

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF)
KENTUCKY UTILITIES COMPANY FOR AN) CASE NO. 2018-00294
ADJUSTMENT OF ITS ELECTRIC RATES)

RESPONSE OF
KENTUCKY UTILITIES COMPANY
TO
SUPPLEMENTAL REQUEST FOR INFORMATION OF THE
U. S. DEPARTMENT OF DEFENSE
DATED DECEMBER 13, 2018

FILED: JANUARY 2, 2019

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Daniel K. Arbough**, being duly sworn, deposes and says that he is Treasurer for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and 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.



Daniel K. Arbough

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 28th day of December 2018.



Notary Public

My Commission Expires:
Judy Schooler
Notary Public, ID No. 603967
State at Large, Kentucky
Commission Expires 7/11/2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Lonnie E. Bellar**, being duly sworn, deposes and says that he is Chief Operating Officer for Louisville Gas and Electric Company and Kentucky Utilities Company and an employee of LG&E and KU Services Company, and 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.



Lonnie E. Bellar

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 28th day of December 2018.



Notary Public

My Commission Expires:
Judy Schooler
Notary Public, ID No. 603967
State at Large, Kentucky
Commission Expires 7/11/2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Kent W. Blake**, being duly sworn, deposes and says that he is Chief Financial Officer for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of LG&E and KU Services Company, and 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.



Kent W. Blake

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 20~~th~~ day of December 2018.



Notary Public

My Commission Expires:
Judy Schooler
Notary Public, ID No. 603967
State at Large, Kentucky
Commission Expires 7/11/2022

VERIFICATION

COMMONWEALTH OF PENNSYLVANIA)
) SS:
COUNTY OF CUMBERLAND)

The undersigned, **John J. Spanos**, being duly sworn, deposes and says that he is the 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

John J. Spanos

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 21st day of December 2018.

Cheryl Ann Rutter (SEAL)

Notary Public

My Commission Expires:
February 20, 2019

COMMONWEALTH OF PENNSYLVANIA
NOTARIAL SEAL
Cheryl Ann Rutter, Notary Public
East Pennsboro Twp., Cumberland County
My Commission Expires Feb. 20, 2019
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense
Dated December 13, 2018**

Case No. 2018-00294

Question No. 1

Responding Witness: Lonnie E. Bellar

- Q-1. Please refer to KU's response to KIUC Data Request Set 1, Question No. 32. Please provide the exact citation to Mr. Bellar's testimony that provides support and testimony for the probable retirement dates used for each of the Company's generating units.
- A-1. The response to KIUC 1-32 did not state that the probable retirement dates were specifically stated in Mr. Bellar's testimony. Thus, there is no exact citation to provide. The request contained in KIUC 1-32 asked for a Company witness who "can testify as to the probable retirement dates." Mr. Bellar was identified as the Company witness who can testify to the probable retirement dates.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 2

Responding Witness: Lonnie E. Bellar / John J. Spanos

- Q-2. Please refer to KU's response to KIUC Data Request Set 1, Question No. 33, where it states, "The depreciation study in Mr. Spanos's direct testimony contains a more detailed engineering analysis of each unit, as opposed to the general age assumption applied in Attachment H. For each unit, the depreciation study resulted in the retirement date occurring at the lower end of the industry life span range for coal units. This higher level of detail is the reason that the dates shown in the depreciation study occur sooner than the assumed age in Attachment H."
- a. Please provide the "more detailed engineering analysis for each unit" in their complete electronic format.
 - b. Please provide a detailed narrative explaining the methodology utilized for the detailed engineering analysis for each unit that was conducted to determine the probable retirement date.
 - c. Please provide the citation to Gannet Fleming's contract (provided in response to Attachment 1 to Response to US DOD-1 Question No. 26) with KU that describes the scope of this detailed engineering analysis.
 - d. Please identify who conducted this analysis.
- A-2.
- a. See the attachment provided in response to US DOD 1-29(a).
 - b. See the attached for a discussion on the methodology.
 - c. The analysis was an internal review performed by LG&E and KU personnel, and is not cited in Gannet Fleming's contract.
 - d. The analysis was conducted by LG&E and KU personnel.

Methodology:

As referenced in LG&E's response to KIUC Data Request Set 1, Question No. 30 (KU's response to KIUC Data Request Set 1, Question No. 33), the depreciation study utilizes a 'more detailed engineering analysis' to evaluate each unit.

The steps utilized in the evaluation process are as follows:

1. Define a starting point for the life of the unit. In this case, the starting point is the year that each unit started commercial operation.
2. Define an estimated life span (and estimated retirement year) for each unit based on industry best practices. In this case the range of estimated life for each unit is based on industry data for coal unit age at retirement or announced retirement. This data is presented in Figure 1 on page 9 of the 2018 IRP Long-Term Resource Planning Analysis (submitted to PSC under Case No. 2018-00394, LGE_KU_2018_IRP-Volume III, page 71 of 93).
3. Periodically evaluate the life span for each unit, looking for anything that would present a risk to the estimated life. Aspects considered in these evaluations are:
 - Equipment age
 - Physical assessments/inspections
 - Operational factors (ie – number of startups/shutdowns)
 - Operating conditions (temperatures, pressures, voltages, etc)
 - Maintenance and repair history
 - Component replacement history
4. Identify from these evaluations any indication of an End of Life event. End of Life event is defined as a catastrophic failure that would be consideration for retirement.
 - Based on industry best practices, and recommendations from the Electric Power Research Institute (EPRI), the components identified that would fail to such extent are the steam drum (major boiler component) and the turbine/generator set.
 - The steam drum is considered due to the large influence of thermal cycling and subsequent risk of developing a critical flaw
 - The turbine/generator set is considered as a single system whose failure could lead to significant repair or replacement costs
5. Shorten the estimated retirement year and estimated life span appropriately based on any indications of a possible End of Life event

When analyzing the units and these specific components, the following assumptions are made regarding factors outside the direct technical evaluation:

- All necessary environmental permits and licenses will be maintained

- Future compliance with environmental regulations is a consideration for unit retirement
- Units will continue to operate in a manner that is consistent with recent operating practices, with a similar number of annual starts and stops, and annual generation
- Units will continue to be operated/maintained in accordance with good industry practices with required renewals and replacements made in a timely manner

The analysis is approached with the understanding that any deviation from these assumptions may shorten the estimated life of any unit.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 3

Responding Witness: Christopher M. Garrett / John J. Spanos

- Q-3. Please refer to KU's response to KIUC Data Request Set 1, Question No. 34.b. Please explain why KU's customers should pay accelerated depreciation expense on the ash ponds due to a mistake on KU's part in a previous settlement, which set depreciation rates at 0%.
- A-3. KU customers are not paying accelerated depreciation on the ash ponds due to a mistake on KU's part in a previous settlement. Based on group depreciation, assets are recovered over the life of the assets within the group. Thus, not every asset is individually depreciated. Additionally, rates are established in rate cases after assets have been placed in service; thus, the entire group of assets are recovered over the life of the group. The life of the ash ponds were previously presented in the last depreciation study.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 4

Responding Witness: Counsel

- Q-4. Please provide Attachment 1 to Response to US DOD-1 Question No. 21, which appears to be a Microsoft Word document, in its native format.
- A-4. KU provided a PDF version of Attachment 1 to US DOD 1-21, which is available via the Commission's website. The US DOD can use readily available software to convert the provided PDF file to Microsoft Word format. Counsel for KU discussed this procedure with counsel for US DOD. US DOD has agreed to convert the PDF file to Microsoft Word format.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 5

Responding Witness: Counsel

- Q-5. Please provide Attachment 1 to Response to US DOD-1 Question No. 22, which appears to be a Microsoft Word document, in its native format.
- A-5. KU provided a PDF version of Attachment 1 to US DOD 1-22, which is available via the Commission's website. The US DOD can use readily available software to convert the provided PDF file to Microsoft Word format. Counsel for KU discussed this procedure with counsel for US DOD. US DOD has agreed to convert the PDF file to Microsoft Word format.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 6

Responding Witness: Counsel

- Q-6. Please provide Attachment 1 to Response to US DOD-1 Question No. 24, which appears to be a Microsoft Word document, in its native format.
- A-6. KU provided a PDF version of Attachment 1 to US DOD 1-24, which is available via the Commission's website. The US DOD can use readily available software to convert the provided PDF file to Microsoft Word format. Counsel for KU discussed this procedure with counsel for US DOD. US DOD has agreed to convert the PDF file to Microsoft Word format.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense
Dated December 13, 2018**

Case No. 2018-00294

Question No. 7

Responding Witness: Christopher M. Garrett / John J. Spanos / Counsel

- Q-7. Please provide the files, which were provided as Attachment 1 to Response to US DOD-1 Question No. 26, which appear to be a variety of Microsoft Word documents, Microsoft Office emails, Microsoft Excel spreadsheets, etc., in their complete native formats.
- A-7. See attachments being provided in Excel format.

KU provided a PDF version of Attachment 1 to US DOD 1-26, which is available via the Commission's website. The US DOD can use readily available software to convert the provided PDF file to Microsoft Word or Microsoft Office email format. Counsel for KU discussed this procedure with counsel for US DOD. US DOD has agreed to convert the PDF file to Microsoft Word format.

