.28  | 162,259    | 153,825    | 2,051,676  | 25.94 | 79,093    |
| 2014 | 15,925,692.98 | 800,760    | 759,139    | 16,759,123 | 26.72 | 627,213   |
| 2015 | 4,245,037.71  | 75,040     | 71,140     | 4,598,401  | 27.55 | 166,911   |
|      | 95,997,822.30 | 22,095,483 | 20,947,022 | 84,650,583 |       | 3,837,892 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 22.1 4.00

SURVIVOR CURVE.. IOWA 50-S0  
NET SALVAGE PERCENT.. -15

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1941 | 20,925.95    | 19,425    | 16,086    | 7,979     | 9.64  | 828     |
| 1942 | 561.26       | 516       | 427       | 218       | 10.03 | 22      |
| 1949 | 227.20       | 194       | 161       | 100       | 12.85 | 8       |
| 1950 | 2,473.03     | 2,090     | 1,731     | 1,113     | 13.25 | 84      |
| 1952 | 2,144.06     | 1,771     | 1,467     | 999       | 14.08 | 71      |
| 1953 | 807.17       | 659       | 546       | 382       | 14.49 | 26      |
| 1955 | 9,134.26     | 7,284     | 6,032     | 4,472     | 15.33 | 292     |
| 1956 | 269,264.00   | 212,113   | 175,651   | 134,003   | 15.75 | 8,508   |
| 1957 | 13.55        | 11        | 9         | 7         | 16.18 |         |
| 1958 | 157,902.06   | 121,300   | 100,449   | 81,138    | 16.60 | 4,888   |
| 1960 | 3,486.27     | 2,609     | 2,161     | 1,848     | 17.46 | 106     |
| 1961 | 43,899.38    | 32,411    | 26,840    | 23,644    | 17.90 | 1,321   |
| 1962 | 361,103.33   | 263,031   | 217,816   | 197,453   | 18.33 | 10,772  |
| 1963 | 15,228.70    | 10,939    | 9,059     | 8,454     | 18.77 | 450     |
| 1965 | 93,255.64    | 65,076    | 53,889    | 53,355    | 19.66 | 2,714   |
| 1966 | 311,293.37   | 214,076   | 177,276   | 180,711   | 20.10 | 8,991   |
| 1967 | 30,369.85    | 20,571    | 17,035    | 17,890    | 20.55 | 871     |
| 1968 | 6,845.65     | 4,564     | 3,779     | 4,093     | 21.01 | 195     |
| 1969 | 177,919.99   | 116,790   | 96,714    | 107,894   | 21.46 | 5,028   |
| 1970 | 931,480.68   | 601,587   | 498,175   | 573,028   | 21.92 | 26,142  |
| 1971 | 153,987.54   | 97,787    | 80,977    | 96,109    | 22.39 | 4,292   |
| 1972 | 381,891.85   | 238,472   | 197,479   | 241,697   | 22.85 | 10,578  |
| 1973 | 20,525.49    | 12,595    | 10,430    | 13,174    | 23.32 | 565     |
| 1974 | 29,934.37    | 18,038    | 14,937    | 19,488    | 23.80 | 819     |
| 1975 | 106,055.99   | 62,763    | 51,974    | 69,990    | 24.27 | 2,884   |
| 1977 | 99,499.44    | 56,663    | 46,923    | 67,501    | 25.24 | 2,674   |
| 1979 | 99,458.52    | 54,375    | 45,028    | 69,349    | 26.23 | 2,644   |
| 1980 | 80,159.37    | 42,921    | 35,543    | 56,640    | 26.72 | 2,120   |
| 1981 | 1,181,126.82 | 618,568   | 512,237   | 846,059   | 27.23 | 31,071  |
| 1982 | 243,932.20   | 124,888   | 103,420   | 177,102   | 27.74 | 6,384   |
| 1983 | 381,705.99   | 190,948   | 158,124   | 280,838   | 28.25 | 9,941   |
| 1984 | 181,632.11   | 88,689    | 73,443    | 135,434   | 28.77 | 4,707   |
| 1985 | 1,317,694.72 | 627,658   | 519,764   | 995,585   | 29.29 | 33,991  |
| 1986 | 718,386.14   | 333,432   | 276,115   | 550,029   | 29.82 | 18,445  |
| 1988 | 588,128.55   | 258,365   | 213,952   | 462,396   | 30.90 | 14,964  |
| 1989 | 6,204,960.03 | 2,647,346 | 2,192,269 | 4,943,435 | 31.45 | 157,184 |
| 1990 | 764,131.71   | 316,351   | 261,970   | 616,781   | 32.00 | 19,274  |
| 1991 | 278,237.87   | 111,607   | 92,422    | 227,552   | 32.56 | 6,989   |
| 1992 | 761,913.37   | 295,630   | 244,811   | 631,389   | 33.13 | 19,058  |
| 1994 | 800,609.07   | 289,284   | 239,556   | 681,144   | 34.29 | 19,864  |
| 1995 | 3,291,747.62 | 1,143,981 | 947,332   | 2,838,178 | 34.89 | 81,346  |
| 1996 | 926,707.45   | 309,270   | 256,107   | 809,607   | 35.49 | 22,812  |
| 1997 | 199,853.77   | 63,893    | 52,910    | 176,922   | 36.10 | 4,901   |

SURVIVOR CURVE.. IOWA 50-S0  
NET SALVAGE PERCENT.. -15

|      |              |         |         |           |       |         |
|------|--------------|---------|---------|-----------|-------|---------|
| 1998 | 143,057.78   | 43,696  | 36,185  | 128,331   | 36.72 | 3,495   |
| 1999 | 434,929.92   | 126,543 | 104,790 | 395,379   | 37.35 | 10,586  |
| 2000 | 448,594.83   | 123,915 | 102,614 | 413,270   | 37.99 | 10,878  |
| 2001 | 1,061,063.69 | 277,235 | 229,579 | 990,644   | 38.64 | 25,638  |
| 2002 | 161,504.46   | 39,746  | 32,914  | 152,816   | 39.30 | 3,888   |
| 2003 | 1,738,444.06 | 400,642 | 331,772 | 1,667,439 | 39.98 | 41,707  |
| 2004 | 317,371.37   | 68,105  | 56,398  | 308,579   | 40.67 | 7,587   |
| 2005 | 1,183,971.00 | 235,006 | 194,609 | 1,166,958 | 41.37 | 28,208  |
| 2006 | 646,597.22   | 117,635 | 97,414  | 646,173   | 42.09 | 15,352  |
| 2007 | 1,088,091.67 | 179,437 | 148,592 | 1,102,713 | 42.83 | 25,746  |
| 2008 | 4,422,984.30 | 653,098 | 540,830 | 4,545,602 | 43.58 | 104,305 |
| 2009 | 2,633,686.17 | 342,248 | 283,416 | 2,745,323 | 44.35 | 61,901  |
| 2010 | 1,160,979.54 | 129,507 | 107,245 | 1,227,881 | 45.15 | 27,196  |
| 2011 | 3,125,052.54 | 290,380 | 240,464 | 3,353,346 | 45.96 | 72,962  |
| 2012 | 6,334,518.20 | 466,221 | 386,077 | 6,898,619 | 46.80 | 147,406 |
| 2013 | 2,888,311.90 | 154,785 | 128,177 | 3,193,382 | 47.67 | 66,989  |
| 2014 | 1,775,868.42 | 58,408  | 48,368  | 1,993,881 | 48.57 | 41,052  |
| 2015 | 5,860,718.68 | 66,050  | 54,696  | 6,685,130 | 49.51 | 135,026 |

|               |            |            |            |           |
|---------------|------------|------------|------------|-----------|
| 56,676,361.14 | 13,473,198 | 11,157,166 | 54,020,649 | 1,378,746 |
|---------------|------------|------------|------------|-----------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 39.2 2.43

SURVIVOR CURVE.. IOWA 33-R1.5  
NET SALVAGE PERCENT.. -10

|      |            |         |         |         |       |       |
|------|------------|---------|---------|---------|-------|-------|
| 1954 | 172.93     | 181     | 190     |         |       |       |
| 1960 | 725.23     | 722     | 798     |         |       |       |
| 1962 | 7,205.33   | 7,056   | 7,926   |         |       |       |
| 1963 | 399.36     | 388     | 439     |         |       |       |
| 1966 | 623.09     | 588     | 685     |         |       |       |
| 1967 | 465.41     | 435     | 512     |         |       |       |
| 1970 | 405.94     | 367     | 447     |         |       |       |
| 1971 | 1,164.17   | 1,041   | 1,281   |         |       |       |
| 1973 | 131.45     | 115     | 145     |         |       |       |
| 1974 | 186.50     | 161     | 205     |         |       |       |
| 1977 | 148.09     | 122     | 163     |         |       |       |
| 1978 | 3,924.94   | 3,186   | 4,317   |         |       |       |
| 1979 | 5,040.26   | 4,022   | 5,544   |         |       |       |
| 1980 | 837.61     | 657     | 921     |         |       |       |
| 1981 | 51,658.03  | 39,742  | 56,824  |         |       |       |
| 1982 | 4,351.91   | 3,281   | 4,787   |         |       |       |
| 1983 | 18,457.70  | 13,628  | 20,129  | 174     | 10.85 | 16    |
| 1984 | 1,919.65   | 1,387   | 2,049   | 63      | 11.33 | 6     |
| 1985 | 10,670.24  | 7,530   | 11,122  | 615     | 11.83 | 52    |
| 1986 | 4,221.73   | 2,906   | 4,292   | 352     | 12.35 | 29    |
| 1987 | 3,902.50   | 2,617   | 3,865   | 428     | 12.88 | 33    |
| 1988 | 4,433.34   | 2,892   | 4,272   | 605     | 13.43 | 45    |
| 1989 | 121,720.51 | 77,130  | 113,922 | 19,971  | 13.99 | 1,428 |
| 1991 | 42,777.33  | 25,438  | 37,572  | 9,483   | 15.16 | 626   |
| 1992 | 1,038.61   | 597     | 882     | 260     | 15.77 | 16    |
| 1993 | 2,633.36   | 1,458   | 2,153   | 744     | 16.39 | 45    |
| 1994 | 62,551.31  | 33,319  | 49,213  | 19,593  | 17.02 | 1,151 |
| 1995 | 3,884.36   | 1,985   | 2,932   | 1,341   | 17.67 | 76    |
| 1996 | 40,240.41  | 19,678  | 29,065  | 15,199  | 18.33 | 829   |
| 1998 | 16,271.89  | 7,225   | 10,671  | 7,228   | 19.68 | 367   |
| 1999 | 2,747.75   | 1,157   | 1,709   | 1,314   | 20.37 | 65    |
| 2000 | 113,747.39 | 45,234  | 66,812  | 58,310  | 21.07 | 2,767 |
|      | 528,658.33 | 306,245 | 445,844 | 135,680 |       | 7,551 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 18.0 1.43

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

|      |              |           |           |         |       |         |
|------|--------------|-----------|-----------|---------|-------|---------|
| 1979 | 139.70       | 140       | 140       |         |       |         |
| 1981 | 3,659.24     | 3,659     | 3,659     |         |       |         |
| 1992 | 98,424.92    | 98,425    | 98,425    |         |       |         |
| 1993 | 97,780.00    | 97,780    | 97,780    |         |       |         |
| 1994 | 146,869.00   | 146,869   | 146,869   |         |       |         |
| 1995 | 380,370.00   | 380,370   | 380,370   |         |       |         |
| 1996 | 218,919.78   | 213,447   | 217,218   | 1,702   | 0.50  | 1,702   |
| 1997 | 273,690.39   | 253,164   | 257,636   | 16,054  | 1.50  | 10,703  |
| 1998 | 217,728.76   | 190,513   | 193,879   | 23,850  | 2.50  | 9,540   |
| 1999 | 197,525.05   | 162,958   | 165,837   | 31,688  | 3.50  | 9,054   |
| 2000 | 3,589,975.52 | 2,782,231 | 2,831,381 | 758,595 | 4.50  | 168,577 |
| 2001 | 163,226.00   | 118,339   | 120,430   | 42,796  | 5.50  | 7,781   |
| 2002 | 188,528.48   | 127,257   | 129,505   | 59,023  | 6.50  | 9,080   |
| 2003 | 250,973.01   | 156,858   | 159,629   | 91,344  | 7.50  | 12,179  |
| 2004 | 149,260.52   | 85,825    | 87,341    | 61,920  | 8.50  | 7,285   |
| 2005 | 164,091.73   | 86,148    | 87,670    | 76,422  | 9.50  | 8,044   |
| 2006 | 99,011.55    | 47,030    | 47,861    | 51,151  | 10.50 | 4,872   |
| 2007 | 312,121.99   | 132,652   | 134,995   | 177,127 | 11.50 | 15,402  |
| 2008 | 181,323.81   | 67,996    | 69,197    | 112,127 | 12.50 | 8,970   |
| 2009 | 591,964.52   | 192,388   | 195,787   | 396,178 | 13.50 | 29,347  |
| 2010 | 56,433.78    | 15,519    | 15,793    | 40,641  | 14.50 | 2,803   |
| 2011 | 106,713.53   | 24,011    | 24,435    | 82,279  | 15.50 | 5,308   |
| 2012 | 415,596.78   | 72,729    | 74,014    | 341,583 | 16.50 | 20,702  |
| 2013 | 396,657.69   | 49,582    | 50,458    | 346,200 | 17.50 | 19,783  |
| 2014 | 865,497.68   | 64,912    | 66,059    | 799,439 | 18.50 | 43,213  |
| 2015 | 831,276.04   | 20,782    | 21,149    | 810,127 | 19.50 | 41,545  |

|              |           |           |           |         |
|--------------|-----------|-----------|-----------|---------|
| 9,997,759.47 | 5,591,584 | 5,677,517 | 4,320,242 | 435,890 |
|--------------|-----------|-----------|-----------|---------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.9 4.36



SURVIVOR CURVE.. 4-SQUARE

NET SALVAGE PERCENT.. 0

|      |              |           |           |           |      |           |
|------|--------------|-----------|-----------|-----------|------|-----------|
| 2009 | 90,680.82    | 90,681    | 90,681    |           |      |           |
| 2010 | 585,963.69   | 585,964   | 585,964   |           |      |           |
| 2011 | 1,781,377.64 | 1,781,378 | 1,781,378 |           |      |           |
| 2012 | 807,591.04   | 706,642   | 322,984   | 484,607   | 0.50 | 484,607   |
| 2013 | 880,851.66   | 550,532   | 251,631   | 629,221   | 1.50 | 419,481   |
| 2014 | 1,114,963.88 | 418,111   | 191,106   | 923,858   | 2.50 | 369,543   |
| 2015 | 2,225,749.13 | 278,219   | 127,165   | 2,098,584 | 3.50 | 599,595   |
|      | 7,487,177.86 | 4,411,527 | 3,350,909 | 4,136,269 |      | 1,873,226 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.2 25.02

SURVIVOR CURVE.. IOWA 14-S2

NET SALVAGE PERCENT.. 0

|      |              |         |         |         |       |        |
|------|--------------|---------|---------|---------|-------|--------|
| 1995 | 13,338.44    | 11,871  | 13,338  |         |       |        |
| 1997 | 92,023.03    | 78,483  | 92,023  |         |       |        |
| 1999 | 245,293.25   | 198,688 | 245,293 |         |       |        |
| 2000 | 19,170.48    | 15,076  | 19,170  |         |       |        |
| 2002 | 20,067.63    | 14,692  | 20,068  |         |       |        |
| 2005 | 25,658.90    | 16,147  | 25,659  |         |       |        |
| 2006 | 21,485.44    | 12,630  | 21,485  |         |       |        |
| 2007 | 48,222.98    | 26,144  | 48,223  |         |       |        |
| 2008 | 53,416.01    | 26,288  | 53,416  |         |       |        |
| 2009 | 37,375.96    | 16,339  | 35,017  | 2,359   | 7.88  | 299    |
| 2010 | 72,524.72    | 27,404  | 58,732  | 13,793  | 8.71  | 1,584  |
| 2011 | 207,041.78   | 65,071  | 139,459 | 67,583  | 9.60  | 7,040  |
| 2012 | 20,712.34    | 5,119   | 10,971  | 9,741   | 10.54 | 924    |
| 2013 | 137,303.90   | 24,421  | 52,339  | 84,965  | 11.51 | 7,382  |
| 2014 | 66,621.85    | 7,138   | 15,298  | 51,324  | 12.50 | 4,106  |
|      | 1,080,256.71 | 545,511 | 850,491 | 229,766 |       | 21,335 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 10.8 1.97

SURVIVOR CURVE.. IOWA 16-L2.5

NET SALVAGE PERCENT.. 0

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1986 | 53,393.62    | 44,483    | 53,394    |           |       |         |
| 1987 | 29,800.99    | 24,493    | 29,801    |           |       |         |
| 1990 | 42,398.59    | 33,309    | 42,399    |           |       |         |
| 1991 | 28,015.92    | 21,625    | 28,016    |           |       |         |
| 1992 | 43,105.44    | 32,679    | 43,105    |           |       |         |
| 1995 | 65,953.79    | 47,033    | 65,954    |           |       |         |
| 1996 | 117,263.62   | 81,938    | 117,264   |           |       |         |
| 1999 | 89,313.31    | 59,002    | 89,313    |           |       |         |
| 2000 | 751,980.60   | 488,321   | 751,981   |           |       |         |
| 2002 | 71,349.71    | 44,371    | 71,350    |           |       |         |
| 2004 | 96,078.24    | 55,666    | 96,078    |           |       |         |
| 2007 | 12,992.33    | 6,171     | 12,992    |           |       |         |
| 2008 | 6,659.48     | 2,859     | 6,564     | 95        | 9.13  | 10      |
| 2009 | 31,924.42    | 12,131    | 27,853    | 4,071     | 9.92  | 410     |
| 2010 | 20,403.31    | 6,669     | 15,312    | 5,091     | 10.77 | 473     |
| 2011 | 957,253.85   | 260,258   | 597,567   | 359,687   | 11.65 | 30,874  |
| 2012 | 75,086.09    | 16,050    | 36,852    | 38,234    | 12.58 | 3,039   |
| 2013 | 27,046.30    | 4,175     | 9,586     | 17,460    | 13.53 | 1,290   |
| 2014 | 1,893,957.35 | 176,365   | 404,943   | 1,489,014 | 14.51 | 102,620 |
| 2015 | 82,110.68    | 2,566     | 5,892     | 76,219    | 15.50 | 4,917   |
|      | 4,496,087.64 | 1,420,164 | 2,506,216 | 1,989,872 |       | 143,633 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.9 3.19

SURVIVOR CURVE.. 25-SQUARE

NET SALVAGE PERCENT.. 0

|      |            |        |        |         |       |        |
|------|------------|--------|--------|---------|-------|--------|
| 1992 | 4,871.57   | 4,579  | 4,093  | 779     | 1.50  | 519    |
| 1993 | 15,790.00  | 14,211 | 12,704 | 3,086   | 2.50  | 1,234  |
| 1994 | 69,979.00  | 60,182 | 53,800 | 16,179  | 3.50  | 4,623  |
| 1995 | 49,532.00  | 40,616 | 36,309 | 13,223  | 4.50  | 2,938  |
| 1996 | 70,779.00  | 55,208 | 49,353 | 21,426  | 5.50  | 3,896  |
| 1997 | 863.00     | 639    | 571    | 292     | 6.50  | 45     |
| 1998 | 2,667.00   | 1,867  | 1,669  | 998     | 7.50  | 133    |
| 1999 | 15,683.00  | 10,351 | 9,253  | 6,430   | 8.50  | 756    |
| 2003 | 102,957.32 | 51,479 | 46,020 | 56,937  | 12.50 | 4,555  |
| 2005 | 118,483.26 | 49,763 | 44,486 | 73,997  | 14.50 | 5,103  |
| 2007 | 4,390.25   | 1,493  | 1,335  | 3,055   | 16.50 | 185    |
| 2009 | 49,517.43  | 12,875 | 11,509 | 38,008  | 18.50 | 2,054  |
| 2011 | 15,739.13  | 2,833  | 2,533  | 13,206  | 20.50 | 644    |
| 2012 | 94,723.04  | 13,261 | 11,854 | 82,869  | 21.50 | 3,854  |
| 2014 | 289,857.21 | 17,391 | 15,547 | 274,310 | 23.50 | 11,673 |
| 2015 | 598,593.70 | 11,972 | 10,702 | 587,892 | 24.50 | 23,996 |

|              |         |         |           |  |        |
|--------------|---------|---------|-----------|--|--------|
| 1,504,425.91 | 348,720 | 311,738 | 1,192,688 |  | 66,208 |
|--------------|---------|---------|-----------|--|--------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 18.0 4.40

SURVIVOR CURVE.. 25-SQUARE  
NET SALVAGE PERCENT.. 0

|      |               |           |           |           |       |         |
|------|---------------|-----------|-----------|-----------|-------|---------|
| 1991 | 71,615.29     | 70,183    | 69,747    | 1,868     | 0.50  | 1,868   |
| 1992 | 266,024.00    | 250,063   | 248,508   | 17,516    | 1.50  | 11,677  |
| 1993 | 51,227.00     | 46,104    | 45,817    | 5,410     | 2.50  | 2,164   |
| 1994 | 182,973.00    | 157,357   | 156,379   | 26,594    | 3.50  | 7,598   |
| 1995 | 128,983.00    | 105,766   | 105,108   | 23,875    | 4.50  | 5,306   |
| 1996 | 320,563.36    | 250,039   | 248,484   | 72,079    | 5.50  | 13,105  |
| 1997 | 275,144.00    | 203,607   | 202,341   | 72,803    | 6.50  | 11,200  |
| 1998 | 177,280.00    | 124,096   | 123,324   | 53,956    | 7.50  | 7,194   |
| 1999 | 291,566.00    | 192,434   | 191,238   | 100,328   | 8.50  | 11,803  |
| 2000 | 137,515.75    | 85,260    | 84,730    | 52,786    | 9.50  | 5,556   |
| 2001 | 113,230.00    | 65,673    | 65,265    | 47,965    | 10.50 | 4,568   |
| 2002 | 71,343.48     | 38,525    | 38,285    | 33,058    | 11.50 | 2,875   |
| 2003 | 865,094.84    | 432,547   | 429,857   | 435,238   | 12.50 | 34,819  |
| 2004 | 311,595.23    | 143,334   | 142,443   | 169,152   | 13.50 | 12,530  |
| 2005 | 203,940.80    | 85,655    | 85,122    | 118,819   | 14.50 | 8,194   |
| 2006 | 147,385.38    | 56,006    | 55,658    | 91,727    | 15.50 | 5,918   |
| 2007 | 204,061.37    | 69,381    | 68,950    | 135,111   | 16.50 | 8,189   |
| 2008 | 92,875.65     | 27,863    | 27,690    | 65,186    | 17.50 | 3,725   |
| 2009 | 831,398.08    | 216,164   | 214,820   | 616,578   | 18.50 | 33,329  |
| 2010 | 1,353,580.22  | 297,788   | 295,936   | 1,057,644 | 19.50 | 54,238  |
| 2011 | 1,081,030.09  | 194,585   | 193,375   | 887,655   | 20.50 | 43,300  |
| 2012 | 2,662,620.33  | 372,767   | 370,449   | 2,292,171 | 21.50 | 106,613 |
| 2013 | 647,844.06    | 64,784    | 64,381    | 583,463   | 22.50 | 25,932  |
| 2014 | 587,894.75    | 35,274    | 35,055    | 552,840   | 23.50 | 23,525  |
| 2015 | 1,070,112.37  | 21,402    | 21,269    | 1,048,843 | 24.50 | 42,810  |
|      | 12,146,898.05 | 3,606,657 | 3,584,231 | 8,562,667 |       | 488,036 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 17.5 4.02

SURVIVOR CURVE.. IOWA 16-L5

NET SALVAGE PERCENT.. 0

|      |              |         |         |           |       |         |
|------|--------------|---------|---------|-----------|-------|---------|
| 1997 | 6,098.00     | 5,389   | 6,098   |           |       |         |
| 1999 | 3,705.14     | 3,228   | 3,705   |           |       |         |
| 2000 | 20,831.00    | 17,902  | 20,831  |           |       |         |
| 2003 | 24,822.74    | 18,772  | 22,193  | 2,630     | 3.90  | 674     |
| 2004 | 96,576.68    | 68,146  | 80,564  | 16,013    | 4.71  | 3,400   |
| 2005 | 11,307.99    | 7,357   | 8,698   | 2,610     | 5.59  | 467     |
| 2009 | 132,372.80   | 53,776  | 63,575  | 68,798    | 9.50  | 7,242   |
| 2010 | 701,660.60   | 241,196 | 285,148 | 416,513   | 10.50 | 39,668  |
| 2011 | 200,469.07   | 56,382  | 66,656  | 133,813   | 11.50 | 11,636  |
| 2012 | 236,821.97   | 51,805  | 61,246  | 175,576   | 12.50 | 14,046  |
| 2013 | 303,598.60   | 47,437  | 56,081  | 247,518   | 13.50 | 18,335  |
| 2014 | 522,741.73   | 49,007  | 57,938  | 464,804   | 14.50 | 32,055  |
| 2015 | 32,193.96    | 1,006   | 1,189   | 31,005    | 15.50 | 2,000   |
|      | 2,293,200.28 | 621,403 | 733,922 | 1,559,278 |       | 129,523 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.0 5.65

SURVIVOR CURVE.. IOWA 18-L3

NET SALVAGE PERCENT.. 0

|      |              |           |           |           |       |         |
|------|--------------|-----------|-----------|-----------|-------|---------|
| 1998 | 12,457.85    | 8,658     | 10,481    | 1,977     | 5.49  | 360     |
| 1999 | 719,866.06   | 492,705   | 596,463   | 123,403   | 5.68  | 21,726  |
| 2000 | 235,068.25   | 157,888   | 191,137   | 43,931    | 5.91  | 7,433   |
| 2001 | 421,824.46   | 276,531   | 334,765   | 87,059    | 6.20  | 14,042  |
| 2002 | 364,284.37   | 231,117   | 279,788   | 84,496    | 6.58  | 12,841  |
| 2003 | 1,005,438.46 | 611,085   | 739,772   | 265,666   | 7.06  | 37,630  |
| 2004 | 353,367.98   | 203,384   | 246,214   | 107,154   | 7.64  | 14,025  |
| 2005 | 130,862.23   | 70,447    | 85,282    | 45,580    | 8.31  | 5,485   |
| 2006 | 2,661,141.55 | 1,320,219 | 1,598,242 | 1,062,900 | 9.07  | 117,189 |
| 2007 | 2,467,174.30 | 1,111,610 | 1,345,702 | 1,121,472 | 9.89  | 113,395 |
| 2008 | 1,494,380.55 | 601,907   | 728,661   | 765,720   | 10.75 | 71,230  |
| 2009 | 1,220,864.00 | 430,696   | 521,396   | 699,468   | 11.65 | 60,040  |
| 2010 | 1,979,741.19 | 596,120   | 721,656   | 1,258,085 | 12.58 | 100,007 |
| 2011 | 2,762,282.69 | 685,958   | 830,412   | 1,931,871 | 13.53 | 142,784 |
| 2012 | 634,785.07   | 123,078   | 148,997   | 485,788   | 14.51 | 33,480  |
| 2013 | 841,007.21   | 116,807   | 141,405   | 699,602   | 15.50 | 45,136  |
| 2014 | 1,189,824.02 | 99,148    | 120,028   | 1,069,796 | 16.50 | 64,836  |
| 2015 | 7,362,781.63 | 204,538   | 247,611   | 7,115,171 | 17.50 | 406,581 |

|               |           |           |            |           |
|---------------|-----------|-----------|------------|-----------|
| 25,857,151.87 | 7,341,896 | 8,888,012 | 16,969,140 | 1,268,220 |
|---------------|-----------|-----------|------------|-----------|

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 13.4 4.90

SURVIVOR CURVE.. 10-SQUARE

NET SALVAGE PERCENT.. 0

|      |               |            |           |            |      |           |
|------|---------------|------------|-----------|------------|------|-----------|
| 1998 | 55,121.82     | 55,122     | 55,122    |            |      |           |
| 1999 | 21,147.52     | 21,148     | 21,148    |            |      |           |
| 2000 | 6,604,605.34  | 6,604,605  | 6,604,605 |            |      |           |
| 2001 | 26,921.72     | 26,922     | 26,922    |            |      |           |
| 2002 | 287,671.98    | 287,672    | 287,672   |            |      |           |
| 2003 | 570,618.36    | 570,618    | 570,618   |            |      |           |
| 2004 | 318,932.87    | 318,933    | 318,933   |            |      |           |
| 2005 | 11,795.73     | 11,796     | 11,796    |            |      |           |
| 2006 | 157,786.36    | 149,897    | 2,254-    | 160,040    | 0.50 | 160,040   |
| 2007 | 140,698.85    | 119,594    | 1,798-    | 142,497    | 1.50 | 94,998    |
| 2008 | 579,287.48    | 434,466    | 6,534-    | 585,821    | 2.50 | 234,328   |
| 2010 | 3,948,503.15  | 2,171,677  | 32,658-   | 3,981,161  | 4.50 | 884,702   |
| 2011 | 134,632.83    | 60,585     | 911-      | 135,544    | 5.50 | 24,644    |
| 2012 | 152,535.52    | 53,387     | 803-      | 153,339    | 6.50 | 23,591    |
| 2013 | 176,438.80    | 44,110     | 663-      | 177,102    | 7.50 | 23,614    |
| 2014 | 370,049.66    | 55,507     | 835-      | 370,885    | 8.50 | 43,634    |
| 2015 | 6,452,905.12  | 322,645    | 4,852-    | 6,457,757  | 9.50 | 679,764   |
|      | 20,009,653.11 | 11,308,684 | 7,845,508 | 12,164,145 |      | 2,169,315 |