The attachments are
being provided in
separate files in Excel
format.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 8

Responding Witness: Daniel K. Arbough / John J. Spanos

- Q-8. Please refer to page 799 of Attachment 1 to Response to US DOD-1 Question No. 26.
- a. Please explain why the Company did not extend the lifespan of Mill Creek 1 and 2, Brown 3, and Ghent 1 and 2 by three years as Mr. Spanos had intended.
 - b. Please explain why Mr. Spanos thought the lives of these units should be extended by three years.
 - c. Please provide the impact on depreciation rates and test year depreciation expense for these units by extending the lives by three years.
 - d. Please provide the remaining life for each FERC account for each unit if the life was extended by three years such that Table 1 of the depreciation study (Exhibit JJS-KU-1) can be updated.
 - e. Please provide the interim retirements for each plant FERC account for each plant if the life was extended by three years such that Table 2 of the Depreciation Study (Exhibit JJS-KU-1) can be updated.
- A-8.
- a. The request misstates the email referenced therein. The email (page 799 of Attachment 1) discussion relates to a possible alternative to some of the steam units. Based on discussions with Company personnel it was determined this alternative was not consistent with the outlook of the units.
 - b. Mr. Spanos did not think the lives of these units should be extended by three years. Page 799 was an email discussing the possible alternative of extending the currently approved life span by three years.
 - c. See attached which sets forth the results for extending the designated units by three years. This calculation reduces depreciation expense for steam plant by \$12,109,997 as compared to the depreciation study filed.

- d. See attached for remaining lives by unit and account with the changed probable retirement dates for some units.
- e. See attached for interim retirements for each account and unit for the facilities with a changed probable retirement date of three years.

	Filed	Rates Using 3 plus Years	Variance
Depreciation Expense	358,688,938.28	346,578,941.76	(12,109,996.52)

DESCRIPTION	Filed	Rates Using 3 plus Years	Variance
KU-130100- KY Organization	0.00%	0.00%	0.00%
KU-130100- VA Organization	0.00%	0.00%	0.00%
KU-130200-Franchises and Consents	3.63%	3.63%	0.00%
KU-130200-Licensed Project Franchi	3.63%	3.63%	0.00%
KU-130300-Misc Intangible Plant	20.96%	20.96%	0.00%
KU-130310-CCS Software	10.06%	10.06%	0.00%
KU-131020-EWB 1 Land	0.00%	0.00%	0.00%
KU-131020-EWB 3 Land	0.00%	0.00%	0.00%
KU-131020-EWB 3 Land ECR 2011	0.00%	0.00%	0.00%
KU-131020-GH 1 Land	0.00%	0.00%	0.00%
KU-131020-GH 4 Land ECR 2009	0.00%	0.00%	0.00%
KU-131020-GH 4 Land ECR 2016	0.00%	0.00%	0.00%
KU-131020-GR 1&2 Land	0.00%	0.00%	0.00%
KU-131020-PI 1&2 Land	0.00%	0.00%	0.00%
KU-131020-PI 3 Land	0.00%	0.00%	0.00%
KU-131020-TC 2 Land	0.00%	0.00%	0.00%
KU-131020-TC 2 Land ECR 2009	0.00%	0.00%	0.00%
KU-131020-TY 3 Land	0.00%	0.00%	0.00%
KU-131100-EWB 1 Structures and Imp	0.04%	0.04%	0.00%
KU-131100-EWB 2 Structures and Imp	0.63%	0.63%	0.00%
KU-131100-EWB 3 Struc	3.17%	2.71%	-0.46%
KU-131100-EWB 3 Struc ECR 2005	3.17%	2.71%	-0.46%
KU-131100-EWB 3 Struc ECR 2009	3.17%	2.71%	-0.46%
KU-131100-EWB 3 Struc ECR 2011	3.17%	2.71%	-0.46%
KU-131100-EWB3 FGD Struc	4.54%	3.88%	-0.66%
KU-131100-EWB3 FGD Struc ECR 2005	4.54%	3.88%	-0.66%
KU-131100-GH 1 Struc	1.68%	1.53%	-0.15%
KU-131100-GH 1 Struc ECR 2006	1.68%	1.53%	-0.15%
KU-131100-GH 1SC Structures and Im	1.14%	1.07%	-0.07%
KU-131100-GH 2 Structures and Impr	1.31%	1.22%	-0.09%
KU-131100-GH 3 Struc	2.15%	2.25%	0.10%
KU-131100-GH 3 Struc ECR 2006	2.15%	2.25%	0.10%
KU-131100-GH 3 Struc ECR 2011	2.15%	2.25%	0.10%
KU-131100-GH 4 Struc	3.44%	3.53%	0.09%
KU-131100-GH 4 Struc ECR 2005	3.44%	3.53%	0.09%
KU-131100-GH 4 Struc ECR 2006	3.44%	3.53%	0.09%

KU-131100-GH 4 Struc ECR 2009	3.44%	3.53%	0.09%
KU-131100-GH2 FGD Structures and I	1.16%	1.09%	-0.07%
KU-131100-GH3 FGD Structures and I	0.00%	0.00%	0.00%
KU-131100-GH4 FGD Structures and I	0.00%	5.41%	5.41%
KU-131100-GR 1-2 Structures and Im	0.00%	0.00%	0.00%
KU-131100-GR 3 Structures and Impr	0.00%	0.00%	0.00%
KU-131100-GR 4 Structures and Impr	0.00%	0.00%	0.00%
KU-131100-PI 1-2 Structures and Imp	0.00%	0.00%	0.00%
KU-131100-PI 3 Structures and Impr	0.00%	0.00%	0.00%
KU-131100-SL Structures and Improv	1.54%	1.54%	0.00%
KU-131100-TC 2 FGD Struc & Improv	1.21%	1.21%	0.00%
KU-131100-TC2 Struct	1.81%	1.81%	0.00%
KU-131100-TC2 Struct ECR 2006	1.81%	1.81%	0.00%
KU-131100-TC2 Struct ECR 2009	1.81%	1.81%	0.00%
KU-131100-TY 1&2 Structures and Im	0.00%	0.00%	0.00%
KU-131100-TY 3 Structures and Impr	0.00%	0.00%	0.00%
KU-131101-AROP EWB 1 Struct & Imp	0.00%	0.00%	0.00%
KU-131101-AROP EWB 3 ECR 2009	0.00%	0.00%	0.00%
KU-131101-AROP EWB 3 Struct & Imp	0.00%	0.00%	0.00%
KU-131101-AROP GH 1 Struct & Imp	0.00%	0.00%	0.00%
KU-131101-AROP GR 1-2 Struct & Imp	0.00%	0.00%	0.00%
KU-131101-AROP GR 4 Struct & Impr	0.00%	0.00%	0.00%
KU-131101-AROP TC2 Struct ECR 2009	0.00%	0.00%	0.00%
KU-131101-AROP TY 3 Struct & Impr	0.00%	0.00%	0.00%
KU-131200-EWB 1 Boil	3.21%	3.21%	0.00%
KU-131200-EWB 1 Boil - Ash Pond	24.68%	7.82%	-16.86%
KU-131200-EWB 1 Boil ECR 2005	3.21%	3.21%	0.00%
KU-131200-EWB 1 Boil ECR 2011	3.21%	3.21%	0.00%
KU-131200-EWB 2 Boil	3.08%	3.08%	0.00%
KU-131200-EWB 2 Boil ECR 2005	3.08%	3.08%	0.00%
KU-131200-EWB 2 Boil ECR 2006	3.08%	3.08%	0.00%
KU-131200-EWB 2 Boil ECR 2011	3.08%	3.08%	0.00%
KU-131200-EWB 3 Boil	5.19%	4.46%	-0.73%
KU-131200-EWB 3 Boil Ash Pond	24.68%	24.68%	0.00%
KU-131200-EWB 3 Boil ECR 2005	5.19%	4.46%	-0.73%
KU-131200-EWB 3 Boil ECR 2006	5.19%	4.46%	-0.73%
KU-131200-EWB 3 Boil ECR 2009	5.19%	4.46%	-0.73%
KU-131200-EWB 3 Boil ECR 2011	5.19%	4.46%	-0.73%
KU-131200-EWB 3 ECR 2016 Plan	5.19%	5.19%	0.00%
KU-131200-EWB 3 ECR 2018 Plan	5.19%	5.19%	0.00%
KU-131200-EWB ECR Future Plan	5.19%	5.19%	0.00%
KU-131200-EWB3 FGD Boil	4.92%	4.23%	-0.69%

KU-131200-EWB3 FGD Boil ECR 2005	4.92%	4.23%	-0.69%
KU-131200-GH 1 Boil	4.83%	4.22%	-0.61%
KU-131200-GH 1 Boil - Ash Pond	0.26%	0.26%	0.00%
KU-131200-GH 1 Boil ECR 2005	4.83%	4.22%	-0.61%
KU-131200-GH 1 Boil ECR 2006	4.83%	4.22%	-0.61%
KU-131200-GH 1 Boil ECR 2011	4.83%	4.22%	-0.61%
KU-131200-GH 1 Boil ECR 2016	4.83%	4.83%	0.00%
KU-131200-GH 1 SC Boil - Ash Pond	0.23%	0.23%	0.00%
KU-131200-GH 1SC Boil	4.16%	3.65%	-0.51%
KU-131200-GH 1SC Boil ECR 2005	4.16%	3.65%	-0.51%
KU-131200-GH 1SC Boil ECR 2016	4.16%	3.65%	-0.51%
KU-131200-GH 2 Boil	5.10%	4.45%	-0.65%
KU-131200-GH 2 Boil ECR 2005	5.10%	4.45%	-0.65%
KU-131200-GH 2 Boil ECR 2011	5.10%	4.45%	-0.65%
KU-131200-GH 2 Boil ECR 2016	5.10%	5.10%	0.00%
KU-131200-GH 2 SC Boil - Ash Pond	0.00%	0.00%	0.00%
KU-131200-GH 2SC Boil	1.19%	1.12%	-0.07%
KU-131200-GH 2SC Boil ECR 2005	1.19%	1.12%	-0.07%
KU-131200-GH 2SC Boil ECR 2016	1.19%	1.12%	-0.07%
KU-131200-GH 3 Boil	3.54%	3.65%	0.11%
KU-131200-GH 3 Boil ECR 2006	3.54%	3.65%	0.11%
KU-131200-GH 3 Boil ECR 2011	3.54%	3.65%	0.11%
KU-131200-GH 3 Boil ECR 2016	3.54%	3.54%	0.00%
KU-131200-GH 4 Boil	4.35%	4.45%	0.10%
KU-131200-GH 4 Boil - Ash Pond	14.06%	14.06%	0.00%
KU-131200-GH 4 Boil ECR 2005	4.35%	4.45%	0.10%
KU-131200-GH 4 Boil ECR 2006	4.35%	4.45%	0.10%
KU-131200-GH 4 Boil ECR 2009	4.35%	4.45%	0.10%
KU-131200-GH 4 Boil ECR 2011	4.35%	4.45%	0.10%
KU-131200-GH 4 Boil ECR 2016	4.35%	4.45%	0.10%
KU-131200-GH3 FGD Boil	3.99%	4.10%	0.11%
KU-131200-GH3 FGD Boil ECR 2005	3.99%	4.10%	0.11%
KU-131200-GH3 FGD Boil ECR 2016	3.99%	4.10%	0.11%
KU-131200-GH4 FGD Boil	3.57%	3.67%	0.10%
KU-131200-GH4 FGD Boil ECR 2005	3.57%	3.67%	0.10%
KU-131200-GH4 FGD Boil ECR 2016	3.57%	3.67%	0.10%
KU-131200-Ghent ECR 2018 Plan	4.35%	4.35%	0.00%
KU-131200-Ghent ECR Future Plan	4.35%	4.35%	0.00%
KU-131200-GR 1-2 Boiler Plant Equi	0.00%	0.00%	0.00%
KU-131200-GR 3 Boil	0.00%	0.00%	0.00%
KU-131200-GR 3 Boil - Ash Pond	0.00%	0.00%	0.00%
KU-131200-GR 3 Boil ECR 2006	0.00%	0.00%	0.00%