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 5.6 10.84

SURVIVOR CURVE.. 10-SQUARE

NET SALVAGE PERCENT.. 0

|      |              |           |         |           |      |         |
|------|--------------|-----------|---------|-----------|------|---------|
| 2012 | 5,875,508.03 | 2,056,428 | 497,906 | 5,377,602 | 6.50 | 827,323 |
|------|--------------|-----------|---------|-----------|------|---------|

|  |              |           |         |           |  |         |
|--|--------------|-----------|---------|-----------|--|---------|
|  | 5,875,508.03 | 2,056,428 | 497,906 | 5,377,602 |  | 827,323 |
|--|--------------|-----------|---------|-----------|--|---------|

|                                                              |     |       |
|--------------------------------------------------------------|-----|-------|
| COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. | 6.5 | 14.08 |
|--------------------------------------------------------------|-----|-------|

KENTUCKY UTILITIES

DECOMMISSIONING COSTS RELATED TO GENERATING UNITS

| UNIT                | ESTIMATED<br>RETIREMENT<br>YEAR | MW  | ESTIMATED<br>DECOMMISSIONING<br>COSTS<br>(\$/KW) | TOTAL<br>DECOMMISSIONING<br>COSTS<br>(CURRENT \$) | TOTAL<br>DECOMMISSIONING<br>COSTS<br>(FUTURE \$) | ESTIMATED<br>TERMINAL<br>RETIREMENTS |
|---------------------|---------------------------------|-----|--------------------------------------------------|---------------------------------------------------|--------------------------------------------------|--------------------------------------|
| (1)                 | (2)                             | (3) | (4)                                              | (5)=(3)*(4)                                       | (6)                                              | (7)                                  |
| <b>STEAM</b>        |                                 |     |                                                  |                                                   |                                                  |                                      |
| SYSTEM LABORATORY   | 2040                            | 0   | 40                                               | 0                                                 | 0                                                | (3,981,926)                          |
| TRIMBLE COUNTY      | 2066                            | 335 | 40                                               | 13,400,000                                        | 48,388,905                                       | (590,869,790)                        |
| BROWN 1             | 2023                            | 106 | 40                                               | 4,240,000                                         | 5,295,179                                        |                                      |
| BROWN 2             | 2029                            | 166 | 40                                               | 6,640,000                                         | 9,616,700                                        |                                      |
| BROWN 3             | 2035                            | 411 | 40                                               | 16,440,000                                        | 27,612,326                                       |                                      |
| TOTAL BROWN         |                                 |     |                                                  | 27,320,000                                        | 42,524,205                                       | (903,057,104)                        |
| GHENT 1             | 2034                            | 493 | 40                                               | 19,720,000                                        | 32,313,516                                       |                                      |
| GHENT 2             | 2034                            | 490 | 40                                               | 19,600,000                                        | 32,116,882                                       |                                      |
| GHENT 3             | 2037                            | 454 | 40                                               | 18,160,000                                        | 32,045,330                                       |                                      |
| GHENT 4             | 2038                            | 487 | 40                                               | 19,480,000                                        | 35,233,981                                       |                                      |
| TOTAL GHENT         |                                 |     |                                                  | 76,960,000                                        | 131,709,709                                      | (2,544,166,674)                      |
| <b>TOTAL STEAM</b>  |                                 |     |                                                  | <b>117,680,000</b>                                | <b>222,622,819</b>                               | <b>(4,042,075,495)</b>               |
| <b>HYDRO</b>        |                                 |     |                                                  |                                                   |                                                  |                                      |
| DIX DAM             | 2041                            | 26  | 10                                               | 260,000                                           | 506,428                                          | (35,425,875)                         |
| <b>TOTAL HYDRO</b>  |                                 |     |                                                  | <b>260,000</b>                                    | <b>506,428</b>                                   | <b>(35,425,875)</b>                  |
| <b>OTHER</b>        |                                 |     |                                                  |                                                   |                                                  |                                      |
| CANE RUN            | 2055                            | 660 | 20                                               | 13,200,000                                        | 36,328,914                                       | (288,106,178)                        |
| HAEFLING 1, 2 AND 3 | 2020                            | 36  | 10                                               | 360,000                                           | 417,490                                          | (3,985,290)                          |
| PADDY'S RUN 13      | 2031                            | 74  | 10                                               | 740,000                                           | 1,125,998                                        | (27,330,118)                         |
| BROWN 5             | 2031                            | 57  | 10                                               | 570,000                                           | 867,322                                          |                                      |
| BROWN 6             | 2029                            | 91  | 10                                               | 910,000                                           | 1,317,951                                        |                                      |
| BROWN 7             | 2029                            | 91  | 10                                               | 910,000                                           | 1,317,951                                        |                                      |
| BROWN 8             | 2025                            | 121 | 10                                               | 1,210,000                                         | 1,587,625                                        |                                      |

KENTUCKY UTILITIES

DECOMMISSIONING COSTS RELATED TO GENERATING UNITS

| UNIT                        | ESTIMATED<br>RETIREMENT<br>YEAR | MW  | ESTIMATED<br>DECOMMISSIONING<br>COSTS<br>(\$/KW) | TOTAL<br>DECOMMISSIONING<br>COSTS<br>(CURRENT \$) | TOTAL<br>DECOMMISSIONING<br>COSTS<br>(FUTURE \$) | ESTIMATED<br>TERMINAL<br>RETIREMENTS |
|-----------------------------|---------------------------------|-----|--------------------------------------------------|---------------------------------------------------|--------------------------------------------------|--------------------------------------|
| (1)                         | (2)                             | (3) | (4)                                              | (5)=(3)*(4)                                       | (6)                                              | (7)                                  |
| BROWN 9                     | 2031                            | 121 | 10                                               | 1,210,000                                         | 1,841,158                                        |                                      |
| BROWN 10                    | 2031                            | 121 | 10                                               | 1,210,000                                         | 1,841,158                                        |                                      |
| BROWN 11                    | 2026                            | 121 | 10                                               | 1,210,000                                         | 1,627,315                                        |                                      |
| BROWN GAS PIPELINE          | 2031                            | 0   | 10                                               | 0                                                 | 0                                                |                                      |
| TOTAL BROWN                 |                                 |     |                                                  | 7,230,000                                         | 10,400,480                                       | (229,538,287)                        |
| TRIMBLE COUNTY 5            | 2032                            | 114 | 10                                               | 1,140,000                                         | 1,778,011                                        |                                      |
| TRIMBLE COUNTY 6            | 2032                            | 114 | 10                                               | 1,140,000                                         | 1,778,011                                        |                                      |
| TRIMBLE COUNTY GAS PIPELINE | 2034                            |     | 10                                               | 0                                                 | 0                                                |                                      |
| TRIMBLE COUNTY 7            | 2034                            | 101 | 10                                               | 1,010,000                                         | 1,655,003                                        |                                      |
| TRIMBLE COUNTY 8            | 2034                            | 101 | 10                                               | 1,010,000                                         | 1,655,003                                        |                                      |
| TRIMBLE COUNTY 9            | 2034                            | 101 | 10                                               | 1,010,000                                         | 1,655,003                                        |                                      |
| TRIMBLE COUNTY 10           | 2034                            | 101 | 10                                               | 1,010,000                                         | 1,655,003                                        |                                      |
| TOTAL TRIMBLE COUNTY        |                                 |     |                                                  | 6,320,000                                         | 10,176,034                                       | (190,892,260)                        |
| TOTAL OTHER                 |                                 |     |                                                  | 27,850,000                                        | 58,448,916                                       | (739,852,132)                        |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 34**

**Responding Witness: Daniel K. Arbough**

Q-34. Refer to the response to AG-1-189. Provide similar comparable information as projected for these periods:

- a. 2017
- b. 2018
- c. Forecast Test Year ended 6/30/2018

| <b>A-34. Year</b>    | <b>107</b>     | <b>108</b>    | <b>Total</b>   |
|----------------------|----------------|---------------|----------------|
| <b>2017</b>          | \$ 353,050,315 | \$ 13,826,679 | \$ 366,876,993 |
| <b>2018</b>          | \$ 415,023,299 | \$ 24,850,550 | \$ 439,873,849 |
| <b>TYE 6/30/2018</b> | \$ 385,977,893 | \$ 16,512,205 | \$ 402,490,098 |

The amounts above (as well as the amounts quoted in AG-1-189) exclude all expenditures recovered through mechanisms other than base rates.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 35**

**Responding Witness: John P. Malloy**

- Q-35. Refer to the response to AG-1-193. Does the Company have any meter replacement programs that will affect meter plant lives? If so, identify and explain fully (1) the programs and (2) how meter plant lives will be affected.
- A-35. The Company is evaluating options to provide a service similar to the AMS proposal to our customers with MV-90 billable meters. The Company will continue to utilize meter testing per Commission regulations to ensure the continued proper operation of meters. The Company does not expect any changes that would impact meter plant lives.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 36**

**Responding Witness: Daniel K. Arbough**

Q-36. Refer to the response to AG-1-205. Provide similar comparable information as projected for these periods:

- a. 2017
- b. 2018
- c. Forecast Test Year ended 6/30/2018

A-36.

**Accumulated COR Balance**

|                                 |                  |
|---------------------------------|------------------|
| 12/31/2017 (year end projected) | \$ (385,615,293) |
| 6/30/2018 (test year projected) | (391,782,803)    |
| 12/31/2018 (year end projected) | (392,767,413)    |

**Regulatory Assets - ARO Balance**

|                                 |                |
|---------------------------------|----------------|
| 12/31/2017 (year end projected) | \$ 208,035,089 |
| 6/30/2018 (test year projected) | 236,735,043    |
| 12/31/2018 (year end projected) | 264,428,916    |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 37**

**Responding Witness: Daniel K. Arbough**

Q-37. Refer to the response to AG-1-207. Provide similar comparable information as projected for these periods:

- a. 2017
- b. 2018
- c. Forecast Test Year ended 6/30/2018

A-37.

|                                      |    |                             |
|--------------------------------------|----|-----------------------------|
| Net Cost of Removal Balance 12/31/17 | \$ | (385,615,293)               |
| Depreciation                         |    | (15,744,432)                |
| Net Cost of Removal Charges          |    | 9,576,922                   |
| Net Cost of Removal Balance 06/30/18 |    | <u>(391,782,803)</u>        |
| Depreciation                         |    | (16,258,238)                |
| Net Cost of Removal Charges          |    | 15,273,628                  |
| Net Cost of Removal Balance 12/31/18 | \$ | <u><u>(392,767,413)</u></u> |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 38**

**Responding Witness: Daniel K. Arbough**

Q-38. Refer to the response to AG-1-209. Provide similar comparable information as projected for the Forecast Test Year ended 6/30/2018.

A-38. See attached.

**Expenses Billed By Affiliates to KU For Forecasted Test Year  
For the 12 Months Ended 06/30/2018**

|                                                                                   | <b>Total</b>      |
|-----------------------------------------------------------------------------------|-------------------|
| <b>a. Labor</b>                                                                   | \$ 67,440,985     |
| <b>b. Employee Benefits:</b>                                                      |                   |
| Overtime Payroll Taxes/Team Incentive Award                                       | 263,558           |
| Pension, FAS 106 and FAS 112                                                      | 193,246           |
| Other Employee Benefits                                                           | 52,004,404        |
| Education/Training - Tuition Reimbursement                                        | 421,879           |
| Misc Benefits Not On Burden Schedule                                              | 114,838           |
| Total Employee Benefits                                                           | <u>52,997,925</u> |
| <b>c. Employment Taxes</b> - Not budgeted separately; included in part (b) above. |                   |
| <b>d. Outside Services</b>                                                        | 63,983,677        |
| <b>e. Promotional, Institutional and/or Corporate Advertising</b>                 | 411,800           |
| <b>f. Contributions:</b>                                                          | None              |
| <b>g. Dues</b>                                                                    |                   |
| American Coal Ash (ACAA)                                                          | 13,416            |
| Chartwell                                                                         | 22,140            |
| Environmental Advocacy Group (Class of 85)                                        | 20,556            |
| Coal Combustion Residuals (CCR)                                                   | 18,736            |
| Coal Utilization Research Council                                                 | 21,577            |
| Cross Cutting Issues Group (CCI)                                                  | 15,095            |
| Director Asset Mgmt - All UofL Research                                           | 15,000            |
| Eastern Interconnection Planning Colaborative (EICP)                              | 20,347            |
| EEI Dues                                                                          | 422,368           |
| IEEE Dues                                                                         | 4,472             |
| Midwest Ozone Group Membership (MOG)                                              | 36,829            |
| National Energy Policy Alliance (NEPA)                                            | 8,030             |
| New Source Review (NSR)                                                           | 18,736            |
| North American Transmission Forum (NATF)                                          | 33,516            |
| PIRA Energy Group                                                                 | 26,072            |
| Southeastern Electric Exchange Membership Dues                                    | 5,000             |
| Utility Air Regulatory Group Member (UARG)                                        | 182,002           |
| Utility Solid Waste Activities Group (USWAG)                                      | 36,400            |
| Utility Water Act Group-Membership (UWAG)                                         | 53,530            |
| Waterways Council                                                                 | 16,344            |
| Items below \$4,000 and other items not budgeted in detail                        | 245,819           |
| Total Dues                                                                        | <u>1,235,984</u>  |
| <b>h. Affiliate Owned/Leased Aircraft</b>                                         | None              |
| <b>i. Regulatory Costs</b>                                                        |                   |
| VSCC, Virginia Rate Case, Docket No. unknown at this time                         | 37,500            |
| Advertising, Docket No. unknown at this time                                      | 142,500           |
| Docket No.'s 2016-00370, 2014-00371;KYPSC, 2014 and 2016 KY rate case             | 1,272,256         |
| Required FERC Expenses, Docket No. unknown at this time                           | 438,436           |
| Total Regulatory Costs                                                            | <u>1,890,692</u>  |
| <b>j. Travel Costs</b>                                                            | 1,729,433         |
| <b>k. Lobbying or Politically Related Activities</b>                              | None              |
| <b>l. Miscellaneous:</b>                                                          |                   |
| Audit - PCAOB Fees                                                                | 37,118            |
| Bank Service Fees                                                                 | 946,102           |
| Cellular/Paging Services                                                          | 556,481           |

**Expenses Billed By Affiliates to KU For Forecasted Test Year  
For the 12 Months Ended 06/30/2018**

|                                                                 | <b>Total</b> |
|-----------------------------------------------------------------|--------------|
| Chief Compliance Officer                                        | 58,208       |
| Computer Custom Software or Services/Mtce - Nontaxable          | 63,075       |
| Computer Hardware Mtce - Nontaxable                             | 225,691      |
| Computer Hardware Purchases - Taxable                           | (9,329)      |
| Computer Prewritten Software or Upgrades/Updates Mtce - Taxable | 4,480        |
| Computer Software Purchases - Taxable                           | 286,844      |
| Credit Services                                                 | 7,891        |
| Depreciation                                                    | 763,147      |
| Education & Training - Course Fees                              | 1,327,144    |
| Facilities Expenses                                             | 254,030      |
| Fees, Permits & Licenses                                        | 2,871,508    |
| Financial Statement Reporting Software                          | 3,514        |
| Freight - Other                                                 | 129,418      |
| Hyperion Financial Management                                   | 9,676        |
| Insurance Services                                              | 9,968,150    |
| Internal Reporting                                              | 172,549      |
| Investor Relations                                              | 210,283      |
| IT Joint Initiatives - Non-Labor                                | 78,947       |
| Lease/Rental - Buildings                                        | 1,652,791    |
| Lease/Rental - Other                                            | 381,392      |
| Lease/Rental - Parking                                          | 7,306        |
| Lease/Rental Vehicles And Equipment                             | 10,932       |
| Meals - Fully Deductible                                        | 713,496      |
| Meals /Enter- Partially Deductible                              | 314,907      |
| O&M Non-labor Expenses for Jointly Owned Gas Turbines           | 22,057,909   |
| Office and Administrative Services                              | 6,077,668    |
| Office of General Counsel                                       | 470,722      |
| Pension/Investments                                             | 251,821      |
| Postage                                                         | 3,015,775    |
| Power Transactions                                              | 44,046,036   |
| Purchased Material - Coal                                       | 14,417,119   |
| Purchased Material - Computer Hardware Purchases                | 101,916      |
| Purchased Material - Computer Purchases And Supplies            | 2,205        |
| Purchased Material - Computer Software Purchases                | 65,830       |
| Purchased Material - Fuel Oil                                   | 475,444      |
| Purchased Material - Gas                                        | 117,161,160  |
| Purchased Material - Office Supplies/Equipment/Furniture        | 269,203      |
| Purchased Material - Other                                      | 1,271,731    |
| Purchased Material - Safety Supplies                            | 177,850      |
| Recruiting Expenses                                             | 67,073       |
| Research and Development                                        | 3,724,500    |
| Rights Of Way                                                   | 124,236      |
| Subscriptions                                                   | 506,218      |
| Telecommunications - Long Distance Calls                        | 60,675       |
| Telecommunications - Other                                      | 1,609,878    |
| Transportation                                                  | 196,689      |
| UI Planner Software                                             | 10,486       |
| Utilities                                                       | 49,870       |

**Expenses Billed By Affiliates to KU For Forecasted Test Year  
For the 12 Months Ended 06/30/2018**

|                      | <b>Total</b>       |
|----------------------|--------------------|
| Vehicles/Equipment   | 415,626            |
| Wall Street Software | 37,440             |
| Total Miscellaneous  | 237,710,829        |
| <b>Grand Total</b>   | <b>427,401,326</b> |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 39**

**Responding Witness: Gregory J. Meiman**

- Q-39. Health and medical insurance. Refer to the response to AG-1-217.
- a. Is the Company's cost of medical insurance projected for the Forecast Test Year ended 6/30/2018 impacted by any provisions of the Affordable Health Care Act (Obamacare)? If so, please explain.
  - b. Would the Company's cost of medical insurance projected for the Forecast Test Year ended 6/30/2018 be impacted if Obamacare were to be repealed? If not, explain fully why not. If so, identify, quantify and explain the impacts.
- A-39.
- a. No.
  - b. If repealed, the company would evaluate and decide whether to reduce benefits or change eligibility that was required by the Affordable Care Act.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 40**

**Responding Witness: Valerie L. Scott**

- Q-40. Refer to the response to AG-1-223.
- a. In which customer class was the customer that was related to the \$58,806 write off in 2015?
  - b. In which customer class was the customer that was related to the \$582,856 write off in 2016?
  - c. In which customer class was the customer that was related to the \$262,553 write off in 2016?
  - d. What were the circumstances related to each of these write-offs?
- A-40. Each write-off was related to an industrial customer that filed for bankruptcy.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 41**

**Responding Witness: Daniel K. Arbough / Valerie L. Scott**

- Q-41. Refer to the response to AG-1-226.
- a. Provide similar comparable information as projected for the Forecast Test Year ended 6/30/2018.
  - b. Are any amounts for donations included in any of the 2015, 2016, or base year Electric amounts? If so, identify the donation amounts.
- A-41.
- a. Injuries and damages expense for the forecasted test year is \$4,319,943.
  - b. No amounts for donations are included in the 2015, 2016, or base year Electric amounts.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 42**

**Responding Witness: Valerie L. Scott / John K. Wolfe**

- Q-42. Refer to the response to AG-1-230 re storm damage expense.
- a. State the amount of storm cost amortization expense of regulatory assets in each year.
  - b. What is the comparable amount of storm damage expense for the Forecast Test Year ended 6/30/2018.
  - c. Show in detail how the amount identified in response to part b was derived.

A-42. a.

|             | <b>Kentucky</b> | <b>Virginia</b> | <b>Total</b> |
|-------------|-----------------|-----------------|--------------|
| <b>2016</b> | \$ 5,943,227    | \$ 534,119      | \$ 6,477,346 |
| <b>2015</b> | 5,943,227       | 1,208,334       | 7,151,561    |
| <b>2014</b> | 5,943,227       | 1,208,334       | 7,151,561    |
| <b>2013</b> | 5,943,228       | 1,208,334       | 7,151,562    |
| <b>2012</b> | 5,943,228       | 1,208,334       | 7,151,562    |
| <b>2011</b> | 5,943,227       | 202,474         | 6,145,701    |
| <b>2010</b> | 2,476,344       | 0               | 2,476,344    |
| <b>2009</b> | 395,784         | 0               | 395,784      |
| <b>2008</b> | 791,604         | 0               | 791,604      |
| <b>2007</b> | 791,604         | 0               | 791,604      |

- b. The storm damage expense for the forecast test year is \$4,073,835.
- c. The storm damage expense is estimated by using a 10 yr. historical average (2006-2015), excluding major weather events, escalated by CPI. The test year estimate is based on the 2006-2015 average monthly historical expenses, excluding major weather events, escalated by CPI factors.

This information was provided in response to KU PSC 2-30 (pages 2-6). A typographical error was discovered that indicated a KU FERC account 426,

which should have been KU FERC account 562. See attached file with the corrected FERC account 562 on page 1 and 5.

**Kentucky Utilities Company**  
**Case No. 2016-00370**

**10Year Average By FERC (CPI ADJUSTED)**

| Company               | FERC |                     |
|-----------------------|------|---------------------|
| KU                    | 562  | 532.18              |
|                       | 580  | 178,490.40          |
|                       | 583  | 396,297.43          |
|                       | 584  | 613.55              |
|                       | 588  | 59,309.40           |
|                       | 590  | 58,082.66           |
|                       | 592  | 104,690.32          |
|                       | 593  | 2,910,881.94        |
|                       | 594  | 24,959.73           |
|                       | 595  | 29,033.97           |
|                       | 596  | 22.46               |
|                       | 598  | 106,571.76          |
|                       | 925  | 5,769.35            |
|                       | 930  | 717.66              |
| <b>KU Total</b>       |      | <b>3,875,972.80</b> |
| LG&E                  | 562  | -                   |
|                       | 571  | 3,353.51            |
|                       | 580  | 414,882.49          |
|                       | 581  | -                   |
|                       | 583  | 772,386.19          |
|                       | 584  | -                   |
|                       | 588  | 1,423.36            |
|                       | 590  | 72,905.29           |
|                       | 593  | 3,358,057.89        |
|                       | 594  | 95,014.67           |
|                       | 595  | 33,295.28           |
|                       | 598  | 97,067.20           |
|                       | 834  | -                   |
|                       | 880  | 5,547.13            |
|                       | 891  | 5,781.27            |
|                       | 907  | -                   |
|                       | 925  | 15,116.32           |
|                       | 930  | 4,722.81            |
|                       | 935  | 16,428.87           |
| <b>LG&amp;E Total</b> |      | <b>4,895,982.28</b> |
| <b>Grand Total</b>    |      | <b>8,771,955.09</b> |

**Kentucky Utilities Company  
Case No. 2016-00370**

**BP Amounts by FERC (CPI ADJUSTED)**

| Company               | FERC | 2017                | 2018                | 2019                | 2020                | 2021                 |
|-----------------------|------|---------------------|---------------------|---------------------|---------------------|----------------------|
| KU                    | 562  | 547.86              | 563.57              | 579.29              | 592.76              | 608.48               |
|                       | 580  | 183,749.09          | 189,020.58          | 194,292.07          | 198,810.49          | 204,081.98           |
|                       | 583  | 407,973.16          | 419,677.30          | 431,381.45          | 441,413.58          | 453,117.73           |
|                       | 584  | 631.63              | 649.75              | 667.87              | 683.40              | 701.52               |
|                       | 588  | 61,056.78           | 62,808.41           | 64,560.04           | 66,061.43           | 67,813.06            |
|                       | 590  | 59,793.89           | 61,509.29           | 63,224.69           | 64,695.03           | 66,410.43            |
|                       | 592  | 107,774.71          | 110,866.60          | 113,958.50          | 116,608.70          | 119,700.60           |
|                       | 593  | 2,996,642.41        | 3,082,611.66        | 3,168,580.91        | 3,242,268.84        | 3,328,238.09         |
|                       | 594  | 25,695.09           | 26,432.25           | 27,169.40           | 27,801.25           | 28,538.40            |
|                       | 595  | 29,889.37           | 30,746.85           | 31,604.33           | 32,339.32           | 33,196.80            |
|                       | 596  | 23.12               | 23.78               | 24.45               | 25.01               | 25.68                |
|                       | 598  | 109,711.58          | 112,859.04          | 116,006.50          | 118,704.33          | 121,851.79           |
|                       | 925  | 5,939.32            | 6,109.71            | 6,280.10            | 6,426.15            | 6,596.54             |
|                       | 930  | 738.80              | 760.00              | 781.20              | 799.36              | 820.56               |
| <b>KU Total</b>       |      | <b>3,990,166.80</b> | <b>4,104,638.80</b> | <b>4,219,110.80</b> | <b>4,317,229.65</b> | <b>4,431,701.65</b>  |
| LG&E                  | 562  | -                   | -                   | -                   | -                   | -                    |
|                       | 571  | 3,452.31            | 3,551.36            | 3,650.40            | 3,735.29            | 3,834.33             |
|                       | 580  | 427,105.76          | 439,358.80          | 451,611.83          | 462,114.43          | 474,367.47           |
|                       | 581  | -                   | -                   | -                   | -                   | -                    |
|                       | 583  | 795,142.25          | 817,953.71          | 840,765.17          | 860,317.85          | 883,129.31           |
|                       | 584  | -                   | -                   | -                   | -                   | -                    |
|                       | 588  | 1,465.29            | 1,507.33            | 1,549.36            | 1,585.40            | 1,627.43             |
|                       | 590  | 75,053.23           | 77,206.40           | 79,359.56           | 81,205.13           | 83,358.30            |
|                       | 593  | 3,456,993.06        | 3,556,169.09        | 3,655,345.12        | 3,740,353.15        | 3,839,529.18         |
|                       | 594  | 97,813.99           | 100,620.13          | 103,426.27          | 105,831.53          | 108,637.67           |
|                       | 595  | 34,276.23           | 35,259.56           | 36,242.89           | 37,085.75           | 38,069.09            |
|                       | 598  | 99,927.00           | 102,793.76          | 105,660.52          | 108,117.74          | 110,984.50           |
|                       | 834  | -                   | -                   | -                   | -                   | -                    |
|                       | 880  | 5,710.56            | 5,874.38            | 6,038.21            | 6,178.64            | 6,342.46             |
|                       | 891  | 5,951.60            | 6,122.34            | 6,293.09            | 6,439.44            | 6,610.18             |
|                       | 907  | -                   | -                   | -                   | -                   | -                    |
|                       | 925  | 15,561.68           | 16,008.12           | 16,454.57           | 16,837.23           | 17,283.67            |
|                       | 930  | 4,861.95            | 5,001.43            | 5,140.92            | 5,260.47            | 5,399.95             |
|                       | 935  | 16,912.90           | 17,398.10           | 17,883.31           | 18,299.20           | 18,784.41            |
| <b>LG&amp;E Total</b> |      | <b>5,040,227.82</b> | <b>5,184,824.52</b> | <b>5,329,421.22</b> | <b>5,453,361.25</b> | <b>5,597,957.95</b>  |
| <b>Grand Total</b>    |      | <b>9,030,394.62</b> | <b>9,289,463.32</b> | <b>9,548,532.02</b> | <b>9,770,590.90</b> | <b>10,029,659.60</b> |

| CPI ADJUSTMENT TO<br>ESCALATE FOR BP |        |
|--------------------------------------|--------|
|                                      |        |
| 2021                                 | 1.1434 |
| 2020                                 | 1.1138 |
| 2019                                 | 1.0885 |
| 2018                                 | 1.0590 |
|                                      |        |
|                                      |        |
| 2017                                 | 1.0295 |
| 2016                                 | 1.0084 |