KU-131200-GR 4 Boil	0.00%	0.00%	0.00%
KU-131200-GR 4 Boil ECR 2006	0.00%	0.00%	0.00%
KU-131200-GR 4 Boil ECR 2016	0.00%	0.00%	0.00%
KU-131200-GR ECR Future Plan	0.00%	0.00%	0.00%
KU-131200-PI 1-2 Boiler Plant Equip	0.00%	0.00%	0.00%
KU-131200-PI 3 Boil - Ash Pond	0.00%	0.00%	0.00%
KU-131200-PI 3 Boiler Plant Equipm	0.00%	0.00%	0.00%
KU-131200-PI ECR 2016	0.00%	0.00%	0.00%
KU-131200-PI ECR Future Plan	0.00%	0.00%	0.00%
KU-131200-TC 2 Boil	2.17%	2.17%	0.00%
KU-131200-TC 2 Boil - Ash Pond	7.48%	7.48%	0.00%
KU-131200-TC 2 Boil ECR 2006	2.17%	2.17%	0.00%
KU-131200-TC 2 Boil ECR 2009	2.17%	2.17%	0.00%
KU-131200-TC 2 Boil ECR 2009-Ash Po	7.48%	7.48%	0.00%
KU-131200-TC 2 Boil ECR 2016	2.17%	2.17%	0.00%
KU-131200-TC ECR 2018 Plan	2.17%	2.17%	0.00%
KU-131200-TC ECR Future Plan	2.17%	2.17%	0.00%
KU-131200-TC2 FGD Boil	1.96%	1.96%	0.00%
KU-131200-TC2 FGD Boil ECR 2006	1.96%	1.96%	0.00%
KU-131200-TY 1&2 Boiler Plant Equi	0.00%	0.00%	0.00%
KU-131200-TY 3 Boil	0.00%	0.00%	0.00%
KU-131200-TY 3 Boil - Ash Pond	0.00%	0.00%	0.00%
KU-131200-TY 3 Boil ECR 2006	0.00%	0.00%	0.00%
KU-131200-TY 3 Boil ECR 2016	0.00%	0.00%	0.00%
KU-131200-TY ECR Future Plan	0.00%	0.00%	0.00%
KU-131201-AROP EWB 1 Boiler Plt Eqp	0.00%	0.00%	0.00%
KU-131201-AROP EWB 3 Boiler Plt Eqp	0.00%	0.00%	0.00%
KU-131201-AROP GH 1 Boiler Plt Equip	0.00%	0.00%	0.00%
KU-131201-AROP GH 1SC Boiler Plt Eq	0.00%	0.00%	0.00%
KU-131201-AROP GH 2 Boiler Plt Equip	0.00%	0.00%	0.00%
KU-131201-AROP GH 4 Boiler Plt Equip	0.00%	0.00%	0.00%
KU-131201-AROP GR 1-2 Boiler Plt Eq	0.00%	0.00%	0.00%
KU-131201-AROP GR 4 Boiler Plt Equip	0.00%	0.00%	0.00%
KU-131201-AROP TY 1-2 Boiler Plt Eq	0.00%	0.00%	0.00%
KU-131201-AROP TY 3 Boiler Plt Equip	0.00%	0.00%	0.00%
KU-131400-EWB 1 Turbogenerator Uni	2.52%	2.52%	0.00%
KU-131400-EWB 2 Turbogenerator Uni	1.62%	1.62%	0.00%
KU-131400-EWB 3 Turbogenerator Uni	5.29%	4.57%	-0.72%
KU-131400-GH 1 Turbogenerator Unit	3.34%	2.96%	-0.38%
KU-131400-GH 2 Turbogenerator Unit	2.62%	2.37%	-0.25%
KU-131400-GH 3 Turbogenerator Unit	2.12%	2.24%	0.12%
KU-131400-GH 4 Turbogenerator Unit	2.64%	2.74%	0.10%

KU-131400-GR 1&2 Turbogenerator Un	0.00%	0.00%	0.00%
KU-131400-GR 3 Turbogenerator Unit	0.00%	0.00%	0.00%
KU-131400-GR 4 Turbogenerator Unit	0.00%	0.00%	0.00%
KU-131400-PI 1-2 Turbogenerator Uni	0.00%	0.00%	0.00%
KU-131400-PI 3 Turbogenerator Unit	0.00%	0.00%	0.00%
KU-131400-TC 2 Turbogenerator Unit	2.14%	2.14%	0.00%
KU-131400-TY 1&2 Turbogenerator Un	0.00%	0.00%	0.00%
KU-131400-TY 3 Turbogenerator Unit	0.00%	0.00%	0.00%
KU-131401-AROP TY 3 Turbogenerator	0.00%	0.00%	0.00%
KU-131500-EWB 1 Accessory Electric	1.24%	1.24%	0.00%
KU-131500-EWB 2 Acc	2.00%	2.00%	0.00%
KU-131500-EWB 2 Acc ECR 2005	2.00%	2.00%	0.00%
KU-131500-EWB 3 Acc	3.74%	3.20%	-0.54%
KU-131500-EWB 3 Acc ECR 2005	3.74%	3.20%	-0.54%
KU-131500-EWB 3 Acc ECR 2011	3.74%	3.20%	-0.54%
KU-131500-EWB 3 FGD Acc	4.75%	4.06%	-0.69%
KU-131500-EWB3 FGD Acc ECR 2005	4.75%	4.06%	-0.69%
KU-131500-GH 1 Access ECR 2011	2.37%	2.12%	-0.25%
KU-131500-GH 1 Accessory Electric	2.37%	2.12%	-0.25%
KU-131500-GH 1SC Acc	3.69%	3.23%	-0.46%
KU-131500-GH 1SC Acc ECR 2005	3.69%	3.23%	-0.46%
KU-131500-GH 2 Acc ECR 2011	1.66%	1.53%	-0.13%
KU-131500-GH 2 Accessory Electric	1.66%	1.53%	-0.13%
KU-131500-GH 2SC Acc	4.85%	4.21%	-0.64%
KU-131500-GH 2SC Acc ECR 2005	4.85%	4.21%	-0.64%
KU-131500-GH 3 Acc ECR 2011	1.73%	1.84%	0.11%
KU-131500-GH 3 Accessory Electric	1.73%	1.84%	0.11%
KU-131500-GH 4 Acc ECR 2009	3.56%	3.65%	0.09%
KU-131500-GH 4 Acc ECR 2011	3.56%	3.65%	0.09%
KU-131500-GH 4 Accessory Electric	3.56%	3.65%	0.09%
KU-131500-GH3 FGD Acc	3.66%	3.76%	0.10%
KU-131500-GH3 FGD Acc ECR 2005	3.66%	3.76%	0.10%
KU-131500-GH4 FGD Acc	4.15%	4.25%	0.10%
KU-131500-GH4 FGD Acc ECR 2005	4.15%	4.25%	0.10%
KU-131500-GR 1&2 Accessory Electri	0.00%	0.00%	0.00%
KU-131500-GR 3 Accessory Electric	0.00%	0.00%	0.00%
KU-131500-GR 4 Accessory Electric	0.00%	0.00%	0.00%
KU-131500-PI 1-2 Accessory Electric	0.00%	0.00%	0.00%
KU-131500-PI 3 Accessory Electric	0.00%	0.00%	0.00%
KU-131500-TC 2 Acc	1.99%	1.99%	0.00%
KU-131500-TC 2 Acc ECR 2006	1.99%	1.99%	0.00%
KU-131500-TC 2 Acc ECR 2009	1.99%	1.99%	0.00%