**Kentucky Utilities Company**  
**Case No. 2016-00370**

| Monthly Amounts for Budget Entry |             |             |             |             |             |             |             |             |            |             |             |             |              |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|------------|-------------|-------------|-------------|--------------|
|                                  | 2017        |             |             |             |             |             |             |             |            |             |             |             |              |
|                                  | Jan         | Feb         | Mar         | Apr         | May         | Jun         | Jul         | Aug         | Sep        | Oct         | Nov         | Dec         | Total        |
| 10yr monthly avg                 | 0.085829392 | 0.145008982 | 0.075802634 | 0.103345187 | 0.096084097 | 0.100804414 | 0.158119084 | 0.104881833 | 0.01683095 | 0.036444172 | 0.02890031  | 0.047948946 |              |
|                                  | 47.02       | 79.44       | 41.53       | 56.62       | 52.64       | 55.23       | 86.63       | 57.46       | 9.22       | 19.97       | 15.83       | 26.27       |              |
|                                  | 15,771.07   | 26,645.27   | 13,928.66   | 18,989.58   | 17,655.37   | 18,522.72   | 29,054.24   | 19,271.94   | 3,092.67   | 6,696.58    | 5,310.41    | 8,810.58    | 183,749.09   |
|                                  | 35,016.09   | 59,159.77   | 30,925.44   | 42,162.06   | 39,199.73   | 41,125.49   | 64,508.34   | 42,788.97   | 6,866.58   | 14,868.24   | 11,790.55   | 19,561.88   | 407,973.16   |
|                                  | 54.21       | 91.59       | 47.88       | 65.28       | 60.69       | 63.67       | 99.87       | 66.25       | 10.63      | 23.02       | 18.25       | 30.29       | 631.63       |
|                                  | 5,240.47    | 8,853.78    | 4,628.26    | 6,309.92    | 5,866.59    | 6,154.79    | 9,654.24    | 6,403.75    | 1,027.64   | 2,225.16    | 1,764.56    | 2,927.61    | 61,056.78    |
|                                  | 5,132.07    | 8,670.65    | 4,532.53    | 6,179.41    | 5,745.24    | 6,027.49    | 9,454.55    | 6,271.29    | 1,006.39   | 2,179.14    | 1,728.06    | 2,867.05    | 59,793.89    |
|                                  | 9,250.24    | 15,628.30   | 8,169.61    | 11,138.00   | 10,355.44   | 10,864.17   | 17,041.24   | 11,303.61   | 1,813.95   | 3,927.76    | 3,114.72    | 5,167.68    | 107,774.71   |
|                                  | 257,199.99  | 434,540.06  | 227,153.39  | 309,688.57  | 287,929.68  | 302,074.78  | 473,826.35  | 314,293.35  | 50,436.34  | 109,210.15  | 86,603.90   | 143,685.84  | 2,996,642.41 |
|                                  | 2,205.39    | 3,726.02    | 1,947.76    | 2,655.46    | 2,468.89    | 2,590.18    | 4,062.88    | 2,694.95    | 432.47     | 936.44      | 742.60      | 1,232.05    | 25,695.09    |
|                                  | 2,565.39    | 4,334.23    | 2,265.69    | 3,088.92    | 2,871.89    | 3,012.98    | 4,726.08    | 3,134.85    | 503.07     | 1,089.29    | 863.81      | 1,433.16    | 29,889.37    |
|                                  | 1.98        | 3.35        | 1.75        | 2.39        | 2.22        | 2.33        | 3.66        | 2.42        | 0.39       | 0.84        | 0.67        | 1.11        | 23.12        |
|                                  | 9,416.48    | 15,909.16   | 8,316.43    | 11,338.16   | 10,541.54   | 11,059.41   | 17,347.49   | 11,506.75   | 1,846.55   | 3,998.35    | 3,170.70    | 5,260.55    | 109,711.58   |
|                                  | 509.77      | 861.26      | 450.22      | 613.80      | 570.67      | 598.71      | 939.12      | 622.93      | 99.96      | 216.45      | 171.65      | 284.78      | 5,939.32     |
|                                  | 63.41       | 107.13      | 56.00       | 76.35       | 70.99       | 74.47       | 116.82      | 77.49       | 12.43      | 26.93       | 21.35       | 35.42       | 738.80       |
|                                  | 342,473.67  | 578,610.17  | 302,465.23  | 412,364.64  | 383,391.67  | 402,226.53  | 630,921.68  | 418,496.11  | 67,158.31  | 145,418.36  | 115,317.09  | 191,324.34  | 3,990,167.80 |
|                                  | 296.31      | 500.62      | 261.69      | 356.78      | 331.71      | 348.01      | 545.88      | 362.09      | 58.11      | 125.82      | 99.77       | 165.53      | 3,452.31     |
|                                  | 36,658.23   | 61,934.17   | 32,375.74   | 44,139.33   | 41,038.07   | 43,054.15   | 67,533.57   | 44,795.64   | 7,188.60   | 15,565.52   | 12,343.49   | 20,479.27   | 427,105.76   |
|                                  | 68,246.58   | 115,302.77  | 60,273.88   | 82,174.13   | 76,400.53   | 80,153.85   | 125,727.16  | 83,395.98   | 13,383.00  | 28,978.30   | 22,979.86   | 38,126.23   | 795,142.25   |
|                                  | 125.76      | 212.48      | 111.07      | 151.43      | 140.79      | 147.71      | 231.69      | 153.68      | 24.66      | 53.40       | 42.35       | 70.26       | 1,465.29     |
|                                  | 6,441.77    | 10,883.39   | 5,689.23    | 7,756.39    | 7,211.42    | 7,565.70    | 11,867.35   | 7,871.72    | 1,263.22   | 2,735.25    | 2,169.06    | 3,598.72    | 75,053.23    |
|                                  | 296,711.61  | 501,295.04  | 262,049.18  | 357,263.60  | 332,162.06  | 348,480.16  | 546,616.57  | 362,575.77  | 58,184.48  | 125,987.25  | 99,908.17   | 165,759.17  | 3,456,993.06 |
|                                  | 8,395.32    | 14,183.91   | 7,414.56    | 10,108.61   | 9,398.37    | 9,860.08    | 15,466.26   | 10,258.91   | 1,646.30   | 3,564.75    | 2,826.85    | 4,690.08    | 97,813.99    |
|                                  | 2,941.91    | 4,970.36    | 2,598.23    | 3,542.28    | 3,293.40    | 3,455.19    | 5,419.73    | 3,594.95    | 576.90     | 1,249.17    | 990.59      | 1,643.51    | 34,276.23    |
|                                  | 8,576.67    | 14,490.31   | 7,574.73    | 10,326.97   | 9,601.40    | 10,073.08   | 15,800.37   | 10,480.53   | 1,681.87   | 3,641.76    | 2,887.92    | 4,791.39    | 99,927.00    |
|                                  | 490.13      | 828.08      | 432.88      | 590.16      | 548.69      | 575.65      | 902.95      | 598.93      | 96.11      | 208.12      | 165.04      | 273.82      | 5,710.56     |
|                                  | 510.82      | 863.04      | 451.15      | 615.07      | 571.85      | 599.95      | 941.06      | 624.21      | 100.17     | 216.90      | 172.00      | 285.37      | 5,951.60     |
|                                  | 1,335.65    | 2,256.58    | 1,179.62    | 1,608.22    | 1,495.23    | 1,568.69    | 2,460.60    | 1,632.14    | 261.92     | 567.13      | 449.74      | 746.17      | 15,561.68    |
|                                  | 417.30      | 705.03      | 368.55      | 502.46      | 467.16      | 490.11      | 768.77      | 509.93      | 81.83      | 177.19      | 140.51      | 233.13      | 4,861.95     |
|                                  | 1,451.62    | 2,452.52    | 1,282.04    | 1,747.87    | 1,625.06    | 1,704.89    | 2,674.25    | 1,773.86    | 284.66     | 616.38      | 488.79      | 810.96      | 16,912.90    |
|                                  | 432,599.69  | 730,878.30  | 382,062.54  | 520,883.29  | 484,285.74  | 508,077.21  | 796,956.20  | 528,628.33  | 84,831.82  | 183,686.93  | 145,664.15  | 241,673.61  | 5,040,227.82 |
|                                  |             |             |             |             |             |             |             |             |            |             |             |             | 1.00         |
| 10Yr Monthly avg                 | 0.057638486 | 0.104122247 | 0.083252597 | 0.085830919 | 0.110687585 | 0.096977645 | 0.20947868  | 0.092400201 | 0.06041718 | 0.035243372 | 0.024408515 | 0.039542571 |              |
|                                  | Jan         | Feb         | Mar         | Apr         | May         | Jun         | Jul         | Aug         | Sep        | Oct         | Nov         | Dec         | Total        |
|                                  | 2016        |             |             |             |             |             |             |             |            |             |             |             |              |
|                                  | 3996.22     | 5937.24     | 4567.11     | 5423.43     | 6041.55     | 16841.11    | 4324.32     | 7881.49     | 10313.34   | 8032.42     | 4540.85     | 21276.93    | 99176.01     |
|                                  | 11,774.85   | 8,241.68    | 9,361.55    | 6,345.48    | 10,277.98   | 1,681.61    | 24,729.92   | 11,390.45   | -          | -           | 769.56      | -           | 84,573.08    |
|                                  | 118010.13   | 95861.09    | 119990.51   | 108800.64   | 114518.06   | 107514.78   | 112373.56   | 108136.56   | 102045.31  | 111317.06   | 107259.14   | 113826.38   | 1319653.22   |
|                                  | 139,189.86  | 287,070.00  | 105,055.97  | 180,232.68  | 173,411.62  | 194,560.00  | 361,452.79  | 206,156.79  | -          | -           | -           | 29,859.46   | 1,676,989.19 |
|                                  | 3996.22     | 5937.24     | 4567.11     | 5423.43     | 6041.55     | 16841.11    | 4324.32     | 7881.49     | 10313.34   | 8032.42     | 4540.85     | 21276.93    | 99176.01     |
|                                  | 32,662.01   | 52,074.53   | 27,808.63   | 38,715.90   | 34,996.52   | 26,213.04   | 63,209.25   | 36,914.15   | -          | 7,533.10    | 7,802.64    | -           | 327,929.75   |
|                                  | 180726.29   | 159161.91   | 209193.24   | 99682.44    | 176533.19   | 144727.56   | 95162.56    | 221801.27   | 123171.53  | 192283.67   | 135860.18   | 125671.16   | 1863975      |
|                                  | 115,985.32  | 275,836.71  | 52,855.94   | 192,594.11  | 119,676.86  | 203,752.60  | 451,454.01  | 140,774.50  | -          | -           | -           | 40,088.01   | 1,593,018.80 |

**Kentucky Utilities Company**  
**Case No. 2016-00370**

|                  | 2018        |             |             |             |             |             |             |             |             |             |             |             |              |
|------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
|                  | Jan         | Feb         | Mar         | Apr         | May         | Jun         | Jul         | Aug         | Sep         | Oct         | Nov         | Dec         | Total        |
| 10Yr Monthly avg | 0.085829392 | 0.145008982 | 0.075802634 | 0.103345187 | 0.096084097 | 0.100804414 | 0.158119084 | 0.104881833 | 0.016830949 | 0.036444172 | 0.02890031  | 0.047948946 |              |
|                  | 48.37       | 81.72       | 42.72       | 58.24       | 54.15       | 56.81       | 89.11       | 59.11       | 9.49        | 20.54       | 16.29       | 27.02       |              |
|                  | 16,223.52   | 27,409.68   | 14,328.26   | 19,534.37   | 18,161.87   | 19,054.11   | 29,887.76   | 19,824.82   | 3,181.40    | 6,888.70    | 5,462.75    | 9,063.34    | 189,020.58   |
|                  | 36,020.65   | 60,856.98   | 31,812.65   | 43,371.63   | 40,324.31   | 42,305.32   | 66,358.99   | 44,016.53   | 7,063.57    | 15,294.79   | 12,128.80   | 20,123.08   | 419,677.30   |
|                  | 55.77       | 94.22       | 49.25       | 67.15       | 62.43       | 65.50       | 102.74      | 68.15       | 10.94       | 23.68       | 18.78       | 31.15       | 649.75       |
|                  | 5,390.81    | 9,107.78    | 4,761.04    | 6,490.95    | 6,034.89    | 6,331.36    | 9,931.21    | 6,587.46    | 1,057.13    | 2,289.00    | 1,815.18    | 3,011.60    | 62,808.41    |
|                  | 5,279.30    | 8,919.40    | 4,662.57    | 6,356.69    | 5,910.06    | 6,200.41    | 9,725.79    | 6,451.21    | 1,035.26    | 2,241.66    | 1,777.64    | 2,949.31    | 61,509.29    |
|                  | 9,515.61    | 16,076.65   | 8,403.98    | 11,457.53   | 10,652.52   | 11,175.84   | 17,530.13   | 11,627.89   | 1,865.99    | 4,040.44    | 3,204.08    | 5,315.94    | 110,866.60   |
|                  | 264,578.68  | 447,006.38  | 233,670.08  | 318,573.08  | 296,189.96  | 310,740.86  | 487,419.73  | 323,309.96  | 51,883.28   | 112,343.23  | 89,088.43   | 147,807.98  | 3,082,611.66 |
|                  | 2,268.66    | 3,832.91    | 2,003.63    | 2,731.65    | 2,539.72    | 2,664.49    | 4,179.44    | 2,772.26    | 444.88      | 963.30      | 763.90      | 1,267.40    | 26,432.25    |
|                  | 2,638.98    | 4,458.57    | 2,330.69    | 3,177.54    | 2,954.28    | 3,099.42    | 4,861.66    | 3,224.79    | 517.50      | 1,120.54    | 888.59      | 1,474.28    | 30,746.85    |
|                  | 2.04        | 3.45        | 1.80        | 2.46        | 2.29        | 2.40        | 3.76        | 2.49        | 0.40        | 0.87        | 0.69        | 1.14        | 23.78        |
|                  | 9,686.62    | 16,365.57   | 8,555.01    | 11,663.44   | 10,843.96   | 11,376.69   | 17,845.17   | 11,836.86   | 1,899.52    | 4,113.05    | 3,261.66    | 5,411.47    | 112,859.04   |
|                  | 524.39      | 885.96      | 463.13      | 631.41      | 587.05      | 615.89      | 966.06      | 640.80      | 102.83      | 222.66      | 176.57      | 292.95      | 6,109.71     |
|                  | 65.23       | 110.21      | 57.61       | 78.54       | 73.02       | 76.61       | 120.17      | 79.71       | 12.79       | 27.70       | 21.96       | 36.44       | 760.00       |
|                  | 352,298.74  | 595,209.64  | 311,142.51  | 424,194.77  | 394,390.61  | 413,765.81  | 649,021.88  | 430,502.15  | 69,084.98   | 149,590.20  | 118,625.36  | 196,813.15  | 4,104,639.80 |
|                  | 304.81      | 514.98      | 269.20      | 367.02      | 341.23      | 357.99      | 561.54      | 372.47      | 59.77       | 129.43      | 102.64      | 170.28      | 3,551.36     |
|                  | 37,709.90   | 63,710.97   | 33,304.55   | 45,405.62   | 42,215.39   | 44,289.31   | 69,471.01   | 46,080.76   | 7,394.83    | 16,012.07   | 12,697.61   | 21,066.79   | 439,358.80   |
|                  | 70,204.47   | 118,610.63  | 62,003.05   | 84,531.58   | 78,592.34   | 82,453.34   | 129,334.09  | 85,788.48   | 13,766.94   | 29,809.65   | 23,639.12   | 39,220.02   | 817,953.71   |
|                  | 129.37      | 218.58      | 114.26      | 155.77      | 144.83      | 151.95      | 238.34      | 158.09      | 25.37       | 54.93       | 43.56       | 72.27       | 1,507.33     |
|                  | 6,626.58    | 11,195.62   | 5,852.45    | 7,978.91    | 7,418.31    | 7,782.75    | 12,207.80   | 8,097.55    | 1,299.46    | 2,813.72    | 2,231.29    | 3,701.97    | 77,206.40    |
|                  | 305,223.83  | 515,676.46  | 269,566.98  | 367,512.96  | 341,691.30  | 358,477.54  | 562,298.20  | 372,977.53  | 59,853.70   | 129,601.64  | 102,774.39  | 170,514.56  | 3,556,169.09 |
|                  | 8,636.16    | 14,590.82   | 7,627.27    | 10,398.61   | 9,667.99    | 10,142.95   | 15,909.96   | 10,553.22   | 1,693.53    | 3,667.02    | 2,907.95    | 4,824.63    | 100,620.13   |
|                  | 3,026.31    | 5,112.95    | 2,672.77    | 3,643.91    | 3,387.88    | 3,554.32    | 5,575.21    | 3,698.09    | 593.45      | 1,285.01    | 1,019.01    | 1,690.66    | 35,259.56    |
|                  | 8,822.73    | 14,906.02   | 7,792.04    | 10,623.24   | 9,876.85    | 10,362.06   | 16,253.65   | 10,781.20   | 1,730.12    | 3,746.23    | 2,970.77    | 4,928.85    | 102,793.76   |
|                  | 504.19      | 851.84      | 445.29      | 607.09      | 564.43      | 592.16      | 928.85      | 616.12      | 98.87       | 214.09      | 169.77      | 281.67      | 5,874.38     |
|                  | 525.48      | 887.79      | 464.09      | 632.71      | 588.26      | 617.16      | 968.06      | 642.12      | 103.04      | 223.12      | 176.94      | 293.56      | 6,122.34     |
|                  | -           | -           | -           | -           | -           | -           | -           | -           | -           | -           | -           | -           | -            |
|                  | 1,373.97    | 2,321.32    | 1,213.46    | 1,654.36    | 1,538.13    | 1,613.69    | 2,531.19    | 1,678.96    | 269.43      | 583.40      | 462.64      | 767.57      | 16,008.12    |
|                  | 429.27      | 725.25      | 379.12      | 516.87      | 480.56      | 504.17      | 790.82      | 524.56      | 84.18       | 182.27      | 144.54      | 239.81      | 5,001.43     |
|                  | 1,493.27    | 2,522.88    | 1,318.82    | 1,798.01    | 1,671.68    | 1,753.81    | 2,750.97    | 1,824.75    | 292.83      | 634.06      | 502.81      | 834.22      | 17,398.10    |
|                  | 445,010.33  | 751,846.12  | 393,023.35  | 535,826.66  | 498,179.18  | 522,653.20  | 819,819.70  | 543,793.90  | 87,265.52   | 188,956.64  | 149,843.04  | 248,606.87  | 5,184,824.52 |
|                  |             |             |             |             |             |             |             |             |             |             |             |             | 1.00         |
| 10Yr Monthly avg | 0.057638486 | 0.104122247 | 0.083252597 | 0.085830919 | 0.110687585 | 0.096977645 | 0.20947868  | 0.092400201 | 0.060417183 | 0.035243372 | 0.024408515 | 0.039542571 |              |
|                  | Jan         | Feb         | Mar         | Apr         | May         | Jun         | Jul         | Aug         | Sep         | Oct         | Nov         | Dec         | Total        |
|                  | 2017        |             |             |             |             |             |             |             |             |             |             |             |              |
|                  | 2506.12     | 4670.48     | 3075.68     | 4157.87     | 2320.93     | 12343.76    | 3075.68     | 6643.08     | 5240.05     | 7756.37     | 3645.26     | 13568.2     | 69003.48     |
| (0.00)           | 13,717.40   | 15,308.01   | 11,252.58   | 15,376.50   | 15,840.94   | 6,710.35    | 26,812.08   | 13,181.74   | -           | -           | 1,817.49    | -           | 120,017.10   |
|                  | 117358.9    | 103448.71   | 123905.31   | 111337.59   | 117351.14   | 106300.35   | 122554.8    | 114231.24   | 101382.21   | 111559.5    | 113353.4    | 115633.76   | 1358416.91   |
| (0.00)           | 147,219.78  | 294,058.74  | 109,764.77  | 207,235.49  | 154,573.85  | 204,440.51  | 364,864.93  | 209,078.72  | -           | 783.73      | -           | 32,174.22   | 1,724,194.75 |
|                  | 2506.12     | 4670.48     | 3075.68     | 4157.87     | 2320.93     | 12343.76    | 3075.68     | 6643.08     | 5240.05     | 7756.37     | 3645.26     | 13568.2     | 69003.48     |
| 0.00             | 35,203.78   | 59,040.49   | 30,228.87   | 41,247.75   | 39,894.46   | 31,945.55   | 66,395.33   | 39,437.68   | 2,154.78    | 8,255.70    | 9,052.35    | 7,498.59    | 370,355.32   |
|                  | 123165.95   | 124167.77   | 116908.18   | 110301.59   | 111142.29   | 109640.46   | 101911.01   | 111866.09   | 109164.56   | 119886.66   | 118985.7    | 130046.26   | 1387186.52   |
| 0.00             | 182,057.88  | 342,197.83  | 152,658.80  | 241,000.06  | 230,549.01  | 248,837.08  | 460,387.19  | 261,111.44  | -           | 9,714.98    | -           | 40,468.30   | 2,168,982.57 |

# Kentucky Utilities Company

## Case No. 2016-00370

|                  | 2019        |             |             |             |             |             |              |             |             |             |             |             | Total        |
|------------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|
| 10Yr Monthly avg | Jan         | Feb         | Mar         | Apr         | May         | Jun         | Jul          | Aug         | Sep         | Oct         | Nov         | Dec         |              |
|                  | 0.085829392 | 0.145008982 | 0.075802634 | 0.103345187 | 0.096084097 | 0.100804414 | 0.158119084  | 0.104881833 | 0.016830949 | 0.036444172 | 0.02890031  | 0.047948946 |              |
|                  | 49.72       | 84.00       | 43.91       | 59.87       | 55.66       | 58.40       | 91.60        | 60.76       | 9.75        | 21.11       | 16.74       | 27.78       |              |
|                  | 16,675.97   | 28,174.10   | 14,727.85   | 20,079.15   | 18,668.38   | 19,585.50   | 30,721.28    | 20,377.71   | 3,270.12    | 7,080.81    | 5,615.10    | 9,316.10    | 194,292.07   |
|                  | 37,025.21   | 62,554.19   | 32,699.85   | 44,581.20   | 41,448.90   | 43,485.15   | 68,209.64    | 45,244.08   | 7,260.56    | 15,721.34   | 12,467.06   | 20,684.29   | 431,381.45   |
|                  | 57.32       | 96.85       | 50.63       | 69.02       | 64.17       | 67.32       | 105.60       | 70.05       | 11.24       | 24.34       | 19.30       | 32.02       | 667.87       |
|                  | 5,541.15    | 9,361.79    | 4,893.82    | 6,671.97    | 6,203.19    | 6,507.94    | 10,208.17    | 6,771.17    | 1,086.61    | 2,352.84    | 1,865.81    | 3,095.59    | 64,560.04    |
|                  | 5,426.54    | 9,168.15    | 4,792.60    | 6,533.97    | 6,074.89    | 6,373.33    | 9,997.03     | 6,631.12    | 1,064.13    | 2,304.17    | 1,827.21    | 3,031.56    | 63,224.69    |
|                  | 9,780.99    | 16,525.01   | 8,638.35    | 11,777.06   | 10,949.60   | 11,487.52   | 18,019.01    | 11,952.18   | 1,918.03    | 4,153.12    | 3,293.44    | 5,464.19    | 113,958.50   |
|                  | 271,957.37  | 459,472.69  | 240,186.78  | 327,457.59  | 304,450.24  | 319,406.94  | 501,013.11   | 332,326.57  | 53,330.23   | 115,476.31  | 91,572.97   | 151,930.11  | 3,168,580.91 |
|                  | 2,331.93    | 3,939.81    | 2,059.51    | 2,807.83    | 2,610.55    | 2,738.80    | 4,296.00     | 2,849.58    | 457.29      | 990.17      | 785.20      | 1,302.74    | 27,169.40    |
|                  | 2,712.58    | 4,582.91    | 2,395.69    | 3,266.16    | 3,036.67    | 3,185.86    | 4,997.25     | 3,314.72    | 531.93      | 1,151.79    | 913.37      | 1,515.39    | 31,604.33    |
|                  | 2.10        | 3.54        | 1.85        | 2.53        | 2.35        | 2.46        | 3.87         | 2.56        | 0.41        | 0.89        | 0.71        | 1.17        | 24.45        |
|                  | 9,956.77    | 16,821.98   | 8,793.60    | 11,988.71   | 11,146.38   | 11,693.97   | 18,342.84    | 12,166.97   | 1,952.50    | 4,227.76    | 3,352.62    | 5,562.39    | 116,006.50   |
|                  | 539.02      | 910.67      | 476.05      | 649.02      | 603.42      | 633.06      | 993.00       | 658.67      | 105.70      | 228.87      | 181.50      | 301.12      | 6,280.10     |
|                  | 67.05       | 113.28      | 59.22       | 80.73       | 75.06       | 78.75       | 123.52       | 81.93       | 13.15       | 28.47       | 22.58       | 37.46       | 781.20       |
|                  | 362,123.80  | 611,809.11  | 319,819.79  | 436,024.90  | 405,389.55  | 425,305.09  | 667,122.09   | 442,508.18  | 71,011.66   | 153,762.04  | 121,933.64  | 202,301.96  | 4,219,111.80 |
|                  | -           | -           | -           | -           | -           | -           | -            | -           | -           | -           | -           | -           | -            |
|                  | 210.40      | 380.09      | 303.91      | 313.32      | 404.05      | 354.01      | 764.68       | 337.30      | 220.55      | 128.65      | 89.10       | 144.35      | 3,650.40     |
|                  | 26,030.22   | 47,022.84   | 37,597.86   | 38,762.26   | 49,987.82   | 43,796.25   | 94,603.05    | 41,729.02   | 27,285.11   | 15,916.32   | 11,023.17   | 17,857.89   | 451,611.83   |
|                  | -           | -           | -           | -           | -           | -           | -            | -           | -           | -           | -           | -           | -            |
|                  | 48,460.43   | 87,542.36   | 69,995.88   | 72,163.65   | 93,062.27   | 81,535.43   | 176,122.38   | 77,686.87   | 50,796.66   | 29,631.40   | 20,521.83   | 33,246.02   | 840,765.17   |
|                  | -           | -           | -           | -           | -           | -           | -            | -           | -           | -           | -           | -           | -            |
|                  | 89.30       | 161.32      | 128.99      | 132.98      | 171.50      | 150.25      | 324.56       | 143.16      | 93.61       | 54.60       | 37.82       | 61.27       | 1,549.36     |
|                  | 4,574.17    | 8,263.10    | 6,606.89    | 6,811.50    | 8,784.12    | 7,696.10    | 16,624.14    | 7,332.84    | 4,794.68    | 2,796.90    | 1,937.05    | 3,138.08    | 79,359.56    |
|                  | 210,688.56  | 380,602.75  | 304,316.98  | 313,741.63  | 404,601.32  | 354,486.76  | 765,716.87   | 337,754.62  | 220,845.65  | 128,826.69  | 89,221.54   | 144,541.74  | 3,655,345.12 |
|                  | 5,961.33    | 10,768.98   | 8,610.51    | 8,877.17    | 11,448.00   | 10,030.04   | 21,665.60    | 9,556.61    | 6,248.72    | 3,645.09    | 2,524.48    | 4,089.74    | 103,426.27   |
|                  | 2,088.99    | 3,773.69    | 3,017.32    | 3,110.76    | 4,011.64    | 3,514.75    | 7,592.11     | 3,348.85    | 2,189.69    | 1,277.32    | 884.64      | 1,433.14    | 36,242.89    |
|                  | 6,090.11    | 11,001.61   | 8,796.51    | 9,068.94    | 11,695.31   | 10,246.71   | 22,133.63    | 9,763.05    | 6,383.71    | 3,723.83    | 2,579.02    | 4,178.09    | 105,660.52   |
|                  | -           | -           | -           | -           | -           | -           | -            | -           | -           | -           | -           | -           | -            |
|                  | 348.03      | 628.71      | 502.70      | 518.27      | 668.36      | 585.57      | 1,264.88     | 557.93      | 364.81      | 212.81      | 147.38      | 238.77      | 6,038.21     |
|                  | 362.72      | 655.25      | 523.92      | 540.14      | 696.57      | 610.29      | 1,318.27     | 581.48      | 380.21      | 221.79      | 153.60      | 248.84      | 6,293.09     |
|                  | -           | -           | -           | -           | -           | -           | -            | -           | -           | -           | -           | -           | -            |
|                  | 948.42      | 1,713.29    | 1,369.89    | 1,412.31    | 1,821.32    | 1,595.72    | 3,446.88     | 1,520.41    | 994.14      | 579.91      | 401.63      | 650.66      | 16,454.57    |
|                  | 296.31      | 535.28      | 427.99      | 441.25      | 569.04      | 498.55      | 1,076.91     | 475.02      | 310.60      | 181.18      | 125.48      | 203.29      | 5,140.92     |
|                  | 1,030.77    | 1,862.05    | 1,488.83    | 1,534.94    | 1,979.46    | 1,734.28    | 3,746.17     | 1,652.42    | 1,080.46    | 630.27      | 436.51      | 707.15      | 17,883.31    |
|                  | 307,179.77  | 554,911.31  | 443,688.16  | 457,429.12  | 589,900.76  | 516,834.72  | 1,116,400.12 | 492,439.59  | 321,988.62  | 187,826.78  | 130,083.26  | 210,739.01  | 5,329,421.22 |
|                  | -           | -           | -           | -           | -           | -           | -            | -           | -           | -           | -           | -           | -            |
|                  | -           | -           | -           | -           | -           | -           | -            | -           | -           | -           | -           | -           | 1.00         |
| 10Yr Monthly avg | 0.057638486 | 0.104122247 | 0.083252597 | 0.085830919 | 0.110687585 | 0.096977645 | 0.20947868   | 0.092400201 | 0.060417183 | 0.035243372 | 0.024408515 | 0.039542571 |              |
|                  | Jan         | Feb         | Mar         | Apr         | May         | Jun         | Jul          | Aug         | Sep         | Oct         | Nov         | Dec         | Total        |
|                  | 2018        |             |             |             |             |             |              |             |             |             |             |             |              |
|                  | 3645.53     | 5810.07     | 4215.14     | 5297.41     | 7389.82     | 11781.06    | 4215.14      | 7893.95     | 6949.3      | 9203.78     | 4784.76     | 10254.96    | 81440.92     |
| (0.00)           | 13,030.44   | 15,623.02   | 10,512.71   | 14,781.74   | 11,278.56   | 7,804.44    | 26,506.14    | 12,483.76   | -           | -           | 830.34      | -           | 112,851.15   |
|                  | 110207.7    | 105174.4    | 113146.4    | 119010.31   | 126371      | 103642.11   | 129452.2     | 114431.4    | 100700.38   | 113885.77   | 106772.17   | 123806.64   | 1366600.48   |
| (0.00)           | 161,749.67  | 306,928.14  | 127,040.38  | 193,248.08  | 178,079.24  | 215,764.83  | 371,560.91   | 217,895.17  | -           | 1,590.54    | -           | 28,123.47   | 1,801,980.43 |
|                  | 3645.53     | 5810.07     | 4215.14     | 5297.41     | 7389.82     | 11781.06    | 4215.14      | 7893.95     | 6949.3      | 9203.78     | 4784.76     | 10254.96    | 81440.92     |
| -                | 22,384.69   | 41,212.77   | 33,382.72   | 33,464.85   | 42,598.00   | 32,015.19   | 90,387.91    | 33,835.07   | 20,335.81   | 6,712.54    | 6,238.41    | 7,602.93    | 370,170.91   |
|                  | 130854.08   | 132631.54   | 121724.62   | 109403.94   | 113172.36   | 116712.44   | 107067.26    | 116456.05   | 120164.87   | 120697.37   | 118053.74   | 133956.98   | 1440895.25   |
| (0.00)           | 79,834.48   | 219,139.01  | 182,592.36  | 204,337.69  | 291,428.96  | 237,774.32  | 658,649.61   | 221,298.57  | 100,680.78  | 8,129.32    | -           | 10,584.76   | 2,214,449.87 |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 43**

**Responding Witness: Daniel K. Arbough**

Q-43. Refer to the response to AG-1-231. What were the comparable budgeted/forecast amounts for years 2014, 2015 and 2015?

A-43. The amount of affiliate operating expenses was not compiled for the budgets for calendar years 2014, 2015, or 2016.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 44**

**Responding Witness: Valerie L. Scott / Daniel K. Arbough**

- Q-44. Refer to the response to AG-1-233(a).
- a. Explain the basis for the exclusion of items from the current KU and LGE rate cases on the attachment.
  - b. What amount of ash pond and landfill closure costs has the Company reflected for the Forecast Test Year ended 6/30/2018 by account?