KU-131500-TC 2 FGD Accessory Equip	1.42%	1.42%	0.00%
KU-131500-TY 1&2 Accessory Electric	0.00%	0.00%	0.00%
KU-131500-TY 3 Accessory Electric	0.00%	0.00%	0.00%
KU-131501-AROP EWB 1 Acc Electric	0.00%	0.00%	0.00%
KU-131501-AROP EWB 2 Acc Electric	0.00%	0.00%	0.00%
KU-131501-AROP EWB 3 Acc Electric	0.00%	0.00%	0.00%
KU-131501-AROP GH 1 Acc Electric	0.00%	0.00%	0.00%
KU-131501-AROP GH 2 Acc Electric	0.00%	0.00%	0.00%
KU-131501-AROP GH 3 Acc Electric	0.00%	0.00%	0.00%
KU-131501-AROP GH 4 Acc Electric	0.00%	0.00%	0.00%
KU-131501-AROP GR 4 Acc Electric	0.00%	0.00%	0.00%
KU-131501-AROP TY 3 Acc Electric	0.00%	0.00%	0.00%
KU-131600-EWB 1 Misc Power Plant E	1.52%	1.52%	0.00%
KU-131600-EWB 2 Misc Power Plant E	0.06%	0.06%	0.00%
KU-131600-EWB 3 Misc Power Plant E	3.36%	2.89%	-0.47%
KU-131600-GH 1 Misc Power Plant Eq	1.06%	1.01%	-0.05%
KU-131600-GH 1SC Misc Power Plant	0.90%	0.88%	-0.02%
KU-131600-GH 2 Misc Power Plant Eq	0.89%	0.87%	-0.02%
KU-131600-GH 3 Misc Power Plant Eq	2.17%	2.28%	0.11%
KU-131600-GH 3 Misc PwrPlt ECR 2011	2.17%	2.28%	0.11%
KU-131600-GH 4 Misc Power Plant Eq	3.53%	3.64%	0.11%
KU-131600-GR 1&2 Misc Power Plant	0.00%	0.00%	0.00%
KU-131600-GR 3 Misc Power Plant Eq	0.00%	0.00%	0.00%
KU-131600-GR 4 Misc Power Plant Eq	0.00%	0.00%	0.00%
KU-131600-PI 1-2 Misc Power Plant E	0.00%	0.00%	0.00%
KU-131600-PI 3 Misc Power Plant Eq	0.00%	0.00%	0.00%
KU-131600-SL Misc Power Plant Equi	3.46%	3.46%	0.00%
KU-131600-TC 2 Misc Power Plant Equi	2.26%	2.26%	0.00%
KU-131600-TY 1&2 Misc Power Plant	0.00%	0.00%	0.00%
KU-131600-TY 3 Misc Power Plant Eq	0.00%	0.00%	0.00%
KU-133010-DD Land Rights	0.00%	0.00%	0.00%
KU-133100-DD Structures and Improv	2.48%	2.48%	0.00%
KU-133200-DD Reservoirs, Dams, and	2.61%	2.61%	0.00%
KU-133300-DD Water Wheels, Turbine	3.86%	3.86%	0.00%
KU-133400-DD Accessory Electric Eq	3.81%	3.81%	0.00%
KU-133400-L7 Accessory Electric Eq	0.00%	0.00%	0.00%
KU-133500-DD Misc Power Plant Equi	3.76%	3.76%	0.00%
KU-133500-L7 Misc Power Plant Equi	0.00%	0.00%	0.00%
KU-133600-DD Roads, Railroads, and	3.33%	3.33%	0.00%
KU-134020-EWB 8 Land	0.00%	0.00%	0.00%
KU-134020-EWB Solar Facility Land	0.00%	0.00%	0.00%
KU-134020-Land	0.00%	0.00%	0.00%

KU-134100-CR 7 Structures and Impr	3.03%	3.03%	0.00%
KU-134100-EWB 10 Structures and Im	2.92%	2.92%	0.00%
KU-134100-EWB 11 Structures and Im	4.32%	4.32%	0.00%
KU-134100-EWB 5 Structures and Im	3.94%	3.94%	0.00%
KU-134100-EWB 6 Structures and Imp	4.34%	4.34%	0.00%
KU-134100-EWB 7 Structures and Imp	4.33%	4.33%	0.00%
KU-134100-EWB 8 Structures and Imp	3.97%	3.97%	0.00%
KU-134100-EWB 9 Structures and Imp	2.76%	2.76%	0.00%
KU-134100-EWB Solar Struc and Imp	4.24%	4.24%	0.00%
KU-134100-HA 1,2,&3 Structures and	19.17%	19.17%	0.00%
KU-134100-PR 13 Structures and Imp	4.16%	4.16%	0.00%
KU-134100-TC 10 Structures and Imp	3.79%	3.79%	0.00%
KU-134100-TC 5 Structures and Impr	3.87%	3.87%	0.00%
KU-134100-TC 6 Structures and Impr	3.86%	3.86%	0.00%
KU-134100-TC 7 Structures and Impr	3.78%	3.78%	0.00%
KU-134100-TC 8 Structures and Impr	3.78%	3.78%	0.00%
KU-134100-TC 9 Structures and Impr	3.79%	3.79%	0.00%
KU-134200-CR 7 Fuel Holders, Produ	3.10%	3.10%	0.00%
KU-134200-EWB 10 Fuel Holders, Pro	5.43%	5.43%	0.00%
KU-134200-EWB 11 Fuel Holders, Pro	7.39%	7.39%	0.00%
KU-134200-EWB 5 Fuel Holders, Prod	5.00%	5.00%	0.00%
KU-134200-EWB 6 Fuel Holders, Prod	6.96%	6.96%	0.00%
KU-134200-EWB 7 Fuel Holders, Prod	6.99%	6.99%	0.00%
KU-134200-EWB 8 Fuel Holders, Prod	6.53%	6.53%	0.00%
KU-134200-EWB 9 Fuel Holders, Prod	4.65%	4.65%	0.00%
KU-134200-HA 1,2,&3 Fuel Holders,	15.74%	15.74%	0.00%
KU-134200-PR 13 Fuel Holders, Prod	3.89%	3.89%	0.00%
KU-134200-TC 10 Fuel Holders, Prod	3.85%	3.85%	0.00%
KU-134200-TC 5 Fuel Holders, Produ	3.90%	3.90%	0.00%
KU-134200-TC 6 Fuel Holders, Produ	3.90%	3.90%	0.00%
KU-134200-TC 7 Fuel Holders, Produ	3.82%	3.82%	0.00%
KU-134200-TC 8 Fuel Holders, Produ	3.82%	3.82%	0.00%
KU-134200-TC 9 Fuel Holders, Produ	3.83%	3.83%	0.00%
KU-134201-AROP EWB 9 Turbogenerator	0.00%	0.00%	0.00%
KU-134300-Cane Run 7 Prime Movers	3.57%	3.57%	0.00%
KU-134300-EWB 10 Prime Movers	4.94%	4.94%	0.00%
KU-134300-EWB 11 Prime Movers	4.82%	4.82%	0.00%
KU-134300-EWB 5 Prime Movers	4.41%	4.41%	0.00%
KU-134300-EWB 6 Prime Movers	5.42%	5.42%	0.00%
KU-134300-EWB 7 Prime Movers	5.28%	5.28%	0.00%
KU-134300-EWB 8 Prime Movers	5.81%	5.81%	0.00%
KU-134300-EWB 9 Prime Movers	4.74%	4.74%	0.00%

KU-134300-Green River CC GT	0.00%	0.00%	0.00%
KU-134300-PR 13 Prime Movers	5.53%	5.53%	0.00%
KU-134300-TC 10 Prime Movers	4.49%	4.49%	0.00%
KU-134300-TC 5 Prime Movers	4.58%	4.58%	0.00%
KU-134300-TC 6 Prime Movers	4.50%	4.50%	0.00%
KU-134300-TC 7 Prime Movers	4.52%	4.52%	0.00%
KU-134300-TC 8 Prime Movers	4.57%	4.57%	0.00%
KU-134300-TC 9 Prime Movers	4.48%	4.48%	0.00%
KU-134400-CR 7 Generators	2.89%	2.89%	0.00%
KU-134400-EWB 10 Generators	2.94%	2.94%	0.00%
KU-134400-EWB 11 Generators	5.55%	5.55%	0.00%
KU-134400-EWB 5 Generators	3.98%	3.98%	0.00%
KU-134400-EWB 6 Generators	4.02%	4.02%	0.00%
KU-134400-EWB 7 Generators	4.08%	4.08%	0.00%
KU-134400-EWB 8 Generators	4.04%	4.04%	0.00%
KU-134400-EWB 9 Generators	2.77%	2.77%	0.00%
KU-134400-EWB Solar Generators	4.61%	4.61%	0.00%
KU-134400-HA 1,2,&3 Generators	5.37%	5.37%	0.00%
KU-134400-PR 13 Generators	4.21%	4.21%	0.00%
KU-134400-TC 10 Generators	3.76%	3.76%	0.00%
KU-134400-TC 5 Generators	3.85%	3.85%	0.00%
KU-134400-TC 6 Generators	3.85%	3.85%	0.00%
KU-134400-TC 7 Generators	3.75%	3.75%	0.00%
KU-134400-TC 8 Generators	3.75%	3.75%	0.00%
KU-134400-TC 9 Generators	3.76%	3.76%	0.00%
KU-134500-CR 7 Accessory Electric	2.96%	2.96%	0.00%
KU-134500-EWB 10 Accessory Electric	3.77%	3.77%	0.00%
KU-134500-EWB 11 Accessory Electric	4.92%	4.92%	0.00%
KU-134500-EWB 5 Accessory Electric	4.23%	4.23%	0.00%
KU-134500-EWB 6 Accessory Electric	4.44%	4.44%	0.00%
KU-134500-EWB 7 Accessory Electric	4.45%	4.45%	0.00%
KU-134500-EWB 8 Accessory Electric	5.84%	5.84%	0.00%
KU-134500-EWB 9 Accessory Electric	3.64%	3.64%	0.00%
KU-134500-EWB Solar Accessory Electric	4.36%	4.36%	0.00%
KU-134500-HA 1,2,&3 Accessory Electric	22.16%	22.16%	0.00%
KU-134500-PR 13 Accessory Electric	4.01%	4.01%	0.00%
KU-134500-TC 10 Accessory Electric	4.04%	4.04%	0.00%
KU-134500-TC 5 Accessory Electric	4.18%	4.18%	0.00%
KU-134500-TC 6 Accessory Electric	4.25%	4.25%	0.00%
KU-134500-TC 7 Accessory Electric	4.13%	4.13%	0.00%
KU-134500-TC 8 Accessory Electric	3.79%	3.79%	0.00%
KU-134500-TC 9 Accessory Electric	3.91%	3.91%	0.00%