- A-44.
- a. We assume the question is referring to the footnote on the attachment to AG 1-233(a) which states "Excluded from Case No. 2016-00026 (KU) and 2016-00027 (LGE)". Case No. 2016-00026 was an application by KU for certificates of public convenience and necessity and approval of its 2016 compliance plan for recovery by environmental surcharge rather than a rate case.
  - b. 

|                |              |
|----------------|--------------|
| Account 107001 | \$1,466,018  |
| Account 108899 | \$25,901,700 |

Note these amounts are part of a previously approved ECR plan and have been removed from this case.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 45**

**Responding Witness: Lonnie E. Bellar / John K. Wolfe**

Q-45. Refer to the response to AG-1-236. Identify the comparable amounts of vegetation management costs for transmission and distribution for the Forecast Test Year ended 6/30/2018 by account.

A-45. Forecast Test Year Ended 6/30/2018:

|              |             |              |
|--------------|-------------|--------------|
| Distribution | Account 593 | \$14,828,868 |
| Transmission | Account 571 | \$9,992,809  |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests**

**Dated February 7, 2017**

**Question No. 46**

**Responding Witness: Daniel K. Arbough / David S. Sinclair**

Q-46. Refer to the response to AG-1-240. Has a full year's worth of revenue for each of the customers listed in the response been included in the Forecast Test Year ended 6/30/2018?

- a. If not, explain fully why not, and show the amount of revenue and sales for each of the customers listed in the response that was reflected in the Forecast Test Year ended 6/30/2018.
- b. If so, show the annualized amount of revenue and sales for each of the customers listed in the response that was reflected in the Forecast Test Year ended 6/30/2018.

A-46.

- a. See the response to part b.
- b. KU does not individually forecast all customers as described in Mr. Sinclair's direct testimony as well as in the Annual Electric Sales and Demand Forecast Process attached at Tab 16 of the Companies' Applications. Seven customers listed in the response to AG-1-240 are individually forecasted and a full year's worth of revenue is included in the Forecast Test Year ended 6/30/18 as shown below.

| <b>Rate Case Customer Designation</b> | <b>Forecast Test Year Ending 6/30/18 Sales (kWh)</b> | <b>Forecast Test Year Ending 6/30/18 Revenue</b> |
|---------------------------------------|------------------------------------------------------|--------------------------------------------------|
| Customer 44-47                        | 97,124,112                                           | \$ 5,378,815                                     |
| Customer 53                           | 74,578,364                                           | \$ 3,899,014                                     |
| Customer 56                           | -                                                    | \$ -                                             |
| Customer 64                           | 126,854,337                                          | \$ 7,777,602                                     |

Customer 56 is currently forecasted to be closed completely by 6/30/17. The list of customers in the response to AG-1-240 was developed based on a

move-in date filter. A change in this date can be caused by a number of circumstances such as a change in ownership, bankruptcy, consolidation of service, or a new metering point. Less than 10% of the volumes and revenues included in the original response are a result of new customers or expanding service to an existing customer.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 47**

**Responding Witness: Daniel K. Arbough / David S. Sinclair**

Q-47. Refer to the response to AG-1-241. Has a full year's worth of revenue for each of the customers listed in the response who are expanding operations been included in the Forecast Test Year ended 6/30/2018?

- a. If not, explain fully why not, and show the amount of revenue and sales for each of the customers listed in the response that was reflected in the Forecast Test Year ended 6/30/2018.
- b. If so, show the annualized amount of revenue and sales for each of the customers listed in the response that was reflected in the Forecast Test Year ended 6/30/2018.

A-47.

- a. See the response to part b.
- b. KU does not individually forecast all customers as described in Mr. Sinclair's direct testimony as well as in the Annual Electric Sales and Demand Forecast Process attached at Tab 16 of the Companies' Applications. Three of the customers listed in the response to AG-1-241 are individually forecasted and a full year's worth of revenue is included in the Forecast Test Year ended 6/30/18 as shown below.

| <b>Rate Case Customer Designation</b> | <b>Forecast Test Year Ending 6/30/18 Sales (kWh)</b> | <b>Forecast Test Year Ending 6/30/18 Revenue</b> |
|---------------------------------------|------------------------------------------------------|--------------------------------------------------|
| Customer 4                            | 97,124,112                                           | \$ 5,378,815                                     |
| Customer 9                            | 532,583,691                                          | \$ 31,245,942                                    |
| Customer 14                           | 204,423,641                                          | \$ 10,840,158                                    |

The information in the response to AG-1-241 was provided directly by customers; the size, timing, and likelihood of the expansion is subject to frequent change.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 48**

**Responding Witness: Daniel K. Arbough / David S. Sinclair**

- Q-48. Refer to the response to AG-1-242. Have all of the estimated reduced load and estimated reduced revenue amounts listed in the response been reflected by the Company in the Forecast Test Year ended 6/30/2018? If not, which amounts were not fully reflected and why?
- A-48. KU does not individually forecast all customers as described in Mr. Sinclair's direct testimony as well as in the Annual Electric Sales and Demand Forecast Process attached at Tab 16 of the Companies' Applications. Two of the customers listed in the response to AG-1-242 are individually forecasted. The impact of reduced revenue from Customer 6 is fully reflected in the test year and no reduction is included for Customer 1 because this information was not available until December 2016.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 49**

**Responding Witness: John P. Malloy**

Q-49. Refer to the responses to AG-1-244 and 245.

- a. Has the Company projected any reduction in postage expense for the Forecast Test Year ended 6/30/2018 related to increasing use of electronic transmission of bills? If not, explain fully why not. If so, identify the amount and show how it was derived.
- b. Refer to the volume of customer bills, notices and letters in response to AG-1- 245(c). How many of those were (1) mailed and (2) electronically transmitted?

A-49.

- a. No. The forecast test year assumes that the increase in electronic bills is offset by customer growth.
- b. The customer bills, notices and letters listed in the response to AG-1- 245(c) were all mailed.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 50**

**Responding Witness: William S. Seelye**

Q-50. With regard to the Company's class cost of service study ("CCOSS") models provided in response to PSC 1-53, tab "Functional Assignment, row 481 (Total Distribution Operation and Maintenance Labor Expenses): confirm or deny that there is a programming error in that Total System amounts are calculated as the sum of Distribution Operations Labor plus Distribution Maintenance Labor, whereas the functional assignment utilizes a lookup table based on Total Distribution Plant ("PDIST").

- a. If the Company confirms, please provide a summary of class rates of return under current and proposed rates with this correction. If the Company denies, please explain why this apparent inconsistency is appropriate considering the programming functionalization of distribution O&M expenses.

A-50. Confirmed. The individual classifications of costs should be the sum of Distribution Operations Labor plus Distribution Maintenance Labor similar to the Total System amounts referenced. Below is a summary of the class rates of return, using the Base-Intermediate-Peak ("BIP") methodology, under both current and proposed rates with this correction:

| Rate Class                                     | Rate of Return on Rate Base |                |
|------------------------------------------------|-----------------------------|----------------|
|                                                | Current Rates               | Proposed Rates |
| Residential Service                            | 4.15%                       | 5.63%          |
| General Service                                | 9.02%                       | 10.87%         |
| All Electric Schools                           | 5.25%                       | 7.05%          |
| Power Service-Secondary                        | 9.59%                       | 11.48%         |
| Power Service-Primary                          | 11.64%                      | 13.58%         |
| Time-of-Day Secondary Service                  | 6.43%                       | 8.31%          |
| Time-of-Day Primary Service                    | 4.46%                       | 6.55%          |
| Retail Transmission Service                    | 4.52%                       | 6.73%          |
| Fluctuating Load Service                       | 1.50%                       | 3.44%          |
| Lighting Energy Service                        | 9.83%                       | 9.82%          |
| Traffic Energy Service                         | 8.84%                       | 10.48%         |
| Lighting Service & Restricted Lighting Service | 8.48%                       | 9.65%          |
| Total All Classes                              | 5.56%                       | 7.29%          |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 51**

**Responding Witness: John P. Malloy**

- Q-51. With respect to Rate Schedule TE (Traffic Energy), provide a separation of the current number of traffic signals that are metered and unmetered.
- A-51. As of January 2017, there are 494 contract metered accounts and 272 contract unmetered accounts in the TE rate schedule. Traffic Energy (TE) rate schedule consists of traffic control devices including signals, cameras, or other traffic lights and electronic communication devices; therefore, the contract accounts are not limited to traffic signals.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 52**

**Responding Witness: John P. Malloy**

- Q-52. With respect to Rate Schedule TE (Traffic Energy), provide the current number of separate accounts; i.e., number of bills rendered monthly.
- A-52. For the month of January 2017, there were 766 contract accounts with respect to Rate Schedule TE with monthly rendered bills. See also the response to Question No. 51.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 53**

**Responding Witness: John P. Malloy**

- Q-53. With respect to Rate Schedule LE (Lighting Energy), provide the current number of separate accounts; i.e., number of bills rendered monthly.
- A-53. For the month of January 2017, there were 5 contract accounts with respect to Rate Schedule LE.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 54**

**Responding Witness: John P. Malloy**

Q-54. With respect to Rate Schedules ST and POL (Outdoor Lighting), provide the current number of separate accounts; i.e., number of bills rendered monthly.

A-54. For the month of January 2017:

- The Company no longer has ST or POL rate schedules. These rate schedules are included in RLS and LS rate schedules.
- 6,691 contract accounts with respect to Rate Schedule RLS.
- 56,606 contract accounts with respect to Rate Schedule LS.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 55**

**Responding Witness: John P. Malloy**

- Q-55. With respect to Rate Schedules ST and POL (Outdoor Lighting), indicate if any lights are metered. If yes, provide the current number of separately metered lights.
- A-55. The Company no longer has ST or POL rate schedules. These rate schedules are included in RLS and LS rate schedules. Currently, there are not any RLS or LS rate schedules that are metered.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 56**

**Responding Witness: William S. Seelye**

- Q-56. With regard to the Company's CCOSS, confirm or deny that Rate Schedules ST and POL (Outdoor Lighting) are allocated Meter Reading expenses.
- A-56. Class ST (or Rate LS) and Class POL (or Rate RLS) are not allocated meter reading expenses.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 57**

**Responding Witness: John P. Malloy / John K. Wolfe**

Q-57. With regard to customers whose transformer (high side) is served from primary or secondary voltage lines, provide the current (actual or estimated) number of customers whose transformers are served at primary and secondary voltage separately for each of the following Rate Schedules:

- a. Residential (RS);
- b. General Service (GS); and,
- c. All Electric Schools (AES).

A-57.

- a. Data responsive to this question is not readily available. There are no known RS services where the Company provides a secondary to secondary voltage transformation before the service point. Therefore all Company RS customers are expected to be served by transformers that perform a primary to secondary transformation.
- b. Data responsive to this question is not readily available. There are no known GS services where the Company provides a secondary to secondary voltage transformation before the service point. Therefore all Company GS customers are expected to be served by transformers that perform a primary to secondary transformation.
- c. Data responsive to this question is not readily available. There are no known AES secondary customers where the Company provides a secondary to secondary voltage transformation before the service point. Therefore all Company AES secondary customers are expected to be served by transformers that perform a primary to secondary transformation.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 58**

**Responding Witness: William S. Seelye**

- Q-58. With regard to the Company's response to AG 1-277 concerning hourly Loss of Load Probabilities ("LOLP"), provide all calculations and components of system LOLP including the "direct numerical convolution" for each station's capacity and availability resulting in a system LOLP of 0.1260% at 1500 hours on August 9, 2017.
- A-58. The hourly LOLPs were produced by PROSYM, which is the software provided by ABB that the Companies also use to develop the generation forecast. The attachment to the response to AG 1-276 documents the LOLP calculations performed in PROSYM. However, the LOLP calculations are performed within the software. The Companies do not have access to the underlying proprietary code that performs the LOLP calculations or the calculations' intermediate components.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 59**

**Responding Witness: David S. Sinclair**

Q-59. With regard to the Company's response to KIUC 1-52(a), is the column entitled "Company" meant to refer to individual CSR customers?

A-59. Yes.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 60**

**Responding Witness: David S. Sinclair**

- Q-60. With regard to the Company's response to KIUC 1-52(a), explain why there are no customers (Companies) referred to as 1, 2, or 3.
- A-60. KIUC 1-52(a) was created from a list of customers including both LG&E and KU. The customers referred to as 1, 2, and 3 are included in the Attachment to Response to KIUC 1-51 in Case No. 2016-00371.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 61**

**Responding Witness: David S. Sinclair**

Q-61. With regard to the Company's response to KIUC 1-52(a) and 1-53(a), provide the following:

- a. an explanation of whether the customers provided in response to KIUC 1-52(a) have been curtailed at any time during the last 60 months; if yes, provide a list of all curtailments for each customer; and,
- b. an explanation why Customer 3 in KIUC 1-53(a) is not included in the list provided in response to KIUC 1-52(a).

A-61.

- a. The table in the Company's response to KIUC 1-53(a) is complete and covers the last five years.
- b. The numbers associated with customers in responses to KIUC 1-53(a) and KIUC 1-52(a) are not intended to represent any information other than anonymizing individual customers. As such, the numbers do not necessarily represent the same customer in each response.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 62**

**Responding Witness: David S. Sinclair**

- Q-62. With regard to the Company's response to KIUC 1-53(a), provide a detailed explanation of what is meant by the column entitled "Load Not Compliant (kVA)."
- A-62. The entries in the "Load Not Compliant (kVA)" column represent the difference between the customer's maximum demand during the identified curtailment period and the firm demand that the customer contractually committed not to exceed during any curtailment period.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 63**

**Responding Witness: David S. Sinclair**

- Q-63. With regard to the Company's response to KIUC 1-53(a), provide a detailed explanation as to why only Customer 3 and Customer 4 were curtailed on January 30, 2014. In this response, explain why other CSR customers were not curtailed during this time period.
- A-63. Curtailing customers under the CSR tariff is a manual process. As such, it is part of the dynamic nature of system dispatch and the real-time demands on system dispatch personnel. On January 30, 2014, the Company curtailed the relatively larger loads of Customers 3 and 4 and did not continue pursuing curtailment of other smaller loads based on system needs that were present at that time. During January 2014, there were no other KU customers registered for CSR10. The CSR10 rider in effect at the time required a ten (10) minute advance notification prior to curtailment. There were only two other customers registered under CSR30, one of which was registered for CSR30 just prior to the January 30. CSR30 required a 30 minute advance notification.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 64**

**Responding Witness: David S. Sinclair**

- Q-64. With regard to the Company's response to KIUC 1-53(a), provide a detailed explanation as to why only Customer 3, Customer 4, and Customer 5 were curtailed on January 7, 2014. In this response, explain why other CSR customers were not curtailed during this time period.
- A-64. Customer 3, Customer 4, and Customer 5 represented all three customers under the CSR10 and CSR30 tariffs on January 7, 2014. Also, see the response to Question No. 63.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 65**

**Responding Witness: David S. Sinclair**

- Q-65. With regard to the Company's response to KIUC 1-53(a), provide a detailed explanation as to why only Customer 3 was curtailed on January 6, 2014. In this response, explain why other CSR customers were not curtailed during this time period.
- A-65. The Company's response to Question No. 63 also applies to the situation encountered on January 6, 2014.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 66**

**Responding Witness: David S. Sinclair**

Q-66. Provide system peak load at generation (KU and LG&E) and total system generation output (KU and LG&E) for each of the following hours:

- a. January 30, 2014, hour ending 0800;
- b. January 7, 2014, hour ending 1000;
- c. January 7, 2014, hour ending 0900;
- d. January 7, 2014, hour ending 0800; and,
- e. January 6, 2014, hour ending 1900.

A-66.

All volumes in MW:

| <b>EST<br/>(Hour Ending)</b> | <b>KU<br/>Load</b> | <b>LG&amp;E<br/>Load</b> | <b>Total<br/>System<br/>Load</b> | <b>Total<br/>Generation*</b> |
|------------------------------|--------------------|--------------------------|----------------------------------|------------------------------|
| 2014-01-30 08:00             | 4,656              | 1,805                    | 6,461                            | 6,700                        |
| 2014-01-07 10:00             | 4,939              | 1,938                    | 6,877                            | 6,902                        |
| 2014-01-07 09:00             | 5,068              | 1,948                    | 7,016                            | 7,030                        |
| 2014-01-07 08:00             | 5,045              | 1,936                    | 6,981                            | 7,018                        |
| 2014-01-06 19:00             | 4,985              | 2,096                    | 7,081                            | 7,589                        |

\*Note: Total Generation includes OVEC and market purchases.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 67**

**Responding Witness: John P. Malloy**

- Q-67. With respect to write-offs or uncollectible expenses, provide a list and amount of any write-offs during the last five years associated with customers served under the following Rate Schedules:
- a. Power Service (PS);
  - b. Time of Day (TOD);
  - c. Retail Transmission Service (RTS); and,
  - d. Fluctuating Load Service (FLS).
- A-67.
- a-d. The Company does not have a business reason to maintain the requested information and therefore cannot provide the requested response.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 68**

**Responding Witness: Valerie L. Scott**

- Q-68. Provide details of booked uncollectible expense for each of the last three years by rate class or customer group as available; i.e., in the finest level of detail available other than on a total Company basis.
- A-68. Uncollectible expense is not recorded on a rate class or customer group level as it is booked only on a total Company basis.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 69**

**Responding Witness: William S. Seelye**

Q-69. With regard to the Company's CCSS, explain why Rate PS-Secondary and Rate TOD-Secondary are not allocated any secondary lines (overhead or underground) costs.

A-69. For customers taking service under Power Service-Secondary (PSS), the twelve-month average demand requirements range from 50kW to 250kW, and for customers taking service under Time-of-Day-Secondary (TODS), the twelve-month average demand requirements range from 250kW to 5,000kW.

Due to the large demand requirements for these customers, the Company does not normally install secondary conductor between the transformer and service drop due to voltage drop concerns associated with long secondary conductor spans serving customers with large loads. For these customers, the Company typically installs a distribution pole very close to the customer's equipment which will support the transformers and service wire leading directly into the customer's meter with no additional secondary conductor.

Since secondary conductor and associated distribution equipment are normally not installed for these customers, it is not appropriate for these customers to be allocated secondary distribution costs in the Company's class cost of service studies.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 70**

**Responding Witness: William S. Seelye**

- Q-70. With regard to the Company excluding an allocation of secondary lines costs to Rate PS-Secondary and Rate TOD-Secondary in this case, explain what facts and circumstances have changed since Case No. 2012-00221, wherein the Company did allocate secondary lines costs to these classes.
- A-70. Prior to the Company's 2014 Rate Application, it was determined that changes to the allocation of Secondary distribution were warranted based on the information provided by the Company's Distribution Engineering department as explained in the response to Question No. 69. These changes were incorporated in the cost of service study filed by KU in Case No. 2014-00371.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 71**

**Responding Witness: William S. Seelye**

- Q-71. Explain the time period utilized to estimate class contributions to peak demands within Mr. Seelye's CCOSS; e.g., Residential Summer CP Demand equals 1,347,051 and Residential NCP Demand equals 2,135,688.
- A-71. The summer Coincident Peak (CP) demands used in the CCOSS are each class's contribution to the highest hourly system peak during the summer months (May – Sept) adjusted for losses during the forecasted test period. The Non-Coincident Peak (NCP) demands are each class's highest hourly demand adjusted for losses during any hour of the forecasted test period.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 72**

**Responding Witness: William S. Seelye**

Q-72. Explain and reconcile differences in class contributions to coincident peak and non-coincident peak demands contained in Mr. Seelye's CCOS (tab: Allocation Proforma) with those provided in response to PSC 2-97. In this response, also indicate if the amounts provided in PSC 2-97 are Kentucky only.

A-72. The response to PSC 2-97 shows each class's contribution to the highest hourly peak load during the summer months (Coincident Peak) multiplied by the Loss of Load Probability (LOLP) during that hour. The allocators used to allocate Production Demand costs in the LOLP version of the Cost of Service Study are the summation of each class's hourly load multiplied by the LOLP for each hour for the entire twelve month test period. The demand values provided in PSC 2-97 are only for Kentucky jurisdictional customers and do not include any wholesale or Virginia customer demands.

The non-coincident peak demands are the same in both versions of the cost of service studies filed and are simply the highest class hourly demand forecasted for the test period.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 73**

**Responding Witness: William S. Seelye**

- Q-73. Explain and reconcile differences in class contributions to coincident peak and non-coincident peak demands contained in Mr. Seelye's CCOSS (tab: Allocation Proforma) with those provided in response to OAG 1-274(d), Attachment 3. In this response, also indicate if the amounts provided in OAG 1-274(d) are Kentucky only.
- A-73. The class coincident and non-coincident peaks in Attachment 3 provided in response to AG 1-274(d) are for July 1, 2015 through June 30, 2016. The information used to develop the demand allocations for the class cost of service studies are contained in Attachment 4 in the response to the same question under the tab "KU 8760s Test Year EMS Shape (2)".

The amounts referenced in AG 1-274(d) are for Kentucky customers only.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 74**

**Responding Witness: William S. Seelye**

Q-74. With regard to the attachment to PSC 2-97, explain and separate (as appropriate) what rate schedules (consistent with the Company's CCOSS) are included in the following classes or categories. In other words, for the following three categories, define and separate consistent with the classes within the Company's CCOSS:

- a. Industrial Service Trans;
- b. Muni Primary; and,
- c. Muni Secondary.

In this response, also indicate if the amounts provided in PSC 2-97 are Kentucky only. Provide hourly loads by class consistent with the CCOSS. Provide in electronic (Excel) format.

A-74.

- a. "Industrial Service Trans" corresponds to Fluctuating Load Service ("FLS") in the Company's class cost of service studies.
- b. "Muni Primary" represents FERC-regulated wholesale customers served at primary voltage, which are not a part of this proceeding and therefore are not in the Company's class cost of service studies.
- c. "Muni Secondary" should have been labeled "Muni Transmission" throughout the file. Muni Secondary therefore represents FERC-regulated wholesale customers served at *transmission* voltage, which are not a part of this proceeding and therefore are not in the Company's class cost of service studies.

The amounts provided in PSC 2-97 are for the Kentucky jurisdiction only. The hourly loads used to develop demand allocators were provided in the attachment referenced for PSC 2-97.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 75**

**Responding Witness: William S. Seelye**

Q-75. With regard to the attachment to OAG 1-274, explain and separate (as appropriate) what rate schedules (consistent with the Company's CCOSS) are included in the following classes or categories. In other words, for the following four categories, define and separate consistent with the classes within the Company's CCOSS:

- a. Industrial Service Trans;
- b. Muni Primary;
- c. Muni Secondary; and,
- d. Comp 1.

In this response, also indicate if the amounts provided in OAG 1-274(d) are Kentucky only. Provide hourly loads by class consistent with the CCOSS. Provide in electronic (Excel) format.

A-75.

- a. "Industrial Service Trans" corresponds to Fluctuating Load Service ("FLS") in the Company's class cost of service studies.
- b. "Muni Primary" represents FERC-regulated wholesale customers served at primary voltage, which are not a part of this proceeding and therefore are not in the Company's class cost of service studies.
- c. "Muni Secondary" should have been labeled "Muni Transmission" throughout the file. Muni Secondary therefore represents FERC-regulated wholesale customers served at *transmission* voltage, which are not a part of this proceeding and therefore are not in the Company's class cost of service studies.
- d. "Comp 1" is a wholesale customer, whose cost of service is not a part of this proceeding and therefore not in the Company's class cost of service studies.

Comp 1 was identified as such to maintain the confidentiality of the customer's load information.

The hourly loads used to develop demand allocators were provided in the attachment referenced for PSC 2-97.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 76**

**Responding Witness: John P. Malloy / David S. Sinclair**

Q-76. Provide:

- a. The cost per avoided MW used for the cost-benefit tests in the Companies' most recent DSM application (2014-00003).
- b. The cost per (avoided) MW used in the Companies' most recent Integrated Resource Plan (2014-00131).

A-76.

- a. The cost per avoided MW used in DSM application 2014-00003 was \$99.92/kW-year.
- b. The cost per avoided MW used in the Companies' 2014 Integrated Resource Plan was \$99.92/kW-year.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 77**

**Responding Witness: John P. Malloy**

- Q-77. Reference the Malloy testimony at page 21, line 17, in which Mr. Malloy indicates that the AMS experience of the Companies' affiliate, PPL Electric Utilities, was used in the development of the Companies' AMS Business Case. The Companies' AMS Business Case indicates a net present value for the Recovery of Non-technical Losses over 20 years at \$489 million (page 31). It is the OAG's understanding that PPL's Pennsylvania deployment of AMS has just begun. Provide the following data from any AMS business case PPL Electric Utilities developed for its Pennsylvania AMS deployment:
- a. Present value of reductions in non-technical losses
  - b. Business processes and technologies to be employed to reduce non-technical losses
  - c. Utility revenues and customer counts for bundled and delivery-only service
- A-77. KU is unaware of a business case prepared by PPL for AMS deployment. PPL Electric Utilities was required to install smart meters by legislative action.

**KENTUCKY UTILITIES COMPANY****CASE NO. 2016-00370****Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017****Question No. 78****Responding Witness: John P. Malloy**

- Q-78. Reference the AMS Business Case, Exhibit JPM-1, page 34, "Reduced Staffing for Ad-Hoc Field Services" and the Companies' response to AG-1-320 [Case No. 2016- 00370]. Complete the table below, where "Total Count, 2016" is the number of each operation performed in 2016; "Count of Unique Customers, 2016" is the number of unique customers for which each operation was performed (i.e., a customer disconnected for non-payment 6 times in 2016 equals 1); and "Cost, 2016" is the cost of all such operations in 2016.

|                                      | Total Count<br>2016 | Count of Unique<br>Customers, 2016 | Cost, 2016 |
|--------------------------------------|---------------------|------------------------------------|------------|
| Off-Cycle Meter Reads                |                     |                                    |            |
| Meter Re-reads                       |                     |                                    |            |
| Move-in Connections                  |                     |                                    |            |
| Bill Payment Reconnections           |                     |                                    |            |
| Disconnections for Non-Payment       |                     |                                    |            |
| Disconnections for all other reasons |                     |                                    |            |
| TOTALS                               |                     |                                    |            |

- A-78. See the tables below.

| KU Kentucky Only                     | Total Count<br>2016 | Count of Unique<br>Customers, 2016 | Cost, 2016  |
|--------------------------------------|---------------------|------------------------------------|-------------|
| Off-Cycle Meter Reads                | 132,756             | 98,056                             | \$2,196,209 |
| Meter Re-reads                       | *                   | *                                  | *           |
| Move-in Connections                  | 489                 | 432                                | \$8,090     |
| Bill Payment Reconnections           | 74,279              | 45,272                             | \$1,228,813 |
| Disconnections for Non-Payment       | 87,309              | 53,676                             | \$1,444,371 |
| Disconnections for all other reasons | 1,290               | 851                                | \$21,341    |
| TOTALS                               | 296,123             | 198,287                            | \$4,898,824 |

\*The Company characterizes all Meter Re-reads as Off-Cycle Meter reads.

| KU Virginia Only                     | Total Count<br>2016 | Count of Unique<br>Customers, 2016 | Cost, 2016       |
|--------------------------------------|---------------------|------------------------------------|------------------|
| Off-Cycle Meter Reads                | 5,804               | 4,607                              | \$96,017         |
| Meter Re-reads                       | *                   | *                                  | *                |
| Move-in Connections                  | 42                  | 38                                 | \$695            |
| Bill Payment Reconnections           | 2,903               | 1,944                              | \$48,025         |
| Disconnections for Non-Payment       | 3,679               | 2,511                              | \$60,862         |
| Disconnections for all other reasons | 66                  | 42                                 | \$1,092          |
| <b>TOTALS</b>                        | <b>12,494</b>       | <b>9,142</b>                       | <b>\$206,691</b> |

\*The Company characterizes all Meter Re-reads as Off-Cycle Meter reads.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 79**

**Responding Witness: John P. Malloy**

Q-79. Reference the AMS Business Case, Exhibit JPM-1, page 38. The AMS Cost-Benefit Summary 2016-2039 indicates that the net present value of meter retirement is only \$3.8 million, while the nominal value of meter retirement is \$39.7 million.

- a. Explain why the net present value of meter retirement is so much less than the nominal value.
- b. Provide all assumptions and calculations used to determine a net present value of \$3.8 million from a nominal value of \$39.7 million. Include calculations by year over the 20-year benefit period utilized in the AMS business case in an executable MS Excel file with all cells and equations intact.

A-79.

- a. The net present value calculation, as seen in the attachment to part b, includes a reduction in capital equal to the net book value of the retired meters. The Company is seeking Regulatory Asset treatment of this remaining value to be amortized over five years. Because the remaining book life of the retired meters is substantially longer than the 5-year amortization, the present value of the meter retirement is proportionally reduced from the nominal value.
- b. See attachment being provided in Excel format. Note that since the Regulatory Asset amortization will be concluded in 2025, the attached calculation only extends 10 years.