KU-134501-AROP EWB 10 Acc Electric	0.00%	0.00%	0.00%
KU-134501-AROP EWB 11 Acc Electric	0.00%	0.00%	0.00%
KU-134501-AROP EWB 5 Acc Electric	0.00%	0.00%	0.00%
KU-134501-AROP EWB 6 Acc Electric	0.00%	0.00%	0.00%
KU-134501-AROP EWB 7 Acc Electric	0.00%	0.00%	0.00%
KU-134501-AROP EWB 8 Acc Electric	0.00%	0.00%	0.00%
KU-134501-AROP EWB 9 Acc Electric	0.00%	0.00%	0.00%
KU-134501-AROP TC 7 Acc Electric	0.00%	0.00%	0.00%
KU-134501-AROP TC 8 Acc Electric	0.00%	0.00%	0.00%
KU-134600-CR 7 Misc. Power Plant E	3.32%	3.32%	0.00%
KU-134600-EWB 10 Misc Power Plant	3.26%	3.26%	0.00%
KU-134600-EWB 11 Misc Power Plant	5.22%	5.22%	0.00%
KU-134600-EWB 5 Misc Power Plant E	4.01%	4.01%	0.00%
KU-134600-EWB 6 Misc Power Plant E	6.22%	6.22%	0.00%
KU-134600-EWB 7 Misc Power Plant E	6.24%	6.24%	0.00%
KU-134600-EWB 8 Misc Power Plant E	4.98%	4.98%	0.00%
KU-134600-EWB 9 Misc Power Plant E	3.31%	3.31%	0.00%
KU-134600-EWB Solar Misc Power Plt	4.25%	4.25%	0.00%
KU-134600-HA 1,2,&3 Misc Power Pla	17.75%	17.75%	0.00%
KU-134600-PR 13 Misc Power Plant E	3.93%	3.93%	0.00%
KU-134600-TC 10 Misc Power Plant E	4.61%	4.61%	0.00%
KU-134600-TC 5 Misc. Power Plant E	4.04%	4.04%	0.00%
KU-134600-TC 6 Misc. Power Plant E	0.00%	0.00%	0.00%
KU-134600-TC 7 Misc. Power Plant E	3.89%	3.89%	0.00%
KU-134600-TC 8 Misc. Power Plant E	3.89%	3.89%	0.00%
KU-134600-TC 9 Misc. Power Plant E	3.91%	3.91%	0.00%
KU-135010- KY Land Rights	0.86%	0.86%	0.00%
KU-135010- TN Land Rights	0.86%	0.86%	0.00%
KU-135010- VA Land Rights	0.86%	0.86%	0.00%
KU-135010-Licensed Project Land Ri	0.86%	0.86%	0.00%
KU-135020- KY Land	0.00%	0.00%	0.00%
KU-135020- VA Land	0.00%	0.00%	0.00%
KU-135210- KY Licensed Proj Str & I	1.66%	1.66%	0.00%
KU-135210- KY Struc & Imprv-Non Sys	1.66%	1.66%	0.00%
KU-135210- KY Struc NonSys Dix Ctrl	1.66%	1.66%	0.00%
KU-135210- VA Struc & Imprv-Non Sys	1.66%	1.66%	0.00%
KU-135220-Struct & Improve-System	1.83%	1.83%	0.00%
KU-135310- KY Licensed Proj Sta Eq-	1.90%	1.90%	0.00%
KU-135310- KY Station Equip -Non Sy	1.90%	1.90%	0.00%
KU-135310- VA Station Equip -Non Sy	1.90%	1.90%	0.00%
KU-135311-AROP Station Equip Non S	1.67%	1.67%	0.00%
KU-135320-Station Equipment-System	0.00%	0.00%	0.00%

KU-135400- KY Towers Fix	1.69%	1.69%	0.00%
KU-135400- KY Towers Fix ECR 2005	1.69%	1.69%	0.00%
KU-135400- VA Towers and Fixtures	1.69%	1.69%	0.00%
KU-135500- KY Licensed Proj Poles a	2.93%	2.93%	0.00%
KU-135500- KY Poles	2.93%	2.93%	0.00%
KU-135500- KY Poles ECR 2005	2.93%	2.93%	0.00%
KU-135500- TN Poles and Fixtures	2.93%	2.93%	0.00%
KU-135500- VA Poles and Fixtures	2.93%	2.93%	0.00%
KU-135600- KY Licensed Proj Ohd Con	2.54%	2.54%	0.00%
KU-135600- TN Overhead Conductors	2.54%	2.54%	0.00%
KU-135600- VA Overhead Conductors	2.54%	2.54%	0.00%
KU-135600-KY OH Cond	2.54%	2.54%	0.00%
KU-135600-KY OH Cond ECR 2005	2.54%	2.54%	0.00%
KU-135700- KY Underground Conduit	1.70%	1.70%	0.00%
KU-135700- VA Underground Conduit	1.70%	1.70%	0.00%
KU-135800- KY Undergrd Conductors a	0.74%	0.74%	0.00%
KU-135800- VA Undergrd Conductors a	0.74%	0.74%	0.00%
KU-136010- KY Land Rights	0.64%	0.64%	0.00%
KU-136010- KY Licensed Proj Land Ri	0.64%	0.64%	0.00%
KU-136010- TN Land Rights	0.64%	0.64%	0.00%
KU-136010- VA Land Rights	0.64%	0.64%	0.00%
KU-136020-KY Land	0.00%	0.00%	0.00%
KU-136020-TN Land	0.00%	0.00%	0.00%
KU-136020-VA Land	0.00%	0.00%	0.00%
KU-136025-VA Land	0.00%	0.00%	0.00%
KU-136100- KY Struct and Improv	2.15%	2.15%	0.00%
KU-136100- TN Struct and Improv	2.15%	2.15%	0.00%
KU-136100- VA Struct and Improv	2.15%	2.15%	0.00%
KU-136200- KY Station Equipment	2.29%	2.29%	0.00%
KU-136200- TN Station Equipment	2.29%	2.29%	0.00%
KU-136200- VA Station Equipment	2.29%	2.29%	0.00%
KU-136400-KY Ghent Transpt ECR 2009	2.67%	2.67%	0.00%
KU-136400-KY Licensed Project Pole	2.67%	2.67%	0.00%
KU-136400-KY Poles, Towers, and Fix	2.67%	2.67%	0.00%
KU-136400-TN Poles, Towers, and Fix	2.67%	2.67%	0.00%
KU-136400-VA Poles, Towers, and Fix	2.67%	2.67%	0.00%
KU-136500- KY Licensed Proj Ohd Con	2.47%	2.47%	0.00%
KU-136500- KY Overhead Conductor	2.47%	2.47%	0.00%
KU-136500- TN Overhead Conductor	2.47%	2.47%	0.00%
KU-136500- VA Overhead Conductor	2.47%	2.47%	0.00%
KU-136500-KY Ghent Transpt ECR 2009	2.47%	2.47%	0.00%
KU-136600- KY Underground Conduit	2.32%	2.32%	0.00%

KU-136600- TN Underground Conduit	2.32%	2.32%	0.00%
KU-136600- VA Underground Conduit	2.32%	2.32%	0.00%
KU-136600-KY Ghent Transpt ECR 2009	2.32%	2.32%	0.00%
KU-136700- KY Undergrnd Conductors	2.43%	2.43%	0.00%
KU-136700- TN Undergrnd Conductors	2.43%	2.43%	0.00%
KU-136700- VA Undergrnd Conductors	2.43%	2.43%	0.00%
KU-136700-KY Ghent Transpt ECR 2009	2.43%	2.43%	0.00%
KU-136800- KY Line Transformers	1.79%	1.79%	0.00%
KU-136800- TN Line Transformers	1.79%	1.79%	0.00%
KU-136800- VA Line Transformers	1.79%	1.79%	0.00%
KU-136900- KY Services	1.63%	1.63%	0.00%
KU-136900- TN Services	1.63%	1.63%	0.00%
KU-136900- VA Services	1.63%	1.63%	0.00%
KU-137000- KY Meters	3.51%	3.51%	0.00%
KU-137000- TN Meters	3.51%	3.51%	0.00%
KU-137000- VA Meters	3.51%	3.51%	0.00%
KU-137001- KY DSM Meters	6.85%	6.85%	0.00%
KU-137002- KY Meter Asset Management	6.85%	6.85%	0.00%
KU-137002- VA Meter Asset Management	6.85%	6.85%	0.00%
KU-137020- KY Meters - CT and PT	4.29%	4.29%	0.00%
KU-137020- TN Meters - CT and PT	4.29%	4.29%	0.00%
KU-137020- VA Meters - CT and PT	4.29%	4.29%	0.00%
KU-137100- KY Install on Customers	0.53%	0.53%	0.00%
KU-137100- TN Install on Customers	0.53%	0.53%	0.00%
KU-137100- VA Install on Customers	0.53%	0.53%	0.00%
KU-137101- KY Install Charging Sta	10.00%	10.00%	0.00%
KU-137300- KY Str Lighting and Sign	4.00%	4.00%	0.00%
KU-137300- VA Str Lighting and Sign	4.00%	4.00%	0.00%
KU-138920- KY Land	0.00%	0.00%	0.00%
KU-138920- VA Land	0.00%	0.00%	0.00%
KU-139010- KY Structures & Improv	2.43%	2.43%	0.00%
KU-139010- VA Structures & Improv	2.43%	2.43%	0.00%
KU-139010-KY Stru Pinevll Joint Own	2.43%	2.43%	0.00%
KU-139010-KY Struc Morganfield Offi	2.43%	2.43%	0.00%
KU-139010-KY Struc One Quality Bldg	2.43%	2.43%	0.00%
KU-139010-Pineville Storerm Owned	2.43%	2.43%	0.00%
KU-139020- VA Pennington Gap Office	1.43%	1.43%	0.00%
KU-139020- VA Wise Office	1.43%	1.43%	0.00%
KU-139020-Carlisle Office	1.43%	1.43%	0.00%
KU-139020-Coeburn Office	1.43%	1.43%	0.00%
KU-139020-Columbia Office	1.43%	1.43%	0.00%
KU-139020-Corbin Office	1.43%	1.43%	0.00%

KU-139020-Earlington Pole Yard	1.43%	1.43%	0.00%
KU-139020-Eddyville Office	1.43%	1.43%	0.00%
KU-139020-Ewing Office	1.43%	1.43%	0.00%
KU-139020-Flemingsburg Storeroom	1.43%	1.43%	0.00%
KU-139020-Henderson Office	1.43%	1.43%	0.00%
KU-139020-Lexington Northside Office	1.43%	1.43%	0.00%
KU-139020-Liberty Office	1.43%	1.43%	0.00%
KU-139020-Livermore Storeroom	1.43%	1.43%	0.00%
KU-139020-London Office	1.43%	1.43%	0.00%
KU-139020-Manchester Office	1.43%	1.43%	0.00%
KU-139020-Morehead Storeroom	1.43%	1.43%	0.00%
KU-139020-Richmond Office	1.43%	1.43%	0.00%
KU-139020-Somerset Pole Yard	1.43%	1.43%	0.00%
KU-139020-St Paul Office	1.43%	1.43%	0.00%
KU-139020-Tates Creek Office	1.43%	1.43%	0.00%
KU-139020-Taylorsville Office	1.43%	1.43%	0.00%
KU-139020-Versailles Storeroom	1.43%	1.43%	0.00%
KU-139020-Whitley City Office	1.43%	1.43%	0.00%
KU-139110- KY Office Equipment	4.36%	4.36%	0.00%
KU-139110- VA Office Equipment	4.36%	4.36%	0.00%
KU-139120-KY Non PC Computer Equip	11.69%	11.69%	0.00%
KU-139120-VA Non PC Computer Equip	11.69%	11.69%	0.00%
KU-139130-Cash Processing Equipmen	0.00%	0.00%	0.00%
KU-139131-Personal Computers	25.02%	25.02%	0.00%
KU-139200- KY - Ghent 4 ECR 2009	1.97%	1.97%	0.00%
KU-139300- KY Stores Equipment	4.40%	4.40%	0.00%
KU-139300- VA Stores Equipment	4.40%	4.40%	0.00%
KU-139400- KY Tools, Shop, Garage	4.02%	4.02%	0.00%
KU-139400- VA Tools, Shop, Garage	4.02%	4.02%	0.00%
KU-139500-KY Laboratory Equipment	0.00%	0.00%	0.00%
KU-139500-VA Laboratory Equipment	0.00%	0.00%	0.00%
KU-139600-KY Power Op Equip	0.00%	0.00%	0.00%
KU-139600-VA Power Op Equip	0.00%	0.00%	0.00%
KU-139700-KY DSM Communication	4.90%	4.90%	0.00%
KU-139700-KY Microwave,Fiber,Other	4.90%	4.90%	0.00%
KU-139700-VA Microwave,Fiber,Other	4.90%	4.90%	0.00%
KU-139710- KY Radios and Telephone	10.84%	10.84%	0.00%
KU-139710- VA Radios and Telephone	10.84%	10.84%	0.00%
KU-139720- DSM Equipment	14.08%	14.08%	0.00%
KU-139800- KY Miscellaneous Equip	0.00%	0.00%	0.00%
KU-139800- VA Miscellaneous Equip	0.00%	0.00%	0.00%
KU-312104-Nonutility Prop - Misc L	0.00%	0.00%	0.00%

KU-312105-Nonutility Prop-Misc Str	0.00%	0.00%	0.00%
KU-312106-Nonutility-Misc Land Rig	0.00%	0.00%	0.00%
KU-139620-KY Power Op Equip - Other	5.65%	5.65%	0.00%
KU-134020-Simpson Solar Share Land	0.00%	0.00%	0.00%
KU-134100-Simp Solar A1 Struc & Imp	4.24%	4.24%	0.00%
KU-134400-Simp Solar A1 Generators	4.61%	4.61%	0.00%
KU-134500-Simp Solar A1 Access Elec	4.36%	4.36%	0.00%
KU-134600-Simp Solar A1 Misc Pwr Pl	4.25%	4.25%	0.00%

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, 2017

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST (4)	BOOK DEPRECIATION RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL AMOUNT (7)	CALCULATED ANNUAL ACCRUAL RATE (8)=(7)/(4)	COMPOSITE REMAINING LIFE (9)=(6)/(7)	
DEPRECIABLE PLANT									
STEAM PRODUCTION PLANT									
311.00	STRUCTURES AND IMPROVEMENTS								
	TRIMBLE COUNTY UNIT 2	105-R2.5	* (13)	96,307,268.16	27,875,957	80,951,256	1,740,732	1.81	46.5
	TRIMBLE COUNTY UNIT 2 SCRUBBER	105-R2.5	* (13)	5,556,451.46	3,229,484	3,049,306	67,265	1.21	45.3
	SYSTEM LABORATORY	105-R2.5	* 0	1,117,119.13	736,160	380,959	17,187	1.54	22.2
	BROWN UNIT 1	105-R2.5	* (6)	4,677,142.79	4,955,316	2,455	2,099	0.04	1.2
	BROWN UNIT 2	105-R2.5	* (6)	2,309,727.39	2,431,335	16,976	14,510	0.63	1.2
	BROWN UNIT 3	105-R2.5	* (6)	28,754,404.33	14,706,856	15,772,813	778,571	2.71	20.3
	BROWN UNIT 1, 2 AND 3 SCRUBBER	105-R2.5	* (6)	45,382,543.88	12,264,813	35,840,684	1,762,943	3.88	20.3
	GHENT UNIT 1 SCRUBBER	105-R2.5	* (10)	8,397,192.12	7,509,513	1,727,398	89,871	1.07	19.2
	GHENT UNIT 1	105-R2.5	* (10)	21,345,248.67	17,200,351	6,279,423	326,200	1.53	19.3
	GHENT UNIT 2	105-R2.5	* (10)	16,653,049.60	14,451,749	3,866,606	202,931	1.22	19.1
	GHENT UNIT 3	105-R2.5	* (10)	51,457,056.74	34,353,891	22,248,871	1,160,210	2.25	19.2
	GHENT UNIT 4	105-R2.5	* (10)	43,271,160.71	16,660,841	30,937,436	1,529,264	3.53	20.2
	GHENT UNIT 2 SCRUBBER	105-R2.5	* (10)	15,816,339.70	14,084,948	3,313,026	172,643	1.09	19.2
	GHENT UNIT 4 SCRUBBER	105-R2.5	* (10)	36,901.04	0	40,591	1,995	5.41	20.3
	<i>TOTAL ACCOUNT 311 - STRUCTURES AND IMPROVEMENTS</i>			341,081,605.72	170,461,214	204,427,800	7,866,421	2.31	26.0
311.20	STRUCTURES AND IMPROVEMENTS - RETIRED PLANT								
	TYRONE UNIT 3	105-R2.5	* (10)	1,821,179.50	2,003,297	0	0	-	-
	TYRONE UNITS 1 AND 2	105-R2.5	* (10)	630,860.03	693,946	0	0	-	-
	GREEN RIVER UNIT 3	105-R2.5	* (10)	2,756,302.50	3,031,933	0	0	-	-
	GREEN RIVER UNIT 4	105-R2.5	* (10)	5,631,448.40	6,194,593	0	0	-	-
	GREEN RIVER UNITS 1 AND 2	105-R2.5	* (10)	1,756,471.53	1,932,119	0	0	-	-
	PINEVILLE UNIT 3	105-R2.5	* (10)	182,442.49	200,687	0	0	-	-
	<i>TOTAL ACCOUNT 311.2 - STRUCTURES AND IMPROVEMENTS - RETIRED PLANT</i>			12,778,704.45	14,056,575	0	0	-	-
312.00	BOILER PLANT EQUIPMENT								
	TRIMBLE COUNTY UNIT 2	70-R1.5	* (13)	554,266,452.52	110,556,316	515,764,775	12,038,282	2.17	42.8
	TRIMBLE COUNTY UNIT 2 SCRUBBER	70-R1.5	* (13)	72,953,390.63	21,555,951	60,881,380	1,429,927	1.96	42.6
	BROWN UNIT 1	70-R1.5	* (6)	38,556,575.43	39,433,716	1,436,254	1,238,148	3.21	1.2
	BROWN UNIT 2	70-R1.5	* (6)	42,204,805.56	43,229,373	1,507,721	1,299,759	3.08	1.2
	BROWN UNIT 3	70-R1.5	* (6)	442,651,264.76	80,166,586	389,043,755	19,753,757	4.46	19.7
	BROWN UNIT 1, 2 AND 3 SCRUBBER	70-R1.5	* (6)	335,178,567.22	75,103,808	280,185,473	14,171,418	4.23	19.8
	GHENT UNIT 1 SCRUBBER	70-R1.5	* (10)	139,576,135.58	57,639,685	95,894,064	5,098,612	3.65	18.8
	GHENT UNIT 1	70-R1.5	* (10)	355,931,120.22	110,114,714	281,409,518	15,014,528	4.22	18.7
	GHENT UNIT 2	70-R1.5	* (10)	277,188,781.51	74,139,461	230,768,199	12,333,219	4.45	18.7
	GHENT UNIT 3	70-R1.5	* (10)	433,488,085.02	181,912,764	294,924,130	15,822,484	3.65	18.6
	GHENT UNIT 4	70-R1.5	* (10)	751,196,369.80	168,106,676	658,209,331	33,460,201	4.45	19.7
	GHENT UNIT 2 SCRUBBER	70-R1.5	* (10)	70,125,568.12	62,367,365	14,770,760	788,295	1.12	18.7
	GHENT UNIT 3 SCRUBBER	70-R1.5	* (10)	119,327,931.24	39,524,131	91,736,593	4,892,675	4.10	18.7
	GHENT UNIT 4 SCRUBBER	70-R1.5	* (10)	254,161,647.89	95,407,708	184,170,105	9,320,031	3.67	19.8
	<i>TOTAL ACCOUNT 312 - BOILER PLANT EQUIPMENT</i>			3,886,806,695.50	1,159,258,254	3,100,702,058	146,661,336	3.77	21.1
312.10	BOILER PLANT EQUIPMENT - ASH PONDS								
	TRIMBLE COUNTY UNIT 2 ASH POND	100-S4	* 0	9,104,044.87	5,018,153	4,085,892	680,982	7.48	6.0
	BROWN UNIT 1 ASH POND	100-S4	* 0	9,299,115.00	9,298,845	270	90	0.00	3.0
	BROWN UNIT 2 ASH POND	100-S4	* 0	3,909,061.67	2,991,413	917,649	305,883	7.82	3.0
	BROWN UNIT 3 ASH POND	100-S4	* 0	19,802,080.26	5,142,558	14,659,522	4,886,507	24.68	3.0
	GHENT UNIT 1 SCRUBBER ASH POND	100-S4	* 0	39,480.55	39,209	272	91	0.23	3.0
	GHENT UNIT 1 ASH POND	100-S4	* 0	2,100,620.94	2,073,761	26,860	5,372	0.26	5.0
	GHENT UNIT 4 ASH POND	100-S4	* 0	32,692,663.87	14,310,027	18,382,637	4,595,659	14.06	4.0
	GHENT UNIT 2 SCRUBBER ASH POND	100-S4	* 0	1,901,133.18	1,901,133	0	0	-	-
	TYRONE UNIT 3 - ASH POND	100-S4	* 0	575,455.72	575,456	0	0	-	-
	GREEN RIVER UNIT 3 - ASH POND	100-S4	* 0	1,831,840.98	1,831,841	0	0	-	-
	PINEVILLE UNIT 3 - ASH POND	100-S4	* 0	91,265.89	91,266	0	0	-	-
	<i>TOTAL ACCOUNT 312.1 - BOILER PLANT EQUIPMENT - ASH PONDS</i>			81,346,762.93	43,273,662	38,073,102	10,474,584	12.88	3.6