The attachment is being  
provided in a separate  
file in Excel format.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 80**

**Responding Witness: John P. Malloy**

- Q-80. Reference the AMS Business Case, Exhibit JPM-1, page 40. The Meter Capital cost indicated in the table entitled "Project Costs 2016-2021" is \$167 million, or approximately \$176.53 per customer assuming 945,000 customers. Provide:
- a. The number of smart meters to be installed for the \$167 million capital cost estimate;
  - b. The portion of the capital cost estimate associated with the optional remote service disconnect-reconnect switch offered by Landis + Gyr; and
  - c. The number of smart meters to be equipped with the optional remote service disconnect-reconnect switch offered by Landis + Gyr.
- A-80.
- a. Included in the meter capital estimate of \$167 million is the installation of 978,436 AMS electric meters and 321,637 AMS gas indices.
  - b. Remote disconnect-reconnect functionality increases the cost of the Landis + Gyr AMS electric meter by approximately \$20/meter, which equates to approximately \$19.6 million for the installed electric meters. Due to the requirement to inspect customer gas appliances when a gas reconnection is performed, remote reconnect-disconnect functionality of AMS gas indices is not practical and is not included in the AMS Business Case.
  - c. The Companies plan to install 933,174 AMS electric meters with remote service disconnect-reconnect switches. Not all AMS electric meters can be equipped with the remote disconnect-reconnect service switch because the service switch is designed and rated at maximum current adequate only for single-phase, residential class and small business electric services.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 81**

**Responding Witness: John P. Malloy**

Q-81. Reference the AMS Business Case, Exhibit JPM-1, page 158. The Companies provide the following estimates used to calculate non-technical loss reduction benefits:

- 2% of revenues are lost due to non-technical losses
- AMS will detect 60% of such losses
- 60% of losses detected will be recovered

- a. Provide any studies or research (other than the EPRI report the Company cited) which support any of these three estimates.
- b. Explain how the Companies used existing experience to determine each of these three estimates. For any of the three estimates which were not developed through the benefit of existing experience, describe how the Companies developed each.
- c. Provide, for 2014, 2015, and 2016:
  - i. The dollar value of non-technical line losses identified and quantified; and
  - ii. Of non-technical line losses identified and quantified, the dollars actually recovered to date from customers and/or thieves.

A-81.

- a. KU relied solely on the 2008 EPRI report.
- b. KU's experience with finding non-technical losses is limited to theft and metering issues (i.e. meter malfunction, non-read, misread). The EPRI report shows that with the additional data provided from AMS additional losses will be identified. The Company discounted the 2% from the study to be conservative and reflect the lack of company experience in this area. 60% was considered a good estimate. See the response to Question No. 82 for further explanation.

c.i. See the table below. The Tampering Fees Billed represents the dollar value of non-technical line losses identified and quantified.

c.ii. The table below reflects the nominal dollars recovered from tampering fees for 2014 through 2016.

| <b>LG&amp;E/KU Combined</b> | <b>2014</b> | <b>2015</b> | <b>2016</b> | <b>Total<br/>2014-2016</b> |
|-----------------------------|-------------|-------------|-------------|----------------------------|
| Tampering Fees Billed       | \$380,620   | \$418,578   | \$386,947   | \$1,186,145                |
| Tampering Fees Collected    | \$234,630   | \$246,639   | \$215,411   | \$696,680                  |
| Recovery Percentage         | 62%         | 59%         | 56%         | 59%                        |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 82**

**Responding Witness: John P. Malloy**

- Q-82. Reference the Companies' response to KIUC 1-16 (c) [Case No. 2016-00370]. Explain how the report provided, "2010 Analysis of System Losses", supports the Companies' estimate that 2% of its revenues are lost through non-technical means. Cite any specific text, tables, charts, appendices, or other components of the report applicable to the Companies' response.
- A-82. The 2008 EPRI report and the 2010 Analysis of System Losses were performed independent of each other and for different purposes.

The objective of the EPRI report, provided in response to KIUC 1-16 (a) [Case No. 2016-00370], is found on page 5, which states, "Revenue security involves securing revenue that is due distribution utilities from delivery of electricity to end-users. It includes both reducing losses and collecting revenue associated with the electricity delivered. Non-technical distribution losses occur at the point of delivery and measurement. Minimizing non-technical losses increases the amount of electricity that is delivered, measured, and billed. This is the challenge to revenue security."

The purpose of the 2010 Analysis of System Losses, provided in response to KIUC 1-16 (c) [Case No. 2016-00370] is found on page 1 in the executive summary which states, "This report presents KU 2010 Analysis of System Losses for the power systems as performed by Management Applications Consulting, Inc. (MAC). The study developed separate demand (kW) and energy (kWh) loss factors for each voltage level of service in the power system for KU. The cumulative loss factor results by voltage level, as presented herein, can be used to adjust metered kW and kWh sales data for losses in performing cost of service studies, determining voltage discounts, and other analysis which may require a loss adjustment." It does not attempt to quantify non-technical losses.

The Company used 2% from the EPRI study. The 2% was then multiplied by 60% to account for the portion of non-technical losses which could reasonably be expected to be found through the new data and analytics. Additionally, another 60% was used to represent that portion of found non-technical losses which could be recovered (turned into actual revenue). See the response to Question No. 81.

Thus,  $2\% \times 60\% \times 60\% = 0.72\%$

The 0.72% is a reasonable level of non-technical loss that can be found and recovered through the improved technology of AMS, the data AMS provides, and the analytics utilizing the data.

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**Question No. 83**

**Responding Witness: John P. Malloy**

- Q-83. Reference the Companies' response to ACM 1-33 [Case No. 2016-00371]. The 2009 E-On AMI benefit-cost analysis provided as a response to that question, page 14, indicates that the present value of the combined revenue protection added to system loss benefits for all three Companies at \$28 million. This is a vast difference from the Companies' latest AMS benefit-cost analysis, which estimates the present value of reductions in non-technical losses at \$489 million. Explain the difference between the Companies' current estimate and the 2009 E-On estimate.
- A-83. The Companies' estimated benefit of \$489 million due to reductions in non-technical losses is a nominal amount, which equates to a present value of \$195 million, which would be more comparable to the \$28 million referenced in the question. \$28 million was the best estimate at the time, and was calculated assuming that total system losses related to distribution only could be reduced by 2%.

The \$195 million that the Company currently estimates the present value of reductions in non-technical losses is based on the 2008 EPRI Report and is further explained in Company's response to Question No. 82.

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**Question No. 84**

**Responding Witness: John P. Malloy**

- Q-84. Reference the Companies' response to PSC 2-29 [Case No. 2016-00370]. Upon finding a meter base which is sufficiently dysfunctional to prevent the installation of an AMI meter, the response describes how the affected customer can: 1) allow the Companies to proceed with meter base repairs at no cost; or 2) repair the meter base with a contractor of the customer's own choosing. The Malloy testimony, pp. 26-27, indicates that customers will not have the opportunity to Opt-Out of AMI meter installation. With no Opt-Out available, explain what the Companies propose to do if a customer refuses to repair, or to allow the Companies to repair, a dysfunctional meter base.
- A-84. See the response to PSC 3-11.

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**Question No. 85**

**Responding Witness: John P. Malloy**

- Q-85. Reference the Companies' response to OAG 1-301 [Case No. 2016-00370]. The Companies report the following quantities of single-phase electronic meters were installed in 1999. Report how many of the single-phase electronic meters installed in 1999 are still in operation by completing the table below.

| Meter            | Quantity Installed 1999 | Quantity Installed 1999 Still In Operation 12-31-16 |
|------------------|-------------------------|-----------------------------------------------------|
| GE I210          | 81                      |                                                     |
| Itron C1S        | 1035                    |                                                     |
| Landis + Gyr ALF | 283                     |                                                     |
| Landis + Gyr AX  | 5                       |                                                     |
| TOTALS           | 1,404                   |                                                     |

- A-85. The Companies' response to AG 1-301 parts a, b, and c listed meters currently installed and in service in Wilmore regardless of the year of initial installation. AG 1-301, part d, question asked, "Of the meters originally installed in 1999, provide a count of those still in operation by model." There are 2,615 Sangamo Model J5S mechanical meters that were installed in 1999 that are still currently installed and active. These Sangamo Model J5S mechanical meters have a communication card in the meter that provides power line communication (PLC) to operate on the TS1 system. There were no single-phase electronic meters installed in 1999 in the Wilmore area as part of the TS1 system.

Nonetheless, see the table below regarding the meters at issue in this request, which shows the years the Companies acquired the meters (usually the same years they were first placed in service):

| Meter Models     | 2001     | 2002      | 2003      | 2007      | 2009      | 2010       | 2011       | 2012       | 2013       | 2014       | Total       |
|------------------|----------|-----------|-----------|-----------|-----------|------------|------------|------------|------------|------------|-------------|
| GE I210          |          |           |           | 81        |           |            |            |            |            |            | 81          |
| Itron C1S        |          | 83        | 88        |           | 89        | 229        | 109        | 221        | 216        |            | 1035        |
| Landis + Gyr ALF |          |           |           |           |           |            |            |            |            | 283        | 283         |
| Landis + Gyr AX  | 5        |           |           |           |           |            |            |            |            |            | 5           |
| <b>Total</b>     | <b>5</b> | <b>83</b> | <b>88</b> | <b>81</b> | <b>89</b> | <b>229</b> | <b>109</b> | <b>221</b> | <b>216</b> | <b>283</b> | <b>1404</b> |

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**Question No. 86**

**Responding Witness: John P. Malloy**

- Q-86. Reference the Company's response to OAG 1-302.f [Case No. 2016-00370]. The Company reports the following meters from the 2007 pilot are still in operation. Provide the quantities originally installed by completing the table below.

| Meter            | Quantity Installed in 2007 | Quantity Still in Operation |
|------------------|----------------------------|-----------------------------|
| Landis + Gyr ALF |                            | 331                         |
| Landis + Gyr AX  |                            | 45                          |
| TOALS            |                            | 376                         |

- A-86. The meters associated with the pilot were installed in 2007 - 2009. The table below contains the peak participation of meter installations for the pilot. The Landis + Gyr ALF meter which encompasses the vast majority of the pilot program installations, exhibited significant fading and/or missing segments in the LCD display over a period of time, thus impacting the visual readability. As the pilot program was dismantled and the meter reading returned to normal operations, meters were exchanged on a periodic or as needed basis.

| Meter            | Peak Quantity Installed in Responsive Pricing and Smart Metering Pilot Program | Quantity Still in Operation |
|------------------|--------------------------------------------------------------------------------|-----------------------------|
| Landis + Gyr ALF | 1579                                                                           | 331                         |
| Landis + Gyr AX  | 98                                                                             | 45                          |
| TOALS            | 1677                                                                           | 376                         |

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**Question No. 87**

**Responding Witness: John P. Malloy**

- Q-87. Reference the Company's response to OAG 1-304 [Case No. 2016-00370], which indicates that 4,181 customers on rates RS and RTOD have enrolled in the AMS Customer Offering. Provide the number of customers in each category described who accessed their e-portal by completing the table below.

|                                               | Customer Count |
|-----------------------------------------------|----------------|
| Customer accessed ePortal once                |                |
| Customer accessed ePortal more than six times |                |
| Customer never accessed ePortal               |                |
| TOTALS                                        | 4,181          |

- A-87. The Company's response to AG 1-304 showed there were 4,181 Rate RS, RTOD, and GS customers participating in the AMS Customer Offering. Therefore, the numbers in the table below include Rate GS customers as well. Note that there are customers who have accessed ePortal more than once but fewer than six times, and those customers are counted in the first entry to ensure the entries total to 4,181. Also note that the second entry includes customers who have accessed ePortal six or more times, which is the criterion the Companies used to determine who was an active user.

|                                             | Customer Count |
|---------------------------------------------|----------------|
| Customer accessed ePortal one to five times | 1,905          |
| Customer accessed ePortal six or more times | 1,001          |
| Customer never accessed ePortal             | 1,275          |
| TOTALS                                      | 4,181          |

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**Question No. 88**

**Responding Witness: John P. Malloy**

- Q-88. Reference the Companies' response to Sierra Club 1-32 [Case No. 2016-00370]. The response indicates the Companies defined "active users" as those customers participating in the AMS Customer Offering who visited the ePortal more than 6 times, and that 36% of the 48% of customers who registered for ePortal access (17% of AMS offering participants) meet this definition. As the Companies are well aware, customers who opt-in to an AMS offering are the most engaged and conservation-conscious customers in the Companies' base. Yet, the Companies appear to have assumed that the same 17% of customers in the overall customer base, who will not express the same level of engagement or conservation-consciousness, will also be active users in the Companies' calculation of the ePortal conservation benefit estimate.
- a. Describe any adjustment the Companies made in the calculation of the ePortal conservation benefit estimate to reflect differences between customers participating in the AMS Customer Offering and the overall base of customers.
  - b. Describe the adjustment the Companies believe is reasonable to reflect this difference. Include in the Companies' response any research or studies the Companies used to determine such an adjustment.
- A-88. Note that the Company's response to SC 1-32 defined an active ePortal user as someone who "had six or more login events following deployment," not more than six as the request above states.
- a. The Companies made no adjustment when extrapolating the percentage of active users in the AMS Opt-In Program to the active user percentage estimated in the calculation of ePortal benefits included in the AMS Business Case. However, the Companies used a conservative estimate of three percent energy savings applied to these customers when the Smart Grid Consumer Collaborative report referenced in the AMS Business Case supports a 5 to 15 percent savings for active users.
  - b. The Companies do not believe that any such adjustment is necessary due to the conservative energy-savings assumptions discussed in part a.

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**Question No. 89**

**Responding Witness: John P. Malloy**

- Q-89. Reference the Companies' response to OAG 1-306.a [Case No. 2016-00370]. The Companies provided the survey the Companies used to gather customer feedback about their experience with the Advanced Meter Service (Email Study #16295). Provide the results of the survey.
- A-89. The survey report and questionnaire were provided in response to AG 1-306.a.

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**Question No. 90**

**Responding Witness: John P. Malloy**

Q-90. Reference the Companies' response to OAG 1-308.a [Case No. 2016-00370], describing how the Companies will use the proposed AMS system to localize and resolve power outages.

- a. Describe how the Companies will guard against false-positive outage reports.
- b. The OAG understands how the Companies plan to integrate AMS with the Companies' OMS systems. In the experience of the OAG's expert, outage reports from AMS allow grid operators to understand the area and extent of customers impacted by an outage, much like OMS does today without AMS. However, the fault must still be located. Describe how the AMS system will, as described on AMS Business Case page 155, reduce fault location time by 50% (from 19.2 minutes on average to 9.6 minutes on average).
- c. The Companies claim present value savings from reductions in restoration time/costs of \$3.3 million (AMS Business Case page 155). This appears to be about the same as the reduction in headcount for linemen/troublemen of about 1. Confirm the Companies will reduce lineman/troubleman headcount by 1 at full AMF deployment as a result of this AMS capability.

A-90.

- a. The Company will guard against false-positive outage reports by coordinating information from different systems to determine the cause. For example, the network will be monitored to know if the reason a meter cannot communicate is because the network, collector, or router is down. Maintenance work on the system will be coordinated with meter outage reports to know if a meter reporting an outage is for a known reason.
- b. Fault location is determined through using information from multiple systems. OMS not only knows individual outages but also contains how each meter is connected to distribution circuits, substation feeders, and transmission. Thus, as outages occur, the outages can be combined with the network connectivity data to locate the most likely cause or location of the outage. Today, this information is obtained when customers call in an outage. With AMS, the meter

will report the outage. The increased number of reports when an outage occurs increases the ability to locate a fault quicker and more accurately.

- c. The Companies' estimate of \$3.3 million in restoration reduction savings is nominal, not present value. The Companies do not plan to reduce lineman/troubleman upon full AMS deployment. The savings is attributed to reduced overtime expense incurred.

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**Question No. 91**

**Responding Witness: John P. Malloy**

Q-91. Reference the Companies' response to OAG 1-316 [Case No. 2016-00370], describing how the Companies calculated ePortal savings as detailed on page 157 of the AMS business case. The OAG's expert is the author of the Smart Grid Consumer Collaborative report cited by the Companies in its ePortal benefit calculation. The OAG expert makes several observations of the Companies' calculations:

- The Companies used a total bill reduction to calculate benefits. Actual economic savings to customers in the long run will be limited to fuel cost reductions, as reductions in sales volumes will result in \$/kWh increases to recover the Companies' fixed costs.
- The Companies assume that 48% of customers will access the ePortal, and that 36% of these will reduce their energy use, resulting in an "adoption rate" (customers who use the ePortal to conserve energy) of 17.28% (48% x 36%). In the research cited, adoption rates of 2% (reference case) to 5% (ideal case) are indicated.
- In the research cited, conservation rates of 5% to 15% were reported with the use of direct, real-time energy usage feedback (i.e., in-home displays). In the report author's informed opinion, conservation rates of this size will not be possible without the use of in-home displays, a high-cost option not included in the Companies' AMS proposal.

Recalculate the present value of ePortal benefits using the following assumptions:

- a. Fuel cost savings only, 2% adoption rate, 3% energy conservation effect (OAG most likely case)
- b. Fuel cost savings only, 5% adoption rate, 3% energy conservation effect (OAG ideal case)

- c. Fuel cost savings only, 5% adoption rate, 5% energy conservation effect (OAG extremely unlikely case)

A-91. Recalculations are provided below, however the Company disagrees with the premise of the question and stands by its original calculation. As the ePortal savings were calculated based on the customer perspective, a reduction in energy due to access to usage would reduce the total bill.

| (\$Millions) | <u>Nominal<br/>Value</u> | <u>Net Present<br/>Value</u> |
|--------------|--------------------------|------------------------------|
| a.           | \$ 5.5                   | \$ 2.2                       |
| b.           | \$ 13.8                  | \$ 5.5                       |
| c.           | \$ 23.0                  | \$ 9.2                       |

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**Question No. 92**

**Responding Witness: John P. Malloy**

- Q-92. Reference the Companies response to OAG 1-316 [Case No. 2016-00370]. Provide the revenue projections, including MWh volume and prices by year, upon which the Companies calculated their conservation benefit by year and resulting in a nominal estimate of \$166.3 million. Also describe the revenue projections (i.e., "residential and small commercial", etc.). The data provided, in conjunction with the assumptions provided in the AMS business case, should be sufficient for the OAG to duplicate the Companies' estimates.
- A-92. The Companies did not directly use MWh and MW volumes and prices to calculate the benefit. Refer to the attachment to PSC 2-64, tab "AMSBenefits", rows 225-240 for the detailed calculations by year. Note that only residential data is included in the calculation.

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**Question No. 93**

**Responding Witness: John P. Malloy**

- Q-93. Refer to the Companies' response to OAG 1-318 [Case No. 2016-00370], describing how the Companies calculated savings associated with a reduction in "OK on Arrival" truck rolls as detailed on page 156 of the AMS business case. The Companies claim present value savings from reductions in OK on Arrival of \$6.9 million. This appears to be about the same as a reduction in headcount for linemen/troublemen of about 2. Confirm the Companies will reduce lineman/troubleman headcount by 2 at full AMF deployment as a result of this AMS capability.
- A-93. The Companies' estimate of \$6.9 million in OK on Arrival savings is nominal, not present value. The Companies do not plan to reduce lineman/troubleman headcount as a result of this capability as the savings are expected to be a reduction in overtime.

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**Question No. 94**

**Responding Witness: John P. Malloy**

Q-94. Refer to the Companies' response to OAG 1-320 and 1-321 [Case No. 2016-00370]. The Companies provided a breakdown of Meter reading savings by year totaling \$203 million over 20 years, and meter services spending totaling \$92 million over 20 years

- a. Provide 2015 meter reading spending with FERC Uniform System of Account details.
- b. Provide 2015 meter services spending with FERC Uniform System of Account details.

A-94.

- a. Meter Reading

| FERC # | Amount    |
|--------|-----------|
| 426    | 583       |
| 902    | 5,007,040 |
| Total  | 5,007,623 |

- b. Meter Services

| FERC # | Amount    |
|--------|-----------|
| 426    | 5,874     |
| 586    | 6,131,842 |
| 587    | (38,396)  |
| 925    | (4,043)   |
| 926    | 1,836     |
| Total  | 6,097,113 |

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**Question No. 95**

**Responding Witness: John P. Malloy**

- Q-95. Refer to the Companies' response to OAG 1-323 [Case No. 2016-00370]. Provide the revenue projections, including MWh and MW volume and prices by year, which the Companies employed to calculate its non-technical losses benefit estimate by year and resulting in a nominal estimate of \$488.6 million. Also describe each component of the revenue projections (i.e., "residential and small commercial", "large commercial", "industrial", etc.) The data provided, in conjunction with the assumptions provided in the AMS business case, should be sufficient for the OAG to duplicate the Companies' estimates.
- A-95. The Companies did not directly use MWh and MW volumes and prices to calculate the benefit. Refer to the attachment to PSC 2-63, tab "AMSBenefits", rows 243-254 for the detailed calculations by year. The revenue used in the calculation is listed by rate type on tab "KY Detail Electric Revenues".

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**Question No. 96**

**Responding Witness: John P. Malloy**

- Q-96. Refer to the Companies' response to OAG 1-330 [Case No. 2016-00370]. The Companies indicate that no affiliated utilities have executed a system-wide conversion to AMI meters. The OAG is aware that PPL Electric Utilities Corp filed an application with the Pennsylvania PUC for approval of its smart meter implementation plan on or around June 30, 2014 in case M-2014-2430781. The OAG was unable to locate anything other than the cover page and certificate of service on the Pennsylvania PUC website. Provide the entire application and smart meter implementation plan submitted by PPL Electric Utilities Corp to the Pennsylvania PUC in case M-2014-2430781, including any cost-benefit analyses which may have accompanied the application and implementation plan.
- A-96. See <http://www.puc.pa.gov/pcdocs/1296056.pdf>, Section IX, page 51 of the PPL Electric Utilities Corporation Smart Meter Technology Procurement and Installation Plan discusses benefits. Costs are discussed in Section X, page 54.

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**Question No. 97**

**Responding Witness: John P. Malloy**

- Q-97. Refer to the Companies' response to OAG 1-342 [Case No. 2016-00370], in which the Companies state the hardware, firmware, and software associated with the Companies' proposed AMS implementation is "aligned with" NIST Interoperability Standards Release 3.0. The OAG notes that "alignment" is not the same as "compliance". NIST Interoperability Standards Release 3.0 describes 72 standards on pages 59-120. Identify each standard with which the Companies' proposed AMS implementation does not comply. For each non-compliant standard:
- Describe how the Companies' proposed AMS implementation is out of compliance with the standard.
  - Provide a justification, if any, as to why the Companies are proposing AMS designs not in compliance with the standard.
  - For standards with no justification, describe how the Companies are willing to modify their AMS design to comply with the standard.
  - For standards with no justification, estimate the incremental cost of the compliance modifications
- A-97. The portion of the NIST Interoperability Standards Release 3.0 cited in the request does not contain binding or enforceable standards for smart-grid devices or related equipment. Instead, it is a list of evolving standards, practices, and procedures—hence "Release 3.0"—developed by government and industry sources, including the Companies' proposed AMS vendor, Landis+Gyr. The cited list of standards, practices, and procedures is not enforceable by NIST or any other entity; rather, it is a list of standards NIST believes can be implemented related to smart-grid interoperability and related matters. Indeed, a number of the listed standards, practices, and procedures do not apply to AMS design at all. For example, number 39 on the list, "NAESB RE Q-22, Third Party Access to Smart Meter-based Information Business Model Practices CoS," is a document that "establishes voluntary Model Business Practices for Third Party access to Smart Meter-based information" that are "intended only to

serve as flexible guidelines rather than requirements ....” Such practices do not apply to AMS design per se, but rather to business practices.

In addition, there is no certifying body to which one could go to verify compliance with the cited standards to the extent they could be applicable.

That is why the Companies have stated that their proposed AMS deployment is in alignment with the NIST Interoperability Standards Release 3.0; not all of it could apply to the AMS deployment, and there is no certifying entity that could verify compliance with any of the proposed standards.

But the Companies would note that Landis+Gyr (L+G) has participated in, and contributed to writing the standards proposed by, the Smart Grid Interoperability Panel (SGIP) for the areas where L+G has relevant solutions (metering, networks, Meter Data Management System). Suppliers must choose to align with the SGIP’s interoperability standards. L+G has chosen to align to the standards, which are also important components of the cited NIST standards.

Furthermore, L+G has deployed approximately 25 million meters across North America. They have vast experience with meters, networks, and systems which help utilities operate and provide services to their customers. They are a solid company backed by Toshiba Corporation and work within the industry to not only align with standards but help create the standards to advance smart grid infrastructure.

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**Question No. 98**

**Responding Witness: John P. Malloy**

Q-98. Refer to the Companies' response to OAG 1-343 [Case No. 2016-00370], which references Appendix A-2 of Exhibit JPM-1 "Application Landscape".

- a. Identify the system or application on this page in which meter data is translated into billing data, and eventually into customer bills.
- b. Identify vendors, names, versions, and other descriptive information on software or applications the Companies have, or plan to implement, to bill customers using AMS data.
- c. Describe the capabilities of each software or application identified above.
- d. If the capabilities described above do not include the ability to bill rates with peak demand response features, such as Critical Peak Price and Peak Time Rebate, describe the required software modifications and incremental costs required to do so.

A-98.

- a. The L+G Meter Data Management System (MDMS) Gridstream will receive interval data and register reads from the L+G Command Center Head End. This data will be then translated into billing determinants within the MDMS, and those billing determinants will be sent to SAP. SAP will then apply the appropriate rates to the billing determinants to calculate the actual billing amounts
- b. Command Center – Version 6.x or 7.x

Advanced Security - Part of Command Center

Gridstream Meter Data Management System (MDMS) – Gridstream L&G MDMS version 3.7

Meter Asset Management System (MAM) Radian WECO Watt-Net Plus – Watt-Net Plus version 2.6

Meter Operations Center (MOC) Bit Stew Mix Core – Mix Core version 10c. Command Center

Command Center is the browser-based operating software for Gridstream RF and PLC networks. It installs seamlessly, or can run on hosted servers, and provides a secure platform for data and system management throughout the utility. Reports are tailored for use by billing, finance, customer service, operations, distribution planning and engineering departments. Multiple integration partners and cross-platform functionality ensure Command Center will integrate into the entire business.

Key features include:

- Support for multiple applications, including AMI and personal energy management
- Reliability indices reporting capabilities
- Power interruption reporting
- System diagnostics
- Remote programming of time-based billing structures
- Tamper detection
- Available hosting service reduces demands on utility staff

Advanced Security

Advanced Security means that security certificates are created and assigned for each endpoint rather than a single certificate for all communications. This feature significantly reduces the risk of a successful cyber-attack gaining over-the-air control capabilities of all meters and infrastructure, therefore more effectively isolating the risk of a mass event. Advanced security protocols align with industry best practices as recommended by the National Institute of Standards and Technology Interagency Report (NISTIR) which states:

“Where meters contain cryptographic keys for authentication, encryption, or other cryptographic operations, a key management scheme must provide for adequate protection of cryptographic materials, as well as sufficient key diversity. That is, a meter, collector, or other power system device should not be subject to a break-once break-everywhere scenario, due to the use of one secret key or a common credential across the entire infrastructure. Each device should have unique credentials or key material such that compromise of one device does not impact other deployed devices.”<sup>[1]</sup>

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<sup>[1]</sup> Source: section 4.1.3, Pg. 219, NISTIR 7628.

## **Gridstream Meter Data Management System**

### **Gridstream MDMS**

Gridstream MDMS is a standards-based system designed to rigorously process and prepare data for a variety of utility programs and operations.

This single, unified system consolidates metering, consumption and related data from all read sources in a centralized system of record repository. It standardizes data for use according to customer specified rules. Using international and industry standards, it interconnects field metering systems with a broad range of enterprise applications. Its analytic processes prepare data for a wide range of utility operations.

Features include:

- **Data Collection & Synchronization:** Standards-based interfaces enable data to be consumed by the Gridstream MDMS from smart meter systems or smart grid devices. The MDMS then processes, formats and places the data in the proper context for any utility back office system
- **Distribution Network & Power Quality:** The Gridstream MDMS maintains the network connectivity model; it enables load mapping and stores non-billing data such as voltage and amperage to provide granular visibility into the smart grid infrastructure.
- **Validation, Estimation, Editing (VEE) Engines:** Powerful analytic engines capable of processing hundreds of millions of register and interval reads to bill quality.
- **Exception Management:** The workflows within the Gridstream MDMS focus on efficient exception management and the remediation of events related to the VEE process.
- **Billing Extracts:** The Gridstream MDMS provides cleansed, framed billing determinants for each rate structure to the utility CIS and/or Billing applications on the billing cycle days.
- **Analytics & Reports:** The analytics and reports within the Gridstream MDMS ensure current and valid, data is correlated using embedded business logic to turn data into knowledge.
- **Virtual & Net Metering:** The virtual and net metering capability within the Gridstream MDMS provides the flexibility to create both virtual meters and virtual channels to support accurate billing for complex metering situations.

**Meter Asset Management System (MAM) Radian WECO Watt-Net Plus**

WATT-Net Plus is the premier asset and smart grid device management database software solution for electric and gas utilities. WATT-Net Plus is an innovative, industry-targeted solution with a unique testing approach that is full featured and highly configurable to meet your business process requirements.

WATT-Net Plus is the most comprehensive device management software package available that offers powerful functionality and ease of use, specifically designed for the metering industry. WATT-Net Plus is the evolution of the WECO industry de facto standard, WATT-Net™ — shop automation and data management software. Building on the WATT-Net legacy of over 900 customers worldwide, WATT-Net Plus expands the software to an enterprise level with additional advanced features and capabilities.

With the demands of AMI, customer requirements for more real-time data and enterprise connectivity increased dramatically. To answer this growing need, WNP uses the AMSLLC Listener™, the newest in enterprise integration technology, to manage all data flow to and from the WNP System, freeing WNP to do what it does best — manage the meter operation process.

**WATT-Net Plus Core Features Include:**

- A Broad Range of Utility Devices - Electric Meters (KWH, KW), Reference Standards, Current Transformers, Potential Transformers, and Testboards.
- Support of AMI Configuration Test Points - AMI Impedance Testing, AMI Configuration Testing, KWH Automated Testing, KW Automated Testing, KW/Runtime Gangboard Automation, Current Transformer Testing, Potential Transformer Testing
- Security - Roles Based Security, Windows Authentication, LDAP Support
- Administration - Purchase Order Tracking, Contractor and Manufacturer Test Data Import, Tamper Case Documentation, Sticky Notes, Test Cards, and more.
- Reporting - Device Listing, Counts, and StatisticsAMI and Smart Grid Support - AMR/AMI Module Traceability, Software, Firmware, and Program ID Traceability

- New Device Management
- New Device Sample Management
- Sample/Periodic Test Management, Testing and Reports, Device Configuration, and Site Premise Management
- Equipment Editors
- Equipment Tracking
- Audit and Certification Traceability
- Programmable State Tracking
- Business Rules Engine - Meter Test Processing

#### **Meter Operations Center (MOC) Bit Stew Mix Core**

Bit's Stew MIX Core is an Intelligent Data Integration platform that automates the modelling, mapping and ingestion of data to a semantic model enabling rapid analytics and visualization solutions for your data-driven projects. The platform will quickly integrate data from disparate sources to provide operational intelligence in real time. It uses Machine Intelligence to automatically identify, model, map and ingest data from connected devices and systems. A federated architecture supports analytics from control systems to cloud environments placing actionable intelligence for operators, engineers, and data teams through the creation of workbenches to analyze and visualize the data.