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, 2017

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST (4)	BOOK DEPRECIATION RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL AMOUNT (7)	CALCULATED ANNUAL ACCRUAL RATE (8)=(7)/(4)	COMPOSITE REMAINING LIFE (9)=(6)/(7)		
314.00	TURBOGENERATOR UNITS									
	TRIMBLE COUNTY UNIT 2	60-R2	*	(13)	89,986,324.04	21,764,667	79,919,879	1,925,583	2.14	41.5
	BROWN UNIT 1	60-R2	*	(6)	11,380,919.20	11,727,960	335,814	287,021	2.52	1.2
	BROWN UNIT 2	60-R2	*	(6)	13,703,060.56	14,265,275	259,969	222,196	1.62	1.2
	BROWN UNIT 3	60-R2	*	(6)	45,797,249.49	8,377,637	40,167,447	2,093,922	4.57	19.2
	GHENT UNIT 1	60-R2	*	(10)	40,327,741.42	22,388,069	21,972,447	1,195,361	2.96	18.4
	GHENT UNIT 2	60-R2	*	(10)	33,056,975.75	22,423,578	13,939,095	784,168	2.37	17.8
	GHENT UNIT 3	60-R2	*	(10)	43,859,372.17	30,697,120	17,548,189	981,509	2.24	17.9
	GHENT UNIT 4	60-R2	*	(10)	59,231,536.72	34,540,570	30,614,120	1,625,352	2.74	18.8
	<i>TOTAL ACCOUNT 314 - TURBOGENERATOR UNITS</i>				337,343,179.35	166,184,876	204,756,960	9,115,112	2.70	22.5
315.00	ACCESSORY ELECTRIC EQUIPMENT									
	TRIMBLE COUNTY UNIT 2	70-R4	*	(13)	45,619,554.81	9,925,988	41,624,109	907,424	1.99	45.9
	TRIMBLE COUNTY UNIT 2 SCRUBBER	70-R4	*	(13)	1,415,469.10	793,978	805,502	20,168	1.42	39.9
	BROWN UNIT 1	70-R4	*	(6)	4,321,324.05	4,517,823	62,780	53,659	1.24	1.2
	BROWN UNIT 2	70-R4	*	(6)	2,416,429.81	2,504,751	56,665	48,431	2.00	1.2
	BROWN UNIT 3	70-R4	*	(6)	15,435,528.73	6,347,369	10,014,291	493,472	3.20	20.3
	BROWN UNIT 1, 2 AND 3 SCRUBBER	70-R4	*	(6)	29,324,457.10	6,736,824	24,347,101	1,189,403	4.06	20.5
	GHENT UNIT 1 SCRUBBER	70-R4	*	(10)	12,223,379.51	5,766,682	7,679,035	394,775	3.23	19.5
	GHENT UNIT 1	70-R4	*	(10)	12,336,881.42	8,571,504	4,999,066	261,566	2.12	19.1
	GHENT UNIT 2	70-R4	*	(10)	14,213,740.74	11,578,763	4,056,352	216,987	1.53	18.7
	GHENT UNIT 3	70-R4	*	(10)	33,564,209.82	25,293,521	11,627,110	618,293	1.84	18.8
	GHENT UNIT 4	70-R4	*	(10)	52,184,797.21	18,816,313	38,586,964	1,907,200	3.65	20.2
	GHENT UNIT 2 SCRUBBER	70-R4	*	(10)	951,198.87	266,709	779,610	40,400	4.21	19.5
	GHENT UNIT 3 SCRUBBER	70-R4	*	(10)	12,041,998.28	4,433,095	8,813,103	453,299	3.76	19.4
	GHENT UNIT 4 SCRUBBER	70-R4	*	(10)	15,148,041.55	3,480,348	13,182,498	643,991	4.25	20.5
	<i>TOTAL ACCOUNT 315 - ACCESSORY ELECTRIC EQUIPMENT</i>				251,197,011.00	109,033,668	166,634,186	7,248,708	2.89	23.0
316.00	MISCELLANEOUS PLANT EQUIPMENT									
	TRIMBLE COUNTY UNIT 2	75-R1.5	*	(13)	7,002,702.79	1,014,150	6,898,904	158,008	2.26	43.7
	SYSTEM LABORATORY	75-R1.5	*	0	3,688,912.98	933,650	2,755,263	127,717	3.46	21.6
	BROWN UNIT 1	75-R1.5	*	(6)	389,684.21	406,185	6,880	5,931	1.52	1.2
	BROWN UNIT 2	75-R1.5	*	(6)	123,107.10	130,414	80	69	0.06	1.2
	BROWN UNIT 3	75-R1.5	*	(6)	6,483,855.33	3,197,454	3,675,433	187,194	2.89	19.6
	GHENT UNIT 1 SCRUBBER	75-R1.5	*	(10)	962,012.25	900,830	157,383	8,437	0.88	18.7
	GHENT UNIT 1	75-R1.5	*	(10)	1,845,970.85	1,684,463	346,105	18,691	1.01	18.5
	GHENT UNIT 2	75-R1.5	*	(10)	1,553,509.99	1,460,824	248,037	13,591	0.87	18.3
	GHENT UNIT 3	75-R1.5	*	(10)	4,027,500.01	2,729,825	1,700,425	91,749	2.28	18.5
	GHENT UNIT 4	75-R1.5	*	(10)	9,999,060.73	3,657,934	7,141,033	363,611	3.64	19.6
	<i>TOTAL ACCOUNT 316 - MISCELLANEOUS PLANT EQUIPMENT</i>				36,076,316.24	16,315,729	22,929,543	974,998	2.70	23.5
	TOTAL STEAM PRODUCTION PLANT				4,946,630,275.19	1,678,583,978	3,737,523,649	182,341,159		

* LIFE SPAN PROCEDURE IS USED. CURVE SHOWN IS INTERIM SURVIVOR CURVE

KENTUCKY UTILITIES COMPANY

TABLE 2. CALCULATION OF WEIGHTED NET SALVAGE PERCENT FOR GENERATION PLANT AS OF DECEMBER 31, 2017

Account (1)	Terminal Retirements			Interim Retirements			Total Net Salvage (\$) (8)=(4)+(7)	Total Retirements (9)=(2)+(5)	Estimated Net Salvage (%) (10)=(8)/(9)	
	Retirements (\$) (2)	Net Salvage (%) (3)	Net Salvage (\$) (4)=(2)x(3)	Retirements (\$) (5)	Net Salvage (%) (6)	Net Salvage (\$) (7)=(5)x(6)				
STEAM PRODUCTION PLANT										
<i>BROWN GENERATING STATION</i>										
311	STRUCTURES AND IMPROVEMENTS	78,898,851	(4)	(3,155,954)	2,224,967	(30)	(667,490.24)	(3,823,444)	81,123,818	(6)
312	BOILER PLANT EQUIPMENT	784,558,922	(4)	(31,382,357)	74,032,291	(30)	(22,209,687)	(53,592,044)	858,591,213	(6)
314	TURBOGENERATOR UNITS	64,002,855	(4)	(2,560,114)	6,878,375	(15)	(1,031,756)	(3,591,870)	70,881,229	(6)
315	ACCESSORY ELECTRIC EQUIPMENT	50,029,587	(4)	(2,001,183)	1,468,153	(15)	(220,223)	(2,221,406)	51,497,740	(6)
316	MISCELLANEOUS POWER PLANT EQUIPMENT	6,314,569	(4)	(252,583)	682,078	(2)	(13,642)	(266,224)	6,996,647	(6)
	TOTAL BROWN GENERATING STATION	983,804,784		(39,352,191)	85,285,863		(24,142,798)	(63,494,989)	1,069,090,647	(6)
<i>GHENT GENERATING STATION</i>										
311	STRUCTURES AND IMPROVEMENTS	149,496,462	(8)	(11,959,717)	7,480,487	(30)	(2,244,146)	(14,203,863)	156,976,949	(10)
312	BOILER PLANT EQUIPMENT	2,144,877,998	(8)	(171,590,240)	256,117,641	(30)	(76,835,292)	(248,425,532)	2,400,995,639	(10)
314	TURBOGENERATOR UNITS	139,789,729	(8)	(11,183,178)	36,685,897	(15)	(5,502,884)	(16,686,063)	176,475,626	(10)
315	ACCESSORY ELECTRIC EQUIPMENT	142,131,535	(8)	(11,370,523)	10,532,713	(15)	(1,579,907)	(12,950,430)	152,664,247	(10)
316	MISCELLANEOUS POWER PLANT EQUIPMENT	16,163,251	(8)	(1,293,060)	2,224,803	(2)	(44,496)	(1,337,556)	18,388,054	(10)
	TOTAL GHENT GENERATING STATION	2,592,458,975		(207,396,718)	313,041,540		(86,206,726)	(293,603,444)	2,905,500,515	(10)
<i>GREEN RIVER GENERATING STATION</i>										
311	STRUCTURES AND IMPROVEMENTS	8,423,626	(10)	(842,363)	-	(30)	-	(842,363)	8,423,626	(10)
312	BOILER PLANT EQUIPMENT	470,724	(10)	(47,072)	-	(30)	-	(47,072)	470,724	(10)
314	TURBOGENERATOR UNITS	164,486	(10)	(16,449)	-	(15)	-	(16,449)	164,486	(10)
315	ACCESSORY ELECTRIC EQUIPMENT	646,150	(10)	(64,615)	-	(15)	-	(64,615)	646,150	(10)
316	MISCELLANEOUS POWER PLANT EQUIPMENT	439,237	(10)	(43,924)	-	(2)	-	(43,924)	439,237	(10)
	TOTAL GREEN RIVER GENERATING STATION	10,144,222		(1,014,422)	-		-	(1,014,422)	10,144,222	(10)
<i>PINEVILLE GENERATING STATION</i>										
311	STRUCTURES AND IMPROVEMENTS	37,240	(10)	(3,724)	-	(30)	-	(3,724)	37,240	(10)
312	BOILER PLANT EQUIPMENT	145,203	(10)	(14,520)	-	(30)	-	(14,520)	145,203	(10)
314	TURBOGENERATOR UNITS	-	(10)	0	-	(15)	-	-	-	(10)
315	ACCESSORY ELECTRIC EQUIPMENT	-	(10)	0	-	(15)	-	-	-	(10)
316	MISCELLANEOUS POWER PLANT EQUIPMENT	-	(10)	0	-	(2)	-	-	-	(10)
	TOTAL PINEVILLE GENERATING STATION	182,442		(18,244)	-		-	(18,244)	182,442	(10)
<i>SYSTEM LAB</i>										
311	STRUCTURES AND IMPROVEMENTS	1,064,516	0	0	52,603	(30)	(15,781)	(15,781)	1,117,119	0
312	BOILER PLANT EQUIPMENT	-	0	0	-	(30)	-	-	-	0
314	TURBOGENERATOR UNITS	-	0	0	-	(15)	-	-	-	0
315	ACCESSORY ELECTRIC EQUIPMENT	-	0	0	-	(15)	-	-	-	0
316	MISCELLANEOUS POWER PLANT EQUIPMENT	3,387,675	0	0	301,238	(2)	(6,025)	(6,025)	3,688,913	0
	TOTAL SYSTEM LAB	4,452,191		-	353,841		(21,806)	(21,806)	4,806,032	0
STEAM PRODUCTION PLANT (CONT.)										
<i>TYRONE GENERATING STATION</i>										
311	STRUCTURES AND IMPROVEMENTS	2,214,639	(10)	(221,464)	-	(30)	-	(221,464)	2,214,639	(10)
312	BOILER PLANT EQUIPMENT	127,100	(10)	(12,710)	-	(30)	-	(12,710)	127,100	(10)
314	TURBOGENERATOR UNITS	-	(10)	0	-	(15)	-	-	-	(10)
315	ACCESSORY ELECTRIC EQUIPMENT	24,267	(10)	(2,427)	-	(15)	-	(2,427)	24,267	(10)
316	MISCELLANEOUS POWER PLANT EQUIPMENT	86,033	(10)	(8,603)	-	(2)	-	(8,603)	86,033	(10)
	TOTAL TYRONE GENERATING STATION	2,452,040		(245,204)	-		-	(245,204)	2,452,040	(10)
<i>TRIMBLE COUNTY</i>										
311	STRUCTURES AND IMPROVEMENTS	88,236,897	(7)	(6,176,583)	13,626,823	(30)	(4,088,047)	(10,264,630)	101,863,720	(13)
312	BOILER PLANT EQUIPMENT	417,299,547	(7)	(29,210,968)	209,920,296	(30)	(62,976,089)	(92,187,057)	627,219,843	(13)
314	TURBOGENERATOR UNITS	53,597,327	(7)	(3,751,813)	36,388,997	(15)	(5,458,350)	(9,210,162)	89,986,324	(13)
315	ACCESSORY ELECTRIC EQUIPMENT	35,302,438	(7)	(2,471,171)	11,732,586	(15)	(1,759,888)	(4,231,059)	47,035,024	(13)
316	MISCELLANEOUS POWER PLANT EQUIPMENT	5,267,283	(7)	(368,710)	1,735,420	(2)	(34,708)	(403,418)	7,002,703	(13)
	TOTAL TRIMBLE COUNTY	599,703,492		(41,979,244)	273,404,122		(74,317,082)	(116,296,326)	873,107,614	(13)
	TOTAL STEAM PRODUCTION PLANT	4,193,198,146		(290,006,024)	672,085,366		(184,688,411)	(474,694,435)	4,865,283,512	

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense
Dated December 13, 2018**

Case No. 2018-00294

Question No. 9

Responding Witness: John J. Spanos

- Q-9. Please refer to page 801 of Attachment 1 to Response to US DOD-1 Question No. 26.
- a. Please provide the native excel version of the files that were attached to this email.
 - b. Please explain which of these two scenarios have been proposed in the filed depreciation study (Exhibit JJS-KU-1).
- A-9.
- a. See attachments 18-21 in the response to Question No. 7.
 - b. See attached. The schedule listed as KU-2017-Steam-retired plant separate.xls on page 801 of Attachment 1 presents the reclassification of the remaining terminal net salvage of the retired plants to the existing plants. These costs are recovered over the remaining life of these facilities. This calculation has been proposed in the filed Depreciation Study (Exhibit JJS-KU_1).

KENTUCKY UTILITIES

DECOMMISSIONING COSTS RELATED TO GENERATING UNITS

<u>UNIT</u>	<u>ESTIMATED RETIREMENT YEAR</u>	<u>MW</u>	<u>ESTIMATED DECOMMISSIONING COSTS (\$/KW)</u>	<u>TOTAL DECOMMISSIONING COSTS (CURRENT \$)</u>	<u>TOTAL DECOMMISSIONING COSTS (FUTURE \$)</u>	<u>ESTIMATED TERMINAL RETIREMENTS</u>	<u>TERMINAL NET SALVAGE (%)</u>
(1)	(2)	(3)	(4)	(5)=(3)*(4)	(6)	(7)	(8)=(6)/(7)
STEAM							
SYSTEM LABORATORY	2040	0	40	0	0	(4,452,191)	0
TRIMBLE COUNTY	2066	335	40	13,400,000	44,933,909	(599,703,492)	(7)
BROWN 1	2019	106	40	4,240,000	4,454,650		
BROWN 2	2019	166	40	6,640,000	6,976,150		
BROWN 3	2035	411	40	16,440,000	25,640,789		
TOTAL BROWN				27,320,000	37,071,589	(999,545,586)	(4)
GHENT 1	2034	493	40	19,720,000	30,006,312		
GHENT 2	2034	490	40	19,600,000	29,823,718		
GHENT 3	2037	454	40	18,160,000	29,757,275		
GHENT 4	2038	487	40	19,480,000	32,718,254		
TYRONE DECOMMISSIONING					11,354,797		
GREEN RIVER DECOMMISSIONING					14,985,577		
PINEVILLE DECOMMISSIONING					8,581,755		
TOTAL GHENT				76,960,000	157,227,688	(2,614,544,848)	(6)
TOTAL STEAM				117,680,000	239,233,186	(4,218,246,117)	

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 10

Responding Witness: Christopher M. Garrett

- Q-10. Please provide the native excel version of the spreadsheets provided as pages 836-841 of Attachment 1 to Response to US DOD-1 Question No. 26.
- A-10. See attachments 22-23 in the response to Question No. 7.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 11

Responding Witness: Kent W. Blake / John J. Spanos

Q-11. Page 848 of Attachment 1 to Response to US DOD-1 Question No. 26 indicates that Mr. Spanos and Kent Blake had a meeting at 3 PM on July 17th.

- a. Please explain what "issues" were discussed during this call.
- b. Please provide a detailed narrative explaining the subject matter of this meeting
- c. Please explain what changes were made to any of Mr. Spanos' preliminary depreciation study results as a result of this meeting.
- d. Please provide any notes