For utility applications of the platform, MIX Core leverages an IEC Common Information Model (CIM)-based data model with extensions to support utility's needs. Additional entity types can be quickly added without any re-indexing.

The MIX Core platform solves the data integration problem across all the connected systems, devices and external sources. It can operate on edge devices such as gateways and routers, across any industry, from the data center to the cloud. The MIX Core platform was built on Bit Stew's proven ten-year experience integrating and managing industrial data across complex environments.

- d. The applications listed above all have the capabilities to bill the rates described in this question. The complexity of the actual rate design will determine if configuration or code development is required to facilitate the data requirement. Configuration is primarily table driven or simpler changes that are made to an application to derive results. Code development is usually much more complex changes that are needed when base application code does not support design. Therefore, it is not possible to provide a cost estimate without a full understanding of the final rate design.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 99**

**Responding Witness: Lonnie E. Bellar**

- Q-99. Regarding response to KIUC 1 – 34, provide the attached spreadsheet in electronic form.
- A-99. See the response to KIUC 2-15.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 100**

**Responding Witness: Lonnie E. Bellar**

Q-100. Regarding response to KLC 1 – 45, provide the following information:

- a. Detailed activities and costs for Mill Creek 2 generation outage during test year.
- b. Detailed activities and costs for Trimble County 1 generation outage during test year.
- c. Detailed activities and costs for all combustion turbine outages during test year.
- d. Provide how major combustion turbine outage activities, including combustor inspections, are scheduled for all combustion turbines and combined cycle unit combustion turbines.
- e. For each combustion turbine, including those in combined cycle units, explain if outage activities scheduled are based on hours or equivalent starts or both.
- f. For each combustion turbine, including those in combined cycle units, provide the number of operating hours or equivalent starts between each major outage activity.
- g. For each combustion turbine, including those in combined cycle units, explain whether current forecast shows major outage activity based on hours or equivalent starts.
- h. For each combustion turbine, including those in combined cycle units, provide current 10 year forecast of annual run hours and equivalent starts.

A-100.

- a. KU has no ownership of Mill Creek 2.
- b. KU has no ownership of Trimble County 1.
- c. See attached.
- d. Major combustion turbine outage activities are driven by unit operation, measured through starts, factored starts (“FS”), run hours, or equivalent operating hours (“EOH”), depending on the unit. These activities are scheduled by incorporating expected run hours and starts with historical operational data to determine the planned timing of an outage need in accordance with the manufacturer’s recommended maintenance interval, and aligning that need within the Companies’ spring or fall outage seasons.
- e. See response to part f.
- f. For the E.W. Brown combustion turbines (“CTs”), the major inspection interval is 24,000 EOH. Each start adds 20 EOH, and each run hour adds 1 EOH. Operating units on fuel oil (where applicable) incurs 50% additional EOH per hour or start.

For the Paddy’s Run 13 CT, the hot gas path inspection interval is 25,000 EOH, and the major inspection interval is 50,000 EOH. Each unit start adds 10 EOH, and each run hour adds 1 EOH.

For the Trimble County CTs, the hot gas path inspection interval is 900 factored starts, the major inspection interval is 2,400 actual starts, and the rotor inspection interval is 5,000 factored starts. The calculation of factored starts from actual starts varies based on start type (conventional vs. quick-start), load achieved during start cycle, and ambient temperature, and the calculation varies for each inspection type. The contribution toward factored starts per actual start varies from 0.5 to 4.0 factored starts per actual start.

For Cane Run 7, the combustor inspection interval is 16,600 run hours or 1,200 starts, the hot gas path inspection interval is 33,200 run hours or 1,200 starts, and the major inspection interval is 66,400 run hours or 2,400 starts (for each case, whichever interval occurs first).

Units may accrue additional hours or starts for other reasons, such as failed startup attempts and unit trips.

- g. For the CTs at E.W. Brown and Paddy’s Run, the current forecast shows major outage activity based on EOH. For the CTs at Trimble County, the

h. current forecast shows major outage activity based on starts or FS, dependent upon the outage activity. For Cane Run 7, the current forecast shows major outage activity based on run hours.

i. See the tables below. Data reflects averages of similar units where applicable.

**Run Hours  
Forecast**

| <b>Unit(s)</b>      | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025</b> | <b>2026</b> |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| E.W. Brown 5        | 349         | 667         | 291         | 151         | 153         | 171         | 128         | 111         | 138         | 114         |
| E.W. Brown 6-7      | 472         | 593         | 517         | 334         | 346         | 455         | 369         | 309         | 373         | 305         |
| E.W. Brown 8-11     | 147         | 198         | 143         | 72          | 63          | 87          | 62          | 74          | 95          | 39          |
| Paddy's Run 13      | 1407        | 1328        | 1219        | 1048        | 836         | 683         | 1172        | 933         | 1083        | 1272        |
| Trimble County 5-10 | 1267        | 1535        | 1239        | 865         | 827         | 929         | 914         | 688         | 774         | 706         |
| Cane Run 7          | 7351        | 7435        | 6900        | 6111        | 5937        | 5696        | 3957        | 4237        | 4030        | 4243        |

**Start Forecast**

| <b>Unit(s)</b>      | <b>2017</b> | <b>2018</b> | <b>2019</b> | <b>2020</b> | <b>2021</b> | <b>2022</b> | <b>2023</b> | <b>2024</b> | <b>2025</b> | <b>2026</b> |
|---------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| E.W. Brown 5        | 41          | 62          | 30          | 26          | 26          | 26          | 22          | 19          | 23          | 20          |
| E.W. Brown 6-7      | 53          | 71          | 52          | 47          | 48          | 65          | 55          | 49          | 49          | 51          |
| E.W. Brown 8-11     | 20          | 24          | 17          | 16          | 13          | 13          | 11          | 13          | 15          | 8           |
| Paddy's Run 13      | 203         | 200         | 156         | 131         | 106         | 91          | 149         | 110         | 141         | 155         |
| Trimble County 5-10 | 145         | 155         | 139         | 120         | 117         | 120         | 125         | 97          | 108         | 104         |
| Cane Run 7          | 32          | 39          | 42          | 111         | 125         | 146         | 174         | 228         | 241         | 231         |

| 0172 - CANE RUN CC GT |         |                                    |         |
|-----------------------|---------|------------------------------------|---------|
| Project Description   | Account | Expenditure Type                   | Amount  |
| CR7 FALL OUTAGE 2017  | 552100  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 715,000 |
| CR7 FALL OUTAGE 2017  | 552100  | 0303 - O/S - MATERIAL & EQUIPMENT  | 684,000 |
| CR7 FALL OUTAGE 2017  | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 360,000 |
| CR7 FALL OUTAGE 2017  | 553010  | 0303 - O/S - MATERIAL & EQUIPMENT  | 240,000 |
| CR7 FALL OUTAGE 2017  | 554100  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 363,000 |
| CR7 FALL OUTAGE 2017  | 554100  | 0303 - O/S - MATERIAL & EQUIPMENT  | 243,000 |

| 5636 - E W BROWN COMBUSTION TURBINE UNIT 6 |         |                                    |         |
|--------------------------------------------|---------|------------------------------------|---------|
| Project Description                        | Account | Expenditure Type                   | Amount  |
| BRCT6 C INSPECTION 2018                    | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 158,100 |
| BRCT6 C FSI's 2018                         | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 316,200 |
| BRCT6 A INSPECTION                         | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 49,000  |
| CT ENVIRONMENTAL TEST                      | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 45,000  |
| BRCT6 A INSPECTION                         | 553010  | 0427 - PM - OTHER                  | 3,000   |

| 5637 - E W BROWN COMBUSTION TURBINE UNIT 7 |         |                                    |        |
|--------------------------------------------|---------|------------------------------------|--------|
| Project Description                        | Account | Expenditure Type                   | Amount |
| CT7 OUTAGE (A INSP)                        | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 29,760 |

| 5638 - E W BROWN COMBUSTION TURBINE UNIT 8 |         |                                    |        |
|--------------------------------------------|---------|------------------------------------|--------|
| Project Description                        | Account | Expenditure Type                   | Amount |
| BRCT 8 A INSPECTION                        | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 65,000 |

| 5641 - E W BROWN COMBUSTION TURBINE UNIT 11 |         |                                    |         |
|---------------------------------------------|---------|------------------------------------|---------|
| Project Description                         | Account | Expenditure Type                   | Amount  |
| BRCT11 C INSPECTION 2018                    | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 343,000 |

| 5693 - HAEFLING UNIT 1  |         |                                    |        |
|-------------------------|---------|------------------------------------|--------|
| Project Description     | Account | Expenditure Type                   | Amount |
| HF Unit 1 ANNUAL OUTAGE | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 18,000 |

| 5694 - HAEFLING UNIT 2  |         |                                    |        |
|-------------------------|---------|------------------------------------|--------|
| Project Description     | Account | Expenditure Type                   | Amount |
| HF Unit 2 ANNUAL OUTAGE | 553010  | 0301 - O/S - OTHER-LABOR-3RD PARTY | 18,000 |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 101**

**Responding Witness: John K. Wolfe**

- Q-101. Regarding the response to AG1 – 11, describe in detail how the DA initiative will be used to improve reliability on each of the worst performing circuits.
- A-101. The DA initiative will improve reliability on worst performing circuits where it is implemented by sectionalizing and isolating faults to minimize sections of impacted customers, thus reducing reliability impacts of mainline outages. This capability maintains service to customers outside of the isolated section of the distribution circuit. Speed of service restoration to impacted customers will be improved due to immediate availability of fault location information from the DA reclosers.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 102**

**Responding Witness: John K. Wolfe**

Q-102. Regarding the response to AG1 – 371, provide the following:

- a. Detailed description of each time in the past 5 years a portable transformer was installed, including why, the cost, the time involved for the temporary installation, effort and action required to locate repair or replacement parts, permanent repair or replacement solution implemented, and the time to provide a permanent replacement or repair. Description for each event should also include the cause and the number of customers affected and how they were affected.
- b. Please describe in detail all spare substation transformers maintained.
- c. Please describe any and all mobile “substations” (transformers and associated equipment) the company has access to or owns for substation transformer failures.
- d. Describe in detail all preventative maintenance and inspection activities the company currently implements to identify potential substation transformer failures.
- e. Detailed description of any outage related to substation transformer failure over the past 5 years and subsequent actions taken to prevent recurrence.

A-102.

- a. See attached.
- b. See attached.
- c. See attached.
- d. See attached.
- e. See attached.

AG 1-371 Q102(a)  
KU Portable Installation Details  
2012-2016

| Substation             | Reason for Installation      | Customers Affected | Impact to Customers | Length of Outage (minutes) | Approximate Cost of Installation | Installation Date | Removal Date | Details                                                                                                                                                                                                                                                              | Action to restore system to normal                           |
|------------------------|------------------------------|--------------------|---------------------|----------------------------|----------------------------------|-------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| <b>Portable - P002</b> |                              |                    |                     |                            |                                  |                   |              |                                                                                                                                                                                                                                                                      |                                                              |
| Waco                   | Transformer Upgrade          | 0                  | No Impact           | 0                          | \$ 40,000                        | 3/20/2012         | 5/10/2012    | Planned transformer upgrade to larger capacity. Portable installed to serve distribution load while transformer maintenance was performed to prevent gassing.                                                                                                        | Installed new transformer                                    |
| Greensburg             | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 5/10/2012         | 5/23/2012    | Portable was installed to serve distribution load during proactive transformer replacement due to moisture.                                                                                                                                                          | Preventive Maintenance                                       |
| Sardis                 | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 5/23/2012         | 8/23/2012    | Portable was installed to allow for Load Tap Changer replacement on Transformer.                                                                                                                                                                                     | Replaced Transformer Proactively                             |
| Kenton                 | Maintenance                  | 0                  | No Impact           | 0                          | \$ 30,000                        | 8/23/2012         | 9/11/2012    |                                                                                                                                                                                                                                                                      | Load Tap Changer was replaced.                               |
| Carlisle               | Equipment Failure            | 0                  | No Impact           | 0                          | \$ 40,000                        | 9/11/2012         | 9/20/2012    | Portable was installed to complete repairs to station following previous equipment failure. At time of failure portable was installed for maintenance at Kenton. Station was put in a position to return service until Portable was available to do complete repair. | Completed repairs to failed equipment and station equipment. |
| Wilmore                | Maintenance                  | 0                  | No Impact           | 0                          | \$ 30,000                        | 11/11/2012        | 11/19/2012   | Transformer bushings were found to be leaking. Portable was installed to serve substation load during transformer bushing replacement.                                                                                                                               | Bushings were replaced with in stock bushings.               |
| Falmouth               | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 50,000                        | 11/27/2012        | 1/7/2013     | Portable was installed to support capital upgrades to substation. Portable installed to serve distribution load during significant work on Transmission system in station.                                                                                           | Completion of capital upgrades                               |
| Lynch                  | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 75,000                        | 4/29/2013         | 7/11/2013    |                                                                                                                                                                                                                                                                      | Completion of capital upgrades                               |
| Eastview               | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 7/29/2013         | 8/5/2013     | Transformer and Load Tap Changer Maintenance                                                                                                                                                                                                                         | Preventative Maintenance                                     |
| Hodgenville            | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 8/5/2013          | 8/19/2013    | Transformer and Load Tap Changer Maintenance                                                                                                                                                                                                                         | Preventative Maintenance                                     |
| Munfordville           | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 8/19/2013         | 9/6/2013     | Transformer and Load Tap Changer Maintenance                                                                                                                                                                                                                         | Preventative Maintenance                                     |
| Vine Grove             | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 9/12/2013         | 9/17/2013    | Load Tap Changer repairs due to failed components.                                                                                                                                                                                                                   | Replaced gears with in stock components.                     |
| Totz                   | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 30,000                        | 9/18/2013         | 10/31/2013   | Portable installed to support rebuild of substation                                                                                                                                                                                                                  | Rebuilt Substation.                                          |
| Vine Grove             | Maintenance                  | 0                  | No Impact           | 0                          | \$ 30,000                        | 11/6/2013         | 11/8/2013    | Load Tap Changer repairs due to failed motor mounting. Planned capital replacement of voltage regulators. Portable installed to serve distribution load during replacement                                                                                           | Repaired parts in house                                      |
| Georgetown             | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 40,000                        | 11/11/2013        | 11/27/2013   |                                                                                                                                                                                                                                                                      | Purchased and replaced regulators.                           |
| Cumberland             | Maintenance                  | 0                  | No Impact           | 0                          | \$ 50,000                        | 11/29/2013        | 1/13/2014    | Load Tap Changer repairs due to failed components. Station was returned to service following an outage while portable was installed to make complete repairs.                                                                                                        | Replaced gears with in stock components.                     |
| Mount Vernon           | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 2/25/2014         | 3/25/2014    |                                                                                                                                                                                                                                                                      | Material was procured and installed.                         |
| Warsaw East            | Maintenance                  | 0                  | No Impact           | 0                          | \$ 30,000                        | 7/21/2014         | 7/23/2014    | Preventive Maintenance on Load Tap Changer.                                                                                                                                                                                                                          | Preventive Maintenance                                       |
| Vine Grove             | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 9/15/2014         | 9/17/2014    | Load Tap Changer repairs due to failed motor                                                                                                                                                                                                                         | Replaced motor with in stock components.                     |
| Liberty                | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 30,000                        | 9/25/2014         | 10/6/2014    | Capital improvements to metering and recloser. Portable installed to serve distribution load during replacement.                                                                                                                                                     | Replaced metering and recloser.                              |
| Atoka                  | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 40,000                        | 10/20/2014        | 11/10/2014   | Capital improvements to substation. Portable installed to serve distribution load during station upgrade.                                                                                                                                                            | Purchased material and completed station upgrade.            |
| Cynthiana              | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 40,000                        | 11/12/2014        | 12/5/2014    | Capital improvements to substation. Portable installed to serve distribution load during station upgrade.                                                                                                                                                            | Purchased and replaced regulators.                           |
| Carlisle               | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 3/12/2015         | 4/10/2015    | Proactive replacement of transformer from preventive maintenance activities. Portable installed during preventive maintenance and remained through transformer replacement.                                                                                          | Replaced transformer with available spare.                   |
| Pocket                 | Equipment Failure            | 249                | Outage              | 92                         | \$ 75,000                        | 4/10/2015         | 5/22/2015    | Equipment failure in station. Portable was installed to support station repairs.                                                                                                                                                                                     | Evaluation and repair of station.                            |
| Warsaw East            | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 30,000                        | 6/24/2015         | 7/16/2015    | Planned capital replacement of Load Tap Changer. Portable was installed to serve distribution load during replacement.                                                                                                                                               | Purchased and replaced Load Tap Changer.                     |
| Bonnieville            | Transformer Failure          | 300                | outage              | 56                         | \$ 50,000                        | 7/28/2015         | 8/3/2015     | Transformer failed. All customers were restored and Portable was installed during transformer replacement for distribution reliability.                                                                                                                              | Replaced Transformer                                         |

AG 1-371 Q102(a)  
KU Portable Installation Details  
2012-2016

| Substation             | Reason for Installation      | Customers Affected | Impact to Customers | Length of Outage (minutes) | Approximate Cost of Installation | Installation Date | Removal Date | Details                                                                                                                           | Action to restore system to normal                                                          |
|------------------------|------------------------------|--------------------|---------------------|----------------------------|----------------------------------|-------------------|--------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Portable - P002</b> |                              |                    |                     |                            |                                  |                   |              |                                                                                                                                   |                                                                                             |
| New Haven              | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 30,000                        | 8/17/2015         | 8/26/2015    | Planned capital improvements. Portable installed to serve distribution load during improvements.                                  | Purchase and installed oil filtration system on transformer to improve life of transformer. |
| Warsaw                 | Maintenance                  | 0                  | No Impact           | 0                          | \$ 30,000                        | 10/5/2015         | 11/25/2015   | Portable was installed to support distribution load during corrective maintenance of transmission switch.                         | Corrective Maintenance                                                                      |
| Sonora                 | Maintenance                  | 0                  | No Impact           | 0                          | \$ 30,000                        | 6/2/2016          | 6/13/2016    | Capital improvements to substation. Portable installed to serve distribution load during station upgrade.                         | Installed Load Tap Changer filtering system.                                                |
| Springfield            | Maintenance                  | 0                  | No Impact           | 0                          | \$ 40,000                        | 6/14/2016         | 6/17/2016    | Transformer bushing replacement. Portable was installed to serve distribution load while bushings were replaced.                  | Preventive Maintenance                                                                      |
| Munfordville           | Maintenance                  | 0                  | No Impact           | 0                          | \$ 50,000                        | 10/11/2016        | 10/27/2016   | Preventive Maintenance on transformer. Portable was installed to serve distribution load during maintenance.                      | Preventive Maintenance                                                                      |
| Kentonia               | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 30,000                        | 10/27/2016        | 11/8/2016    | Capital improvements to substation. Portable installed to serve distribution load during station upgrade.                         | Replaced                                                                                    |
| Munfordville           | Transformer Failure          | 5500               | Outage              | 579                        | \$ 50,000                        | 12/20/2016        | 1/3/2016     | Transformer failed. Portable installed during transformer replacement.                                                            | Replaced Transformer with available spare.                                                  |
| <b>Portable - P003</b> |                              |                    |                     |                            |                                  |                   |              |                                                                                                                                   |                                                                                             |
| AO Smith               | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 50,000                        | 6/5/2012          | 7/24/2012    | Capital upgrade to substation due to load growth. Portable installed to serve distribution load during project.                   | Installed new transformer and upgraded substation equipment.                                |
| Carntown               | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 50,000                        | 7/24/2012         | 9/26/2012    | Portable was installed to serve distribution load while transformer was returned to factory for warranty repairs.                 | Sent transformer to factory and return and install.                                         |
| Sharon                 | Maintenance                  | 0                  | No Impact           | 0                          | \$ 50,000                        | 3/15/2013         | 4/12/2013    | Load Tap Changer replacement. Portable installed to serve distribution load during load tap changer replacement.                  | Purchased and Installed new Load Tap Changer.                                               |
| Delaplain              | Maintenance                  | 0                  | No Impact           | 0                          | \$ 50,000                        | 4/12/2013         | 6/13/2013    | Preventive maintenance on Load Tap Changer.                                                                                       | Preventive Maintenance                                                                      |
| Wedonia                | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 50,000                        | 9/2/2013          | 9/25/2013    | Capital upgrades to Flemingsburg. Portable was installed at Wedonia to serve distribution load during the Flemingsburg upgrade.   | Completion of substation upgrade Flemingsburg.                                              |
| Adams                  | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 50,000                        | 10/31/2013        | 12/3/2013    | Portable was installed to support replacement of station upgrades for reliability.                                                | Replaced substation equipment.                                                              |
| Versailles West        | Equipment Failure            | 0                  | No Impact           | 0                          | \$ 50,000                        | 1/13/2014         | 3/4/2014     | Failed parts in load tap changer. Portable installed to support replacement of failed equipment.                                  | Installed new parts in Load Tap Changer.                                                    |
| Versailles West        | Equipment Failure            | 0                  | No Impact           | 0                          | \$ 40,000                        | 4/3/2014          | 4/10/2014    | Failed parts in load tap changer. Portable installed to support replacement of failed equipment.                                  | Installed new parts in Load Tap Changer.                                                    |
| Woodlawn               | Maintenance                  | 0                  | No Impact           | 0                          | \$ 50,000                        | 4/10/2014         | 4/24/2014    | Portable was installed to serve distribution load during planned transmission line maintenance.                                   |                                                                                             |
| Delaplain              | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 50,000                        | 4/17/2015         | 6/9/2015     | Capital upgrade to station to support customer expansion. Portable installed to serve distribution load during expansion project. | Completion of expansion.                                                                    |
| Bardstown City         | Equipment Failure            | 1                  | Outage              | 391                        | \$ 50,000                        | 6/11/2015         | 6/17/2015    | Transformer bushing failure. Portable was installed to serve distribution load during transformer bushing replacement.            | Replaced bushings with stock bushings.                                                      |
| Lockport               | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 50,000                        | 7/23/2015         | 8/13/2015    | Capital improvement to station. Portable installed to serve distribution load during capital project to install transrupter.      | Installed new equipment.                                                                    |
| Parkers Mill           | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 50,000                        | 10/26/2015        | 1/8/2016     | Capital improvements to station. Portable installed to serve distribution load during Transmission capital improvements.          | Installed new equipment.                                                                    |
| Lakeshore              | Capital Construction Support | 0                  | No Impact           | 0                          | \$ 50,000                        | 9/26/2016         | 10/17/2016   | Portable was installed to serve distribution load during substation expansion.                                                    | Completion of substation expansion.                                                         |

| location                         | equip category     | equip type | manufacturer      | equip no | serial no     | operating class | owner | mfg date  | operation center | substation crew site | position     | operating class | h voltage rating | x voltage rating | v voltage rating |
|----------------------------------|--------------------|------------|-------------------|----------|---------------|-----------------|-------|-----------|------------------|----------------------|--------------|-----------------|------------------|------------------|------------------|
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | Howard Industries | TX000138 | 3793735015    | Distribution    | KU    | 12/1/2015 | Pineville        | PN                   | Distribution |                 | 34500            | 2400             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | Central Moloney   | TX000063 | CM113468803   | Distribution    | KU    | 1/1/2014  | Pineville        | PN                   | Distribution |                 | 34500            | 7200             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | Central Moloney   | TX000062 | CM113469902   | Distribution    | KU    | 1/1/2014  | Pineville        | PN                   | Distribution |                 | 34500            | 7200             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | Central Moloney   | TX000061 | CM113469901   | Distribution    | KU    | 1/1/2014  | Pineville        | PN                   | Distribution |                 | 34500            | 7200             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | MO038    | F-956252      | Distribution    | KU    | 1/1/1967  | Pineville        | PN                   | Distribution |                 | 67000            | 13090            |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | C0283    | B532692       | Distribution    | KU    | 1/1/1951  | Pineville        | PN                   | Distribution |                 | 67000            | 7560X2520        |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | C0284    | B532693       | Distribution    | KU    | 1/1/1951  | Pineville        | PN                   | Distribution |                 | 67000            | 7560X2520        |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | 0931     | 8637565       | Distribution    | KU    | 1/1/1950  | Pineville        | PN                   | Distribution |                 | 34500            | 2400             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | 0930     | 8637564       | Distribution    | KU    | 1/1/1950  | Pineville        | PN                   | Distribution |                 | 34500            | 2400             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | Allis Chalmers    | C0410    | 4069900       | Distribution    | KU    | 1/1/1966  | Pineville        | PN                   | Distribution |                 | 67000            | 4800X2400        |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | 0947     | C-157105      | Distribution    | KU    | 1/1/1954  | Pineville        | PN                   | Distribution |                 | 65550            | 7200X2400        |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | 0271     | 7082652       | Distribution    | KU    | 1/1/1942  | Pineville        | PN                   | Distribution |                 | 69000            | 7200X2400        |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | Westinghouse      | B0219    | 7350371       | Distribution    | KU    | 1/1/1956  | Pineville        | PN                   | Distribution |                 | 69000X34500      | 4800X2400        |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | C0282    | B532691       | Distribution    | KU    | 1/1/1951  | Pineville        | PN                   | Distribution |                 | 67000            | 7560X2520        |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | 0980     | C860337       | Distribution    | KU    | 1/1/1959  | Pineville        | PN                   | Distribution |                 | 67000            | 4360             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | WithLTC    | Westinghouse      | B0270    | 6991859       | Distribution    | KU    | 1/1/1961  | Pineville        | PN                   | Distribution |                 | 67000            | 4360             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | WithLTC    | General Electric  | C0413    | F960658       | Distribution    | KU    | 1/1/1967  | Pineville        | PN                   | Distribution |                 | 67000            | 13090            |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | W0074    | 8683602       | Distribution    | KU    | 1/1/1944  | Pineville        | PN                   | Distribution |                 | 33000            | 7200             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | W0075    | 8683310       | Distribution    | KU    | 1/1/1950  | Pineville        | PN                   | Distribution |                 | 33000            | 7200             |                  |
| Pineville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | MO013    | F50643365P    | Distribution    | KU    | 1/1/1965  | Pineville        | PN                   | Distribution |                 | 67000            | 2520             |                  |
| Bear Track                       | POWER TRANSFORMERS | NonLTC     | General Electric  | T0498    | 5516754       | Distribution    | KU    | 1/1/1937  | Richmond         | DV                   | Distribution |                 | 66000            | 33000            |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | B0234    | 6534513       | Distribution    | KU    | 1/1/1956  | Earlington       | EA                   | Distribution |                 | 69000X34500      | 4160             | 2300             |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Howard Industries | KT0041   | 295656-4210   | Distribution    | KU    | 11/1/2010 | Earlington       | EA                   | Distribution |                 | 69000            | 34500            | 7200             |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Pennsylvania      | TX000080 | R-08570-1-2   | Distribution    | KU    | 4/1/2014  | Earlington       | EA                   | Distribution |                 | 34500            | 13090            |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Howard Industries | TX000069 | 3368344913    | Distribution    | KU    |           | Earlington       | EA                   | Distribution |                 | 34500            | 2400             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Howard Industries | TX000068 | 3368314913    | Distribution    | KU    |           | Earlington       | EA                   | Distribution |                 | 34500            | 2400             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Howard Industries | TX000067 | 3368304913    | Distribution    | KU    |           | Earlington       | EA                   | Distribution |                 | 34500            | 2400             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Central Moloney   | TX000060 | CM113469903   | Distribution    | KU    | 1/1/2014  | Earlington       | EA                   | Distribution |                 | 34500            | 7200             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Central Moloney   | TX000059 | CM113469901   | Distribution    | KU    | 1/1/2014  | Earlington       | EA                   | Distribution |                 | 34500            | 7200             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Central Moloney   | TX000058 | CM113469802   | Distribution    | KU    | 1/1/2014  | Earlington       | EA                   | Distribution |                 | 34500            | 7200             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0244    | E660729B      | Distribution    | KU    | 8/1/1963  | Earlington       | EA                   | Distribution |                 | 67000            | 4360X2520        |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0260    | E6951408      | Distribution    | KU    | 1/1/1965  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Allis Chalmers    | W0103    | 2311818       | Distribution    | KU    | 1/1/1950  | Earlington       | EA                   | Distribution |                 | 34500            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0149    | C184362       | Distribution    | KU    | 1/1/1955  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0273    | F958818A      | Distribution    | KU    | 1/1/1967  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | C0333    | 6533827       | Distribution    | KU    | 1/1/1953  | Earlington       | EA                   | Distribution |                 | 67000            | 13090            |                  |
| Earlington Substation Department | POWER TRANSFORMERS | WithLTC    | Kuhlman           | S0651    | 341545-94-1-1 | Distribution    | KU    | 3/1/2005  | Earlington       | EA                   | Distribution |                 | 67000            | 13090            |                  |
| Earlington Substation Department | POWER TRANSFORMERS | WithLTC    | Westinghouse      | P815316  | P81545762     | Distribution    | KU    | 1/1/1967  | Earlington       | EA                   | Distribution |                 | 67000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0346    | H8816638      | Distribution    | KU    | 1/1/1985  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | W0200    | 6543895       | Distribution    | KU    | 1/1/1958  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Allis Chalmers    | C0382    | 3515629       | Distribution    | KU    | 1/1/1963  | Earlington       | EA                   | Distribution |                 | 67000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0248    | E691133A      | Distribution    | KU    | 2/1/1964  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0345    | H881854B      | Distribution    | KU    | 1/1/1985  | Earlington       | EA                   | Distribution |                 | 67000            | 7560X4360        |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0347    | H881854A      | Distribution    | KU    | 1/1/1985  | Earlington       | EA                   | Distribution |                 | 69000            | 7560X4360        |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0233    | E690466A      | Distribution    | KU    | 1/1/1963  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             | 2520             |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0349    | H881854C      | Distribution    | KU    | 1/1/1985  | Earlington       | EA                   | Distribution |                 | 69000            | 7560X4360        |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Howard Industries | KT0007   | 489211-4207   | Distribution    | KU    | 10/1/2007 | Earlington       | EA                   | Distribution |                 | 67000            | 13090            |                  |
| Earlington Substation Department | POWER TRANSFORMERS | WithLTC    | Westinghouse      | C0399    | 69937094      | Distribution    | KU    | 1/1/1965  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0224    | E590466B      | Distribution    | KU    | 1/1/1963  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             | 2520             |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | C0303    | 8632635       | Distribution    | KU    | 1/1/1947  | Earlington       | EA                   | Distribution |                 | 33000            | 7200             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | C0302    | 8632637       | Distribution    | KU    | 1/1/1947  | Earlington       | EA                   | Distribution |                 | 33000            | 7200             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | W0154    | 3773007       | Distribution    | KU    | 1/1/1968  | Earlington       | EA                   | Distribution |                 | 69000            | 2400             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0209    | C862379       | Distribution    | KU    | 1/1/1958  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0194    | C861454       | Distribution    | KU    | 1/1/1958  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0287    | F962821B      | Distribution    | KU    | 1/1/1968  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | W0187    | 6534013       | Distribution    | KU    | 1/1/1956  | Earlington       | EA                   | Distribution |                 | 67000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | WithLTC    | Kuhlman           | B0467    | 241504-94-1   | Distribution    | KU    | 1/1/1994  | Earlington       | EA                   | Distribution |                 | 67000            | 13090X4360       |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0286    | F962821A      | Distribution    | KU    | 1/1/1968  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | WithLTC    | Westinghouse      | W0263    | P8R-88822     | Distribution    | KU    | 1/1/1965  | Earlington       | EA                   | Distribution |                 | 67000            | 4160X2400        |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | B0145    | 8311107       | Distribution    | KU    | 1/1/1950  | Earlington       | EA                   | Distribution |                 | 34500            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | B0075    | 3164026       | Distribution    | KU    | 1/1/1942  | Earlington       | EA                   | Distribution |                 | 34500            | 7200             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0265    | F53519765P    | Distribution    | KU    | 1/1/1965  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0275    | F958818C      | Distribution    | KU    | 1/1/1967  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | C0376    | 63F9402       | Distribution    | KU    | 1/1/1963  | Earlington       | EA                   | Distribution |                 | 67000            | 2400             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | C0356    | F931821C      | Distribution    | KU    | 1/1/1968  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | C0356    | E37979761P    | Distribution    | KU    | 1/1/1961  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0236    | E690466D      | Distribution    | KU    | 1/1/1963  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             | 2520             |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0235    | E690466C      | Distribution    | KU    | 1/1/1963  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             | 2520             |
| Earlington Substation Department | POWER TRANSFORMERS | WithLTC    | Solomon           | W0292    | F961615B      | Distribution    | KU    | 5/1/2010  | Earlington       | EA                   | Distribution |                 | 67000            | 13200            |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0274    | F958818B      | Distribution    | KU    | 1/1/1967  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Interstate        | C0285    | 99K-7189      | Distribution    | KU    | 1/1/1998  | Earlington       | EA                   | Distribution |                 | 69000            | 59013            | 7560X4360        |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | C0357    | E37979961P    | Distribution    | KU    | 1/1/1961  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | C0375    | 63F9401       | Distribution    | KU    | 1/1/1963  | Earlington       | EA                   | Distribution |                 | 67000            | 2400             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | C0374    | 63F9400       | Distribution    | KU    | 1/1/1963  | Earlington       | EA                   | Distribution |                 | 67000            | 2400             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | W0186    | 6533937       | Distribution    | KU    | 1/1/1956  | Earlington       | EA                   | Distribution |                 | 69000X34500      | 4160             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | B0146    | 8311108       | Distribution    | KU    | 1/1/1960  | Earlington       | EA                   | Distribution |                 | 34500            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Moloney           | KT0003   | CM1106524002  | Distribution    | KU    | 2/1/2007  | Earlington       | EA                   | Distribution |                 | 34500            | 7200             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | C0301    | 8632631       | Distribution    | KU    | 1/1/1947  | Earlington       | EA                   | Distribution |                 | 33000            | 7200             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0123    | B343668       | Distribution    | KU    | 1/1/1953  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | W0334    | UCV63970101   | Distribution    | KU    | 1/1/1980  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0345    | H881663A      | Distribution    | KU    | 1/1/1985  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | C0170    | 4087262       | Distribution    | KU    | 1/1/1948  | Earlington       | EA                   | Distribution |                 | 34500            | 2400             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0225    | C859956C      | Distribution    | KU    | 1/1/1962  | Earlington       | EA                   | Distribution |                 | 69000            | 4360             | 2520             |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | W0184    | 6533831       | Distribution    | KU    | 1/1/1955  | Earlington       | EA                   | Distribution |                 | 67000            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | B0147    | B311709       | Distribution    | KU    | 1/1/1950  | Earlington       | EA                   | Distribution |                 | 34500            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | WithLTC    | ABB               | S0014    | SLB5024-001T  | Distribution    | KU    | 1/1/1999  | Earlington       | EA                   | Distribution |                 | 69000X34500      | 13090            |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | C0286    | B532694       | Distribution    | KU    | 1/1/1962  | Earlington       | EA                   | Distribution |                 | 34500            | 4360             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | C0356    | 7529143       | Distribution    | KU    | 1/1/1947  | Earlington       | EA                   | Distribution |                 | 34500            | 480X240          |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | C0045    | 6337148       | Distribution    | KU    | 1/1/1940  | Earlington       | EA                   | Distribution |                 | 66000            | 6600X2200        |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0266    | F53519865P    | Distribution    | KU    | 1/1/1965  | Earlington       | EA                   | Distribution |                 | 67000            | 2520             |                  |
| Earlington Substation Department | POWER TRANSFORMERS | NonLTC     | Howard Industries | KT0018   | 260661-2508   | Distribution    | KU    | 9/1/2008  | Earlington       | EA                   | Distribution |                 | 69000            | 34500            | 13200            |
| Corning 12                       |                    |            |                   |          |               |                 |       |           |                  |                      |              |                 |                  |                  |                  |

| location                        | equip category     | equip type | manufacturer      | equip no | serial no   | operating class | owner | mfq date   | operation center                | substation crew site | position     | operating class | h voltage rating | x voltage rating | v voltage rating |
|---------------------------------|--------------------|------------|-------------------|----------|-------------|-----------------|-------|------------|---------------------------------|----------------------|--------------|-----------------|------------------|------------------|------------------|
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | Pennsylvania      | TX000129 | C-09132-5-2 | Distribution    | KU    | 12/1/2015  | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | Waukesha          | TX000056 | GT-01744    | Distribution    | KU    | 10/30/2013 | Lexington Substation Department | LX                   | Distribution |                 | 138000X69000     | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | General Electric  | 00177    | F908074     | Distribution    | KU    | 1/1/1967   | Lexington Substation Department | LX                   | Distribution |                 | 69000X34500      | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | General Electric  | B0432    | H881790     | Distribution    | KU    | 1/1/1985   | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | McGraw-Edison     | C0463    | C-04782-5-1 | Distribution    | KU    | 1/1/1974   | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | General Electric  | B0404    | H880250     | Distribution    | KU    | 1/1/1978   | Lexington Substation Department | LX                   | Distribution |                 | 138000           | 12470X8320       |                  |
| Lexington Substation Department | POWER TRANSFORMERS | NonLTC     | ABB               | C0529    | SHB13901    | Distribution    | KU    | 1/1/1995   | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | NonLTC     | Howard Industries | KT0045   | 308756-4410 | Distribution    | KU    | 12/1/2010  | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | B0190    | 5068922     | Distribution    | KU    | 1/1/1953   | Lexington Substation Department | LX                   | Distribution |                 | 69000            | 7200X14400       |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | Jordan            | E590221  |             | Distribution    | KU    | 9/1/2009   | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | NonLTC     | Westinghouse      | 0949     | 6530700     | Distribution    | KU    | 1/1/1954   | Lexington Substation Department | LX                   | Distribution |                 | 69000X34500      | 12470X4160       |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | Howard Industries | KT0038   | 260406-3610 | Distribution    | KU    | 12/1/2010  | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 4360             |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | General Electric  | W0318    | G860320     | Distribution    | KU    | 1/1/1975   | Lexington Substation Department | LX                   | Distribution |                 | 69000X34500      | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | OTC Services      | C0445    | PFP11793    | Distribution    | KU    | 12/1/2013  | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | NonLTC     | Howard Industries | KT0046   | 296569-4210 | Distribution    | KU    | 11/1/2010  | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | B0271    | C859779     | Distribution    | KU    | 1/1/1982   | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 4360             |                  |
| Lexington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0031    | 8623674     | Distribution    | KU    | 1/1/1948   | Lexington Substation Department | LX                   | Distribution |                 | 34500            | 2400             |                  |
| Lexington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | W0030    | 8176206     | Distribution    | KU    | 1/1/1948   | Lexington Substation Department | LX                   | Distribution |                 | 34500            | 2400             |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | Kuhlman           | S0019    | 282836-98-1 | Distribution    | KU    | 7/1/1999   | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Lexington Substation Department | POWER TRANSFORMERS | NonLTC     | General Electric  | B0244    | 8627703     | Distribution    | KU    | 1/1/1958   | Lexington Substation Department | LX                   | Distribution |                 | 69000            | 2400             |                  |
| Lexington Substation Department | POWER TRANSFORMERS | WithLTC    | General Electric  | W0308    | G8600308    | Distribution    | KU    | 1/1/1971   | Lexington Substation Department | LX                   | Distribution |                 | 67000            | 13090X4360       |                  |
| Toyota North                    | POWER TRANSFORMERS | WithLTC    | Waukesha          | S0012    | A3417T      | Distribution    | KU    | 3/10/1999  | Lexington                       | LX                   | Distribution |                 | 138000           | 13200            |                  |
| Imboden                         | POWER TRANSFORMERS | NonLTC     | Westinghouse      | T0226    | RBS-25221   | Distribution    | KU    | 1/1/1982   | Norton                          | OD                   | Distribution |                 | 69000            | 34500X23000      | 2400             |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | Howard Industries | TX000066 | 3331704913  | Distribution    | KU    | 12/1/2013  | Danville                        | DV                   | Distribution |                 | 34500            | 2400             |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | Howard Industries | TX000065 | 3331694913  | Distribution    | KU    | 2/1/2014   | Danville                        | DV                   | Distribution |                 | 34500            | 2400             |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | Howard Industries | TX000064 | 3331684913  | Distribution    | KU    | 2/1/2014   | Danville                        | DV                   | Distribution |                 | 34500            | 2400             |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | Westinghouse      | C0338    | 6533830     | Distribution    | KU    | 1/1/1955   | Danville                        | DV                   | Distribution |                 | 67000            | 4360             |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | B0290    | F10445264P  | Distribution    | KU    | 1/1/1964   | Danville                        | DV                   | Distribution |                 | 34500            | 480X240          |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | B0254    | D430342     | Distribution    | KU    | 1/1/1959   | Danville                        | DV                   | Distribution |                 | 34500            | 480X240          |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | C0326    | C500404     | Distribution    | KU    | 1/1/1955   | Danville                        | DV                   | Distribution |                 | 69000X34500      | 12470X4160       |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | B0381    | H888375     | Distribution    | KU    | 1/1/1974   | Danville                        | DV                   | Distribution |                 | 67000            | 13090            |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | B0291    | F10445364P  | Distribution    | KU    | 1/1/1964   | Danville                        | DV                   | Distribution |                 | 34500            | 480X240          |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | Howard Industries | KT0001   | 240102-1307 | Distribution    | KU    | 2/1/2007   | Danville                        | DV                   | Distribution |                 | 67000            | 13090            |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | B0172    | B500887     | Distribution    | KU    | 1/1/1951   | Danville                        | DV                   | Distribution |                 | 67000            | 4360X2520        |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | C0370    | C859941C    | Distribution    | KU    | 1/1/1962   | Danville                        | DV                   | Distribution |                 | 67000            | 2400             |                  |
| Danville Substation Department  | POWER TRANSFORMERS | NonLTC     | General Electric  | C0174    | 8277752     | Distribution    | KU    | 1/1/1948   | Danville                        | DV                   | Distribution |                 | 66000            | 7200             |                  |
| Kenton                          | POWER TRANSFORMERS | WithLTC    | General Electric  | B0339    | F961661     | Distribution    | KU    | 1/1/1969   | Maysville                       | LX                   | Distribution |                 | 138000           | 13090X4360       |                  |
| Big Stone Gap Storeroom         | POWER TRANSFORMERS | NonLTC     | General Electric  | 00235    | 8686823     | Distribution    | KU    | 1/1/1947   | Norton                          | OD                   | Distribution |                 | 34500            | 2400             |                  |
| Big Stone Gap Storeroom         | POWER TRANSFORMERS | NonLTC     | Westinghouse      | 00217    | 79A370845   | Distribution    | KU    | 1/1/1979   | Norton                          | OD                   | Distribution |                 | 22900            | 7200X2400        |                  |
| Big Stone Gap Storeroom         | POWER TRANSFORMERS | NonLTC     | Westinghouse      | 00216    | 79A371760   | Distribution    | KU    | 1/1/1979   | Norton                          | OD                   | Distribution |                 | 22900            | 7200X2400        |                  |
| Big Stone Gap Storeroom         | POWER TRANSFORMERS | NonLTC     | Hevi Duty         | O0194    | GM239943    | Distribution    | KU    | 1/1/1977   | Norton                          | OD                   | Distribution |                 | 22900            | 13090            |                  |
| Big Stone Gap Storeroom         | POWER TRANSFORMERS | NonLTC     | General Electric  | O0162    | C503164     | Distribution    | KU    | 1/1/1956   | Norton                          | OD                   | Distribution |                 | 22900            | 4360             |                  |
| Big Stone Gap Storeroom         | POWER TRANSFORMERS | NonLTC     | Hevi Duty         | O0195    | GM243473    | Distribution    | KU    | 1/1/1977   | Norton                          | OD                   | Distribution |                 | 22900            | 13090X4360       |                  |
| Big Stone Gap Storeroom         | POWER TRANSFORMERS | NonLTC     | General Electric  | 00237    | 8686825     | Distribution    | KU    | 1/1/1947   | Norton                          | OD                   | Distribution |                 | 34500            | 2400             |                  |
| Big Stone Gap Storeroom         | POWER TRANSFORMERS | NonLTC     | General Electric  | 00236    | 8686824     | Distribution    | KU    | 1/1/1947   | Norton                          | OD                   | Distribution |                 | 34500            | 2400             |                  |
| Lebanon Junction                | POWER TRANSFORMERS | WithLTC    | Waukesha          | S0072    | A5869T      | Distribution    | KU    | 8/1/2007   | Elizabethtown                   | DV                   | Distribution |                 | 161000X67000     | 13090            |                  |
| Midway Storeroom                | POWER TRANSFORMERS | WithLTC    | Delta Star        | P0003    | E78321295   | Distribution    | KU    | 1/1/1996   | Lexington                       | LX                   | Distribution |                 | 138000X69000     | 13200            |                  |
| Eastland Storage                | POWER TRANSFORMERS | NonLTC     | Pennsylvania      | TX000081 | R-08645-1-1 | Distribution    | KU    | 8/1/2014   | Lexington                       | LX                   | Distribution |                 | 69000            | 34500            | 12470            |
| Eastland Storage                | POWER TRANSFORMERS | NonLTC     | Westinghouse      | W0242    | 6994687     | Distribution    | KU    | 8/22/1963  | Lexington                       | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Eastland Storage                | POWER TRANSFORMERS | WithLTC    | General Electric  | B0310    | F960693     | Distribution    | KU    | 1/1/1967   | Lexington                       | LX                   | Distribution |                 | 67000            | 4360             |                  |
| Eastland Storage                | POWER TRANSFORMERS | WithLTC    | General Electric  | C0476    | G860196C    | Distribution    | KU    | 1/1/1975   | Lexington                       | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Eastland Storage                | POWER TRANSFORMERS | WithLTC    | Kuhlman           | B0473    | 252725-95-1 | Distribution    | KU    | 1/1/1995   | Lexington                       | LX                   | Distribution |                 | 67000            | 13800            |                  |
| Eastland Storage                | POWER TRANSFORMERS | WithLTC    | Howard Industries | KT0032   | 205279-2109 | Distribution    | KU    | 10/1/2009  | Lexington                       | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Eastland Storage                | POWER TRANSFORMERS | WithLTC    | General Electric  | B0247    | C859191     | Distribution    | KU    | 1/1/1959   | Lexington                       | LX                   | Distribution |                 | 67000            | 4360             |                  |
| Eastland Storage                | POWER TRANSFORMERS | WithLTC    | Westinghouse      | C0407    | PBR97631    | Distribution    | KU    | 1/1/1981   | Lexington                       | LX                   | Distribution |                 | 67000            | 4360X2520        |                  |
| Eastland Storage                | POWER TRANSFORMERS | WithLTC    | OTC Services      | C0443    | PFP11791    | Distribution    | KU    | 12/1/2013  | Lexington                       | LX                   | Distribution |                 | 67000            | 13090            |                  |
| Midway Storeroom                | POWER TRANSFORMERS | NonLTC     | Westinghouse      | P0002    | 5067276     | Distribution    | KU    | 1/1/1953   | Lexington                       | LX                   | Distribution |                 | 69000X34500      | 12470X4160       |                  |
| Pineville Substation Department | POWER TRANSFORMERS | WithLTC    | Pennsylvania      | TX000131 | C-09132-5-4 | Distribution    | KU    | 4/1/2016   | Pineville                       | PN                   | Distribution |                 | 67000            | 13090            |                  |

| equip_category     | equip_type | manufacturer | equip_no | serial_no | operating_class | owner | alternate_name              | position_operatin | power_tranh | voltage_ratingx | voltage_rati | base_rating |
|--------------------|------------|--------------|----------|-----------|-----------------|-------|-----------------------------|-------------------|-------------|-----------------|--------------|-------------|
| POWER TRANSFORMERS | WithLTC    | Delta Star   | P0003    | E78321295 | Distribution    | KU    | Portable Substation         | Distribution      | Portable    | 138000X69000    | 13200        | 30          |
| POWER TRANSFORMERS | NonLTC     | Westinghouse | P0002    | 5067276   | Distribution    | KU    | Portable Substation (B0184) | Distribution      | Portable    | 69000X34500     | 12470X4160   | 7.5         |

| Equipment    | Type         | Make | Proposed Activity Name                | Task                                  | Task Description                                                                                                                                                                                                                       |
|--------------|--------------|------|---------------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Transformers | Distribution | All  | Quarterly Inspection                  | Bushing oil level inspection.         | Perform a visual inspection to check the oil level.                                                                                                                                                                                    |
|              |              |      |                                       | Perform functional test.              | Monitor fan operation and listen for abnormal noise.                                                                                                                                                                                   |
|              |              |      |                                       | Perform visual inspection.            | Check bushings for contamination and damaged insulation.                                                                                                                                                                               |
|              |              |      |                                       | Perform visual inspection.            | Perform a visual inspection of the transformer, LTC, bushings, gaskets, valves, piping and welds for oil leaks and check oil levels.                                                                                                   |
|              |              |      |                                       | Perform visual inspection.            | Perform visual inspection of temperature indicators, and compare readings with other indicators at the station. Record and trend results.                                                                                              |
|              |              |      |                                       | Perform visual inspection.            | Check for obstructions and valve positions.                                                                                                                                                                                            |
|              |              |      |                                       | Record LTC counter readings.          | Check and record LTC counter reading. Record position indicator present position, high and low.                                                                                                                                        |
|              |              |      |                                       | Perform visual inspection.            | Inspect control cabinet                                                                                                                                                                                                                |
|              |              |      |                                       | Record demand.                        | Record Load Demand Meter Readings                                                                                                                                                                                                      |
|              |              |      |                                       | Perform visual inspection.            | Inspect Primary Fuses                                                                                                                                                                                                                  |
|              |              |      |                                       | Perform visual inspection.            | Check nitrogen system regulator                                                                                                                                                                                                        |
|              |              |      | In service Diagnostic Maintenance     | Perform Dissolved Gas Analysis (LTC)  | Sample oil in the LTC compartment for DGA and Mini-Screen. Send to system lab for analysis. Lab will record and trend results. If results are above a specified limit or abnormal gas ratios, investigate and recondition as required. |
|              |              |      |                                       | Perform Dissolved Gas Analysis (Main) | Sample oil in main tank for DGA and Mini-Screen. Send to system lab for analysis. Lab will record and trend results. If results are above a specified limit or abnormal gas ratios, investigate and recondition as required.           |
|              |              |      |                                       | Perform functional test.              | Prove the operation of the LTC manual/automatic control loop and ensure regulatory voltage tolerances are maintained.                                                                                                                  |
|              |              |      |                                       | Perform infrared scan.                | See Infrared Inspection Plan and Guidelines. Check on temperature differential between main tank and LTC compartment. Look for temperature inconsistencies in radiators.                                                               |
|              |              |      | Out of Service Diagnostic Maintenance | Insulation Power Factor Test          | Perform power factor test in conjunction with maintenance of associated transformer. Record and trend results for age exploration. Review results with respect to determining the effectiveness of this test.                          |
|              |              |      |                                       | Perform insulation resistance test.   | Perform watts loss Doble test in conjunction with transformer power factor tests. Record and trend results.                                                                                                                            |
|              |              |      |                                       | Perform Excitation Test               | Perform winding excitation test in conjunction with maintenance of associated transformer. Record and trend results for age exploration. Review results with respect to determining the effectiveness of this test.                    |
|              |              |      | LTC Overhaul                          | Perform functional test.              | Perform a functional test of tap changer in conjunction with preventative maintenance of associated apparatus. Listen for abnormal operation. Record and trend results.                                                                |
|              |              |      |                                       | Perform functional test.              | Verify temperature alarms with cooling equipment operation, in conjunction with LTC maintenance.                                                                                                                                       |
|              |              |      |                                       | Perform visual inspection.            | Inspect current boxes for leaks or loose connections                                                                                                                                                                                   |
|              |              |      |                                       | Perform internal inspection.          | Inspect and adjust operating mechanism and assess condition of stationary and arcing contacts. Filter tap changer oil. Inspect and clean load tap changer compartment.                                                                 |
|              |              |      |                                       | Check fault pressure relay            | Check Fault Pressure Relay                                                                                                                                                                                                             |
|              |              |      |                                       | Check nitrogen system                 | Check nitrogen system regulator & alarms                                                                                                                                                                                               |
|              |              |      |                                       | Test fuses.                           | Perform air flow test on S&C Power fuses if applicable.                                                                                                                                                                                |
|              |              |      | Transformer Maintenance               | Perform internal inspection.          | Filter and condition oil. Visually inspect internal components and connections for abnormalities and tightness.                                                                                                                        |

| Failure Date | Transformer | Manufacture Year | Substation              | Cause of Failure             | Subsequent Action                           | Customers Affected | Length of Outage (in minutes) |
|--------------|-------------|------------------|-------------------------|------------------------------|---------------------------------------------|--------------------|-------------------------------|
| 4/11/2012    | KT0047      | 2011             | Waco                    | Voltage regulation           | Removed supplier from approved bidders list | 0                  | 0                             |
| 5/30/2012    | B0304       | 1966             | Sardis                  | Proactive replacement        | Replaced with an available spare            | 0                  | 0                             |
| 7/26/2012    | KT0035      | 2010             | Carntown                | Proactive replacement        | Removed supplier from approved bidders list | 0                  | 0                             |
| 10/18/2012   | C0448       | 1969             | Russell Springs         | Failed due to internal fault | Replaced with an available spare            | 1553               | 71                            |
| 12/20/2012   | C0445       | 1969             | Shelbyville South       | Voltage regulation           | Replaced with an available spare            | 0                  | 0                             |
| 2/6/2013     | C0443       | 1969             | Harrodsburg East        | Proactive replacement        | Replaced with an available spare            | 0                  | 0                             |
| 2/22/2013    | W0106       | 1951             | Clay KU                 | Failed due to internal fault | Replaced with an available spare            | 815                | 1274                          |
| 7/31/2013    | B0307       | 2008             | Kentucky State Hospital | Failed due to internal fault | Replaced with an available spare            | 883                | 27                            |
| 8/8/2013     | T0206       | 1954             | Pocket                  | Failed due to internal fault | Replaced with an available spare            | 108                | 57                            |
| 5/5/2014     | B0319       | 1967             | Farmers                 | Failed due to internal fault | Replaced with an available spare            | 687                | 63                            |
| 3/14/2015    | B0404       | 1978             | Midway                  | Bushing failure              | Replaced with an available spare            | 2049               | 105                           |
| 4/2/2015     | B0183       | 1953             | Carlisle                | Proactive replacement        | Replaced with an available spare            | 0                  | 0                             |
| 4/27/2015    | O0182       | 1971             | Boonesboro Park         | Failed due to internal fault | Replaced with an available spare            | 121                | 107                           |
| 5/14/2015    | KT0007      | 2007             | McKee Road              | Proactive replacement        | Replaced with an available spare            | 0                  | 0                             |
| 6/11/2015    | C517        | 1994             | Bardstown City          | Bushing failure              | Replaced bushings with new                  | 1                  | 391                           |
| 7/27/2015    | B0288       | 1963             | Bonnieville             | Failed due to internal fault | Replaced with an available spare            | 322                | 56                            |
| 8/9/2015     | B355        | 1971             | American Avenue         | Bushing failure              | Replaced bushings with new                  | 2386               | 124                           |
| 10/13/2015   | C0415       | 1966             | Pine Hill               | Voltage regulation           | Replaced with an available spare            | 0                  | 0                             |
| 12/14/2015   | C0329       | 1955             | Bens Branch             | Failed due to internal fault | Replaced with an available spare            | 1                  | 914                           |
| 8/26/2016    | M0005       | 1956             | Lynch                   | Failed due to internal fault | Replaced with an available spare            | 552                | 823                           |
| 8/28/2016    | T0184       | 1972             | Andover                 | Failed due to internal fault | Replaced with an available spare            | 2                  | 102                           |
| 10/22/2016   | C0400       | 1965             | Etown 3                 | Bushing failure              | Replaced all bushings with new              | 3                  | 1607                          |
| 12/19/2016   | C0424       | 1967             | Munfordville            | Failed due to internal fault | Replaced with an available spare            | 5596               | 579                           |

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests**

**Dated February 7, 2017**

**Question No. 103**

**Responding Witness: John K. Wolfe / Robert M. Conroy / John P. Malloy**

Q-103. Regarding the response to AG1 – 372, provide the following:

- a. Does the company currently have a SCADA system for their distribution system?
- b. How many SCADA capable reclosers does the company currently have on their distribution system?
- c. What is the difference between the proposed DA initiative SCADA capable reclosers and the ones currently installed on the distribution system?
- d. Did the company receive a CPCN for installation of its current distribution SCADA system or SCADA capable reclosers?
  - i. If not, why not?
- e. Describe in detail at what level of deployment the company needs a CPCN to install SCADA capable reclosers.
- f. Describe in detail how the company will use the information from the AMS system to determine where to install SCADA capable reclosers.
- g. Describe in detail how the company will use the information from the distribution vegetation management program to determine where to install SCADA capable reclosers.

A-103.

- a. No, the Company does not currently have a SCADA system for distribution lines.
- b. 215 SCADA capable reclosers are installed on the Kentucky Utilities distribution system.

- c. The proposed DA initiative reclosers will have communications equipment installed upon purchase. Existing SCADA capable reclosers will require field installation of communications equipment to enable communication via DSCADA with the DMS.
- d. No. The Company does not believe a CPCN was necessary for any SCADA or SCADA-capable reclosers deployed to date, which were all ordinary extensions of existing systems in the usual course of business. See also the response to part e. below, particularly the portion of the larger quote from the Commission's April 13, 2016 final order in Case No. 2012-00428 that states, "Some of the investments in existing Smart Grid technology were made after the utilities had obtained a CPCN, and some were not. The Commission has not found any of the investments to be unreasonable."<sup>1</sup>
- e. In accordance with recent Commission precedent, the Company believes it is appropriate for a utility to seek a CPCN for any major deployment of SCADA, distribution automation ("DA"), or other smart-grid technology. The Commission articulated this standard less than a year ago in its final order in Case No. 2012-00428 regarding CPCNs for smart-grid-related investments:

The Commission believes that the record in this case demonstrates that the deployment of Smart Grid technology, whether in the form of smart meters or DA, varies from utility to utility, as are the reasons for the investment decisions that are made. Some of the investments in existing Smart Grid technology were made after the utilities had obtained a CPCN, and some were not. The Commission has not found any of the investments to be unreasonable.

While the Commission supports the intent of the EISA 2007 Smart Grid Investment Standard, we will not require its adoption. The Commission does not find it practical for each jurisdictional utility to be required to obtain a CPCN for every Smart Grid or meter investment decision. ...

...

With regard to CPCNs, the Commission finds it appropriate for jurisdictional electric utilities to obtain CPCNs for major AMR

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<sup>1</sup> *In the Matter of: Consideration of the Implementation of Smart Grid and Smart Meter Technologies*, Case No. 2012-00428, Order at 10 (Apr. 13, 2016).

or AMI meter investments and distribution grid investments for DA, SCADA or volt/var resources.<sup>2</sup>

- f. The information gained from the AMS deployment will not be utilized in locating DA equipment such as SCADA capable reclosers. SCADA capable recloser locations will be optimized by leveraging historical data from the Outage Management System (OMS) and customer locations from the Geographic Information System (GIS).
- g. The Company will not use the information from the distribution vegetation management program to determine where to install SCADA capable reclosers. See the response to part f.

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<sup>2</sup> *Id.* at 10-11.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 104**

**Responding Witness: John P. Malloy / John K. Wolfe**

Q-104. Regarding the response to AG1 – 373, provide the following:

- a. Since the AMS and DSCADA are two distinct systems, describe in detail how information gained from AMS deployment will be used to locate DA equipment such as SCADA capable reclosers.
- b. Explain how AMS deployment and SCADA capable reclosers initiatives can be done simultaneously while optimizing recloser locations.
- c. Describe any needed improvements to distribution transformer maintenance, inspections and diagnostic maintenance.

A-104.

- a. The information gained from the AMS deployment will not be used to locate DA equipment such as SCADA capable reclosers. See the response to Question No. 103.f.
- b. See the responses to part a. and Question No. 103.f.
- c. No improvements to substation distribution transformer maintenance, inspections, and diagnostic maintenance are identifiable concurrent with this response. Maintenance methods are subject to continuous review and reevaluation.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 105**

**Responding Witness: Robert M. Conroy / John K. Wolfe**

Q-105. Regarding the response to AG 1-376, provide clarification with a detailed description of the following:

- a. Distribution SCADA investments over the past 5 years.
- b. Distribution SCADA capable equipment installations over the past 5 years.
- c. Distribution SCADA capable reclosers installed over the past 5 years.
- d. Redundant distribution transformer installations over the past 5 years.
- e. CPCN's received for any of the above activities.

A-105.

- a. No distribution line SCADA investments have taken place over the past 5 years. Four (4) distribution reclosers have been connected to the transmission SCADA system (EMS).
- b. Two hundred eighty seven (287) distribution SCADA capable devices have been installed over the past 5 years. This includes SCADA capable reclosers and capacitors.
- c. One hundred sixty seven (167) distribution SCADA capable reclosers have been installed over the past 5 years.
- d. 2016 - Innovation Drive Substation base 20 MVA; 2016 - Lakeshore Substation base 20 MVA.
- e. No CPCNs were received for any of the above activities. The Company does not believe a CPCN was necessary for any of the above activities; rather, they were all ordinary extensions of existing systems in the usual course of business.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 106**

**Responding Witness: Robert M. Conroy / John K. Wolfe**

Q-106. Regarding the response to AG1 – 391, provide the following:

- a. 5 year program costs if the distribution automation initiative were scaled back to a pilot program.
- b. Would this require a CPCN?

A-106.

- a. The distribution automation (“DA”) program as planned includes the benefits of a pilot program. In a pilot program, DMS and DSCADA implementation along with recloser installations would take place during 2017 – 2019 consistent with the current plan. Recloser installations in the following years can be scaled up or back depending on actual DA performance.
- b. See the response to Question No. 103(e). Generally speaking, the Company does not believe a pilot program for DA would require a CPCN.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 107**

**Responding Witness: Lonnie E. Bellar**

- Q-107. Regarding the response to KLC 1-8a, clarify attachment reference to \$000 and verify that miscellaneous expense is not \$4,647,613,000 in 2018 plan.
- A-107. The attachment to KLC 1-8a, was inadvertently mislabeled in \$000's and should have been labeled in \$'s, \$4,647,613 is the correct amount for the change in miscellaneous expense from 2018 to 2019. KU filed revised attachments to KLC 1-8a and KLC 1-8b on February 9, 2017.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 108**

**Responding Witness: William S. Seelye**

- Q-108. Regarding the response to AG1 – 291, provide the loss factors for all categories over the past 10 years and describe the voltage levels for primary and secondary.
- A-108. The Company does not determine loss factors annually. Therefore, the requested loss factor information is not available. The loss factors used to develop the allocation factors for the cost of service study were based on a Loss Study dated August 2012. The primary voltages are 2400/4160Y volts, 7200/12,470Y volts, or 34,500 volts. The secondary voltages include any available voltages below these levels, including 120/240 volts three-wire and four-wire, 120/208Y volts three-wire and four-wire, 240 volts three-wire, 480 volts three-wire, and 277/480Y volts four-wire service.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 109**

**Responding Witness: Lonnie E. Bellar**

Q-109. Regarding the response to AG 1-361, provide the MW miles for each transmission line listed in response to AG 1-361(c). Provide response in an excel spreadsheet.

A-109. See attached.

The attachment is being  
provided in a separate  
file in Excel format.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests**

**Dated February 7, 2017**

**Question No. 110**

**Responding Witness: Lonnie E. Bellar**

Q-110. Regarding the response to AG 1-363, provide the following:

- a. Explain why 2013 switch replacement costs were negative.
- b. Explain why no expenditures were made in the 5-year period for underground cable replacement.
- c. Explain accelerated defective equipment replacement.
- d. Explain high expenditures for circuit breaker replacement in 2012.

A-110.

- a. The negative costs for 2013 reflect a reallocation of costs incorrectly assigned to this category/asset class in a prior year.
- b. While the Company did not have expenditures for underground cable replacement, they did have expenditures for repairs on underground accessories (terminations, splices, etc.). Repairs on underground accessories are often a leading indicator that the underground cable system is nearing the end of its useful life and is a driver for the proactive replacement program proposed. The investments in underground cable replacement planned for the next five years are on lines that have experienced failures and associated underground accessory repairs.
- c. The Company has increased defective equipment replacements in an effort to reduce the backlog of defective equipment identified through inspection programs.
- d. The increased spend in 2012 under KBR-12 is due to addressing an identified need to replace specific circuit breakers operating at 69kV– 161kV at various locations. In addition, multiple 345kV breakers were replaced at the Ghent switchyard as part of a multi-year project to replace nine circuit breakers. The breaker replacements at Ghent were initiated as a result of issues experienced with these breakers in 2009, in which two breakers failed, and due to the

criticality of these components to the Ghent power plant and the bulk electric system.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 111**

**Responding Witness: Lonnie E. Bellar**

Q-111. Regarding the response to AG1 – 378, provide the following:

- a. Why project 151744 costs more than project 151811.
- b. All costs involved in an auto switch installation such as the projects listed above.
- c. Why a 69 kV switch installation (project 147482 for example) is estimated to cost more than an auto switch installation (project 151811 for example).
- d. All costs involved in a switch replacement.
- e. Why project 144364 costs more than project 144632.
- f. All costs involved in a breaker installation such as the projects listed above.
- g. All costs involved in project 151794.
- h. All costs involved in project 147565.
- i. All costs involved in projects 147592, 147593, and 147594.

A-111.

- a. Project 151744 is an Auto installation on a transmission pole while project 151811 is located in a substation. The primary difference in cost is due to materials and contract labor associated with the installation of the transmission pole in project 151744.
- b. Costs for the construction of auto switches can vary by location. For a transmission structure installation, the major components are a structure, switch, motor, communications, PTs, and associated relaying. Some of the proposed locations have an existing structure and switch and would only require motor, communications, PTs and associated relaying. Other installations are in a substation and would not require the transmission

structure. Final testing and commissioning is required to place the equipment in service.

- c. Project 147482 requires the installation of a new transmission structure to accommodate the motor operated switch which adds significantly to the cost. Project 151811 already has switches installed in the substation steel and only needs the addition of motors and the equipment for automating the switch.
- d. A typical switch replacement will include the cost for removal of the existing switch and, if needed, construction of a new transmission structure and the purchase and installation of the switch itself and attachment to line conductors followed by testing and commissioning.
- e. Project 144364 involved the purchase and installation of 2 circuit breakers into an existing substation and the purchase and installation of a new control house to hold the associated relaying. This project also included the construction of 2 substation bays to accommodate the breakers and construction of a transfer bus to accommodate maintenance activity. Project 144632 involves the purchase and installation of a single breaker in an open substation bay and the purchase and installation of a transclosure (a box to accommodate the necessary relaying).
- f. Breaker installations typically include the purchase of a single breaker, the construction of a substation bay to place the breaker, associated line relaying, and communications equipment and testing and commissioning.
- g. See the table below.
- h. See the table below.
- i. See the table below.

**Response to AG-2 Question No. 111****Page 3 of 3****Bellar**

| Project | Bud Description                | Company and Contract Labor | Materials | Overheads, Contingency and Other | Total       |
|---------|--------------------------------|----------------------------|-----------|----------------------------------|-------------|
| 144364  | REL-Parkers Mill 604 Brkr Adds | \$890,730                  | \$731,539 | \$359,132                        | \$1,981,401 |
| 144632  | REL-Cawood 604 Brkr Addition   | \$455,287                  | \$251,452 | \$143,262                        | \$850,001   |
| 147482  | REL Campbellsburg Switch       | \$217,250                  | \$94,000  | \$29,569                         | \$340,819   |
| 147565  | REL Haley MOS                  | \$255,120                  | \$170,080 | \$24,800                         | \$450,000   |
| 147592  | REL Motor Op Switches KU 2019  | \$1,001,500                | \$400,000 | \$105,112                        | \$1,506,612 |
| 147593  | REL Motor Op Switches KU 2020  | \$1,215,000                | \$400,000 | \$153,425                        | \$1,768,425 |
| 147594  | REL Motor Op Switches KU 2021  | \$1,256,000                | \$400,000 | \$140,760                        | \$1,796,760 |
| 151744  | REL-Campbellsville 605 Switch  | \$118,580                  | \$81,680  | \$43,365                         | \$243,625   |
| 151794  | REL Elizabethtown Tap MOS      | \$293,500                  | \$185,000 | \$107,121                        | \$585,621   |
| 151811  | REL-Rockwell Motor-Auto        | \$97,385                   | \$67,081  | \$35,534                         | \$200,000   |

**KENTUCKY UTILITIES COMPANY**

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**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 112**

**Responding Witness: Lonnie E. Bellar**

- Q-112. Regarding the response to AG1 – 409, provide the following:
- a. When does LKE expect to perform an updated RTO membership analysis?
  - b. Did the 2012 analysis consider revenue from the PJM capacity market value?  
If not why?
  - c. Reserve margin requirements if LKE joined either PJM or MISO.
  - d. Any changes to assumptions regarding cost allocation of regional PJM or MISO projects since 2012.
  - e. Current present value benefits of reduction in spinning reserve.
  - f. Current estimate of third party transmission revenue to LKE with PJM or MISO membership.
  - g. Current reduction of cost for elimination of ITO and RC less increased staff costs for joining an RTO.
  - h. Reduction of depancaking costs if LKE joined an RTO.
  - i. Avoided long-term firm PTP transmission charges from joining an RTO.
  - j. Current forecast of 10-year capacity market revenue from sales in either PJM or MISO.
  - k. Current adjusted projection cost savings from joining MISO for the next 10 years.
  - l. Current adjusted projection cost savings from joining PJM for the next 10 years.

A-112.

- a. At this time, the Company has not made definitive plans to perform a new cost/benefit study of becoming an RTO member.
- b. Yes; however, since revenue received from the PJM capacity market is also paid for by customers, the overall net difference in revenues and cost associated with the PJM capacity market was not considered to have a material impact on the results. The analysis assumed that if the Company joined an RTO it would not change its targeted generation planning reserve margin.
- c. The analysis assumed that if the Company joined an RTO, it would not change its targeted generation planning reserve margin.
- d. The Company has not reevaluated any assumptions regarding cost allocation of RTO regional projects since the 2012 analysis.
- e. The Company has not reevaluated spinning reserve requirements of joining an RTO since the 2012 analysis.
- f. The Company has not reevaluated third party transmission revenue impacts from joining an RTO since the 2012 analysis.
- g. The Company has not reevaluated the net impact of eliminating ITO and RC costs less increased staff costs from joining an RTO since the 2012 analysis.
- h. See the response to AG 1-409.
- i. See the response to AG 1-409.
- j. The Company has not performed a current 10 year capacity market revenue forecast for sales into PJM or MISO.
- k. The Company has not reevaluated the financial impacts of joining MISO since the 2012 analysis, which indicated an incremental present value cost of \$216.5 million.
- l. The Company has not reevaluated the financial impacts of joining PJM since the 2012 analysis, which indicated an incremental present value cost of \$103 million.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
Dated February 7, 2017**

**Question No. 113**

**Responding Witness: Robert M. Conroy**

Q-113. Has the Company ever considered requesting Commission approval for tariffs regarding any of the following: (i) "Seasonal;" (ii) "Seasonal Agriculture;" and/or (iii) "Agriculture"?

- a. If not, why not?
- b. If so, why does the Company not have such a tariff now?

A-113.

- a. No, the Company has not requested Commission approval for tariffs regarding the specific items noted. The Company has developed rates that more closely reflect the cost of providing service. It is important for the Company to design its rates so that the actual cost of providing service is recovered through rates even when customers reduce their energy consumption but still require the same utility infrastructure to serve them. A utility must install distribution, transmission, and generation facilities to serve a customer's demand. Just because a customer's demand is not always at the maximum level does not mean that the fixed costs of the facilities installed to meet the customer's maximum demand will disappear. The fixed costs of the facilities installed to meet a customer's maximum demand will be incurred even when the customer has a lower demand. In the case of localized facilities, such as primary and secondary distribution lines, transformers, substations, and transmission facilities, the utility must install sufficient capacity to meet the customer's maximum demand, whenever the demand occurs. Therefore, a utility's transmission and distribution fixed costs are correlated to the customers' maximum demands, not their average monthly demands. Generation fixed costs are correlated to customer demands at the time of the system peak. For most but not all customers, the customer's maximum demands occur near the system peak. For system peak demands, which drive the cost of generation fixed assets, customer load diversity has an effect on the generation requirements that individual customer demands place on the system.

In addition, when one rate class subsidizes another rate class it is referred to as “inter-class subsidies”, but when customers within a particular rate class subsidize other customers served under the same rate schedule it is referred to as “intra-class subsidies.” The rate-making principle that should be followed to avoid intra-class subsidies is that, as much as possible, fixed costs should be recovered through fixed charges (such as the basic service charge and demand charge) and variable costs should be recovered through variable charges (such as the energy charge). If fixed costs are recovered through variable charges, each kWh contains a component of fixed costs and customers using more energy than the average customer in the class are paying more than their fair share of fixed costs and margins, while customers using less energy than the average customer in the class are paying less than their fair share of fixed costs and margins. These fixed costs and margins should be collected through the billing units associated with the appropriate cost driver, and energy usage clearly is not the correct cost driver for fixed costs. The collection of fixed costs through the energy charge typically results in customers with above-average usage subsidizing customers with below-average usage. The collection of variable costs through fixed charges also results in an intra-class subsidy, with customers with below-average usage subsidizing customers with above-average usage. In order to eliminate this source of intra-class subsidies, the Company wants to pursue a rate design that moves more in the direction of recovering fixed costs through fixed charges and variable costs through variable charges.

- b. Not applicable.

**KENTUCKY UTILITIES COMPANY**

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**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 114**

**Responding Witness: Robert M. Conroy**

Q-114. Has the Company performed any studies, analyses or research regarding the need for or adoption of tariffs regarding any one of the three subject matters referenced immediately above, or any combination thereof?

- a. If not, why not?
- b. If so, provide all studies, analyses, or research the Company has performed regarding the aforementioned tariffs?

A-114.

- a. No the Company has not performed any studies, analyses, or research regarding the matters referenced in Question No. 113. See response to Question No. 113(a).
- b. Not applicable.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 115**

**Responding Witness: Robert M. Conroy**

Q-115. Has the Company ever considered requesting Commission approval for a tariff specific to sports-related facilities and/or sports fields owned by municipalities or schools?

- a. If not, why not?
- b. If so, why does the Company not have such a tariff now?

A-115.

- a. See the response to Question No. 113(a).
- b. Not applicable.

**KENTUCKY UTILITIES COMPANY**

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**Question No. 116**

**Responding Witness: Robert M. Conroy**

Q-116. Has the Company performed any studies, analyses or research regarding the need for or adoption of a tariff related to sports-related facilities and/or sports fields?

- a. If not, why not?
- b. If so, provide all studies, analyses, or research the Company has performed regarding tariffs for the aforementioned subjects?

A-116.

- a. No the Company has not performed any studies, analyses, or research regarding the matters referenced. See the response to Question No. 113(a).
- b. Not applicable.

**KENTUCKY UTILITIES COMPANY**

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**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 117**

**Responding Witness: Robert M. Conroy / John P. Malloy**

Q-117. Has the Company ever engaged in any meetings, correspondence or conversations with individuals or organizations regarding tariffs for: (i) "Seasonal;" (ii) "Seasonal Agriculture;" (iii) "Agriculture," and/or sports-related facilities and/or sports fields?

a. If so, what has been the outcome of these engagements?

A-117. Yes.

a. The Company has engaged in conversations with various customers related to possible tariff design for "Seasonal", "Seasonal Agriculture", "Agriculture", and/or sports-related facilities and/or sports fields. However, those conversations have not yielded cost of service reasons to support the development of those tariffs. The Company is always willing to discuss tariff designs with its customers.

**KENTUCKY UTILITIES COMPANY**

**CASE NO. 2016-00370**

**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 118**

**Responding Witness: John P. Malloy**

- Q-118. Refer to the Company's response to PSC 2-109. Explain why the Company waited until April 2016 to change the tariff for the Greater Muhlenberg Parks and Recreation System even though the system's usage would have necessitated an earlier move to Power Service.
- A-118. In November 2015, the Company informed the Greater Muhlenberg Parks and Recreation Department that the energy demand was averaging over 50 kW which would require a rate change from General Service to Power Service. Since the rate change would result in higher bills, the Greater Muhlenberg Parks and Recreation Department requested time to explore options to reduce their demand. The Company, consistent with filed and approved Terms and Conditions on Tariff Sheet 101.1 - Customer Rate Assignment, did not change the rate until April 2016 since November through March was the Sporting Complex's off season and would not be in use. When Greater Muhlenberg Parks and Recreation could not find a feasible option to lower their demand, the rate was changed in April 2016 in accordance with our tariffs.

**KENTUCKY UTILITIES COMPANY**

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**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 119**

**Responding Witness: Robert M. Conroy**

- Q-119. Refer to the Company's response to PSC 2-109 and PSC 2-110. When did the Power Service tariff change so that customers whose demand averages more than 50 KW are defaulted to that rate? This answer should include the date of the tariff change and the case number in which the change was proposed and approved.
- A-119. On February 5, 2009, the Commission entered an Order approving the unanimous Settlement, Stipulation and Recommendation reached between KU and all intervenors in its 2008 base rate case (Case No. 2008-00251). As part of said Order, the Commission approved KU's proposal to combine its then-existing Large Power Rate LP with Mining Power Rate MP, and rename it Power Service Rate PS. Effective February 6, 2009, the availability of service for secondary and primary customers under Rate PS was limited to customers having minimum average secondary loads of 50 kW and maximum average loads of 250 kW. The 50 kW minimum for secondary service has not been modified since its original effective date. Customers with maximum average loads below 50 kW are provided secondary service under Rate GS.

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**Response to the Attorney General's Supplemental Data Requests  
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**Question No. 120**

**Responding Witness: John P. Malloy**

Q-120. Refer to the Company's response to PSC 2-110. Subject to the customer's approval, provide the customer's usage for each month since January 2010, in a chart similar to the Company's response to PSC 2-109.

A-120. See attached.

## Fredonia Food &amp; More

## Monthly Customer Usage - January 2010 to February 2017

| Rate Category/Tariff | Billing Period | Revenue Amount<br>\$ | Total Energy<br>KWH | Demand Billed<br>KW | Demand Measured<br>KW |
|----------------------|----------------|----------------------|---------------------|---------------------|-----------------------|
| PS Secondary         | 2010/01        | \$ 1,365.12          | 22,680              | 49.2                | 49.2                  |
| PS Secondary         | 2010/02        | \$ 1,523.47          | 23,480              | 49.2                | 49.2                  |
| PS Secondary         | 2010/03        | \$ 1,056.16          | 11,320              | 49.2                | 49.2                  |
| PS Secondary         | 2010/04        | \$ 1,412.14          | 27,120              | 49.2                | 49.2                  |
| PS Secondary         | 2010/05        | \$ 1,896.32          | 23,120              | 104.8               | 104.8                 |
| PS Secondary         | 2010/06        | \$ 1,680.83          | 29,680              | 50.1                | 50.1                  |
| PS Secondary         | 2010/07        | \$ 1,713.92          | 28,920              | 52.8                | 52.8                  |
| PS Secondary         | 2010/08        | \$ 1,907.68          | 28,200              | 53.2                | 53.2                  |
| PS Secondary         | 2010/09        | \$ 1,973.12          | 30,480              | 52.4                | 52.0                  |
| PS Secondary         | 2010/10        | \$ 1,533.63          | 24,920              | 52.4                | 50.2                  |
| PS Secondary         | 2010/11        | \$ 1,455.97          | 21,640              | 52.4                | 47.0                  |
| PS Secondary         | 2010/12        | \$ 1,452.13          | 23,640              | 52.4                | 41.8                  |
| PS Secondary         | 2011/01        | \$ 1,379.30          | 21,400              | 52.4                | 38.4                  |
| PS Secondary         | 2011/02        | \$ 1,344.37          | 18,760              | 52.4                | 39.2                  |
| PS Secondary         | 2011/03        | \$ 1,367.44          | 21,280              | 52.4                | 38.4                  |
| PS Secondary         | 2011/04        | \$ 1,390.08          | 21,040              | 52.4                | 42.1                  |
| PS Secondary         | 2011/05        | \$ 1,522.33          | 22,480              | 50.0                | 46.9                  |
| PS Secondary         | 2011/06        | \$ 1,721.43          | 26,560              | 51.7                | 51.7                  |
| PS Secondary         | 2011/07        | \$ 1,716.45          | 26,840              | 50.0                | 49.2                  |
| PS Secondary         | 2011/08        | \$ 1,759.33          | 28,240              | 51.5                | 51.5                  |
| PS Secondary         | 2011/09        | \$ 1,900.48          | 30,600              | 51.9                | 51.9                  |
| PS Secondary         | 2011/10        | \$ 1,503.25          | 24,120              | 50.0                | 48.8                  |
| PS Secondary         | 2011/11        | \$ 1,369.06          | 20,400              | 50.0                | 46.4                  |
| PS Secondary         | 2011/12        | \$ 1,322.80          | 21,200              | 50.0                | 38.8                  |
| PS Secondary         | 2012/01        | \$ 1,387.27          | 21,560              | 50.0                | 37.0                  |
| PS Secondary         | 2012/02        | \$ 1,320.07          | 19,920              | 50.0                | 38.4                  |
| PS Secondary         | 2012/03        | \$ 1,355.04          | 19,640              | 50.0                | 39.6                  |
| PS Secondary         | 2012/04        | \$ 1,429.05          | 21,280              | 50.0                | 45.7                  |
| PS Secondary         | 2012/05        | \$ 1,640.18          | 24,160              | 50.0                | 46.4                  |
| PS Secondary         | 2012/06        | \$ 1,696.15          | 25,280              | 50.0                | 48.8                  |
| PS Secondary         | 2012/07        | \$ 1,988.45          | 30,800              | 51.2                | 51.2                  |
| PS Secondary         | 2012/08        | \$ 1,816.03          | 27,680              | 53.2                | 53.2                  |
| PS Secondary         | 2012/09        | \$ 1,785.96          | 28,240              | 50.0                | 49.4                  |
| PS Secondary         | 2012/10        | \$ 1,545.74          | 24,840              | 50.0                | 48.9                  |
| PS Secondary         | 2012/11        | \$ 1,433.20          | 20,920              | 50.0                | 42.4                  |
| PS Secondary         | 2012/12        | \$ 1,368.54          | 20,120              | 50.0                | 39.1                  |
| PS Secondary         | 2013/01        | \$ 1,430.82          | 22,000              | 50.0                | 40.0                  |
| PS Secondary         | 2013/02        | \$ 1,414.04          | 19,560              | 50.0                | 38.7                  |
| PS Secondary         | 2013/03        | \$ 1,315.83          | 19,440              | 50.0                | 37.5                  |
| PS Secondary         | 2013/04        | \$ 1,459.68          | 20,040              | 50.0                | 41.0                  |

| Rate Category/Tariff | Billing Period | Revenue Amount | Total Energy | Demand Billed | Demand Measured |
|----------------------|----------------|----------------|--------------|---------------|-----------------|
|                      |                | \$             | KWH          | KW            | KW              |
| PS Secondary         | 2013/05        | \$ 1,756.59    | 24,400       | 50.0          | 45.3            |
| PS Secondary         | 2013/06        | \$ 1,911.15    | 27,000       | 50.0          | 48.9            |
| PS Secondary         | 2013/07        | \$ 2,031.30    | 29,520       | 50.0          | 50.0            |
| PS Secondary         | 2013/08        | \$ 1,852.21    | 27,160       | 50.2          | 50.2            |
| PS Secondary         | 2013/09        | \$ 1,867.34    | 27,640       | 50.3          | 50.3            |
| PS Secondary         | 2013/10        | \$ 1,734.35    | 27,760       | 50.0          | 48.9            |
| PS Secondary         | 2013/11        | \$ 1,479.88    | 20,680       | 50.0          | 41.1            |
| PS Secondary         | 2013/12        | \$ 1,462.59    | 20,920       | 50.0          | 41.1            |
| PS Secondary         | 2014/01        | \$ 1,585.12    | 22,600       | 50.0          | 38.6            |
| PS Secondary         | 2014/02        | \$ 1,556.23    | 20,600       | 50.0          | 39.0            |
| PS Secondary         | 2014/03        | \$ 1,571.39    | 20,200       | 50.0          | 38.6            |
| PS Secondary         | 2014/04        | \$ 1,526.68    | 19,360       | 50.0          | 38.4            |
| PS Secondary         | 2014/05        | \$ 1,780.47    | 21,840       | 50.0          | 43.8            |
| PS Secondary         | 2014/06        | \$ 2,078.10    | 27,800       | 50.0          | 46.6            |
| PS Secondary         | 2014/07        | \$ 2,017.58    | 27,800       | 50.0          | 48.0            |
| PS Secondary         | 2014/08        | \$ 1,773.14    | 23,720       | 50.0          | 47.0            |
| PS Secondary         | 2014/09        | \$ 2,017.18    | 29,800       | 50.0          | 46.3            |
| PS Secondary         | 2014/10        | \$ 1,611.46    | 21,800       | 50.0          | 45.3            |
| PS Secondary         | 2014/11        | \$ 1,566.66    | 20,960       | 50.0          | 40.3            |
| PS Secondary         | 2014/12        | \$ 1,526.33    | 21,000       | 50.0          | 40.0            |
| PS Secondary         | 2015/01        | \$ 1,541.16    | 19,280       | 50.0          | 37.7            |
| PS Secondary         | 2015/02        | \$ 1,571.41    | 19,880       | 50.0          | 37.1            |
| PS Secondary         | 2015/03        | \$ 1,515.23    | 19,080       | 50.0          | 37.5            |
| GS Three Phase       | 2015/04        | \$ 1,877.30    | 18,600       | 0             | 40.1            |
| GS Three Phase       | 2015/05        | \$ 2,019.37    | 20,280       | 0             | 43.3            |
| GS Three Phase       | 2015/06        | \$ 2,566.88    | 25,200       | 0             | 44.3            |
| GS Three Phase       | 2015/07        | \$ 2,614.05    | 25,600       | 0             | 45.0            |
| GS Three Phase       | 2015/08        | \$ 2,695.50    | 25,800       | 0             | 49.2            |
| GS Three Phase       | 2015/09        | \$ 2,892.65    | 27,920       | 0             | 48.6            |
| GS Three Phase       | 2015/10        | \$ 2,247.23    | 21,400       | 0             | 43.1            |
| GS Three Phase       | 2015/11        | \$ 2,040.00    | 19,560       | 0             | 39.8            |
| GS Three Phase       | 2015/12        | \$ 2,102.73    | 20,640       | 0             | 38.1            |
| GS Three Phase       | 2016/01        | \$ 2,110.88    | 20,440       | 0             | 39.6            |
| GS Three Phase       | 2016/02        | \$ 1,885.44    | 17,240       | 0             | 38.6            |
| GS Three Phase       | 2016/03        | \$ 2,063.01    | 18,280       | 0             | 38.6            |
| GS Three Phase       | 2016/04        | \$ 1,946.33    | 18,440       | 0             | 42.5            |
| GS Three Phase       | 2016/05        | \$ 2,310.43    | 22,200       | 0             | 41.0            |
| GS Three Phase       | 2016/06        | \$ 2,311.32    | 21,880       | 0             | 41.6            |
| GS Three Phase       | 2016/07        | \$ 2,609.52    | 24,880       | 0             | 45.3            |
| GS Three Phase       | 2016/08        | \$ 2,996.80    | 28,080       | 0             | 45.0            |
| GS Three Phase       | 2016/09        | \$ 2,528.46    | 23,560       | 0             | 45.5            |
| GS Three Phase       | 2016/10        | \$ 2,177.59    | 20,600       | 0             | 41.9            |

| <b>Rate Category/Tariff</b> | <b>Billing<br/>Period</b> | <b>Revenue<br/>Amount</b> | <b>Total<br/>Energy</b> | <b>Demand<br/>Billed</b> | <b>Demand<br/>Measured</b> |
|-----------------------------|---------------------------|---------------------------|-------------------------|--------------------------|----------------------------|
|                             |                           | <b>\$</b>                 | <b>KWH</b>              | <b>KW</b>                | <b>KW</b>                  |
| GS Three Phase              | 2016/11                   | \$ 2,225.51               | 21,200                  | 0                        | 43.8                       |
| GS Three Phase              | 2016/12                   | \$ 1,887.13               | 17,720                  | 0                        | 38.5                       |
| GS Three Phase              | 2017/01                   | \$ 1,916.23               | 18,200                  | 0                        | 35.6                       |
| GS Three Phase              | 2017/02                   | \$ 1,775.88               | 16,400                  | 0                        | 36.6                       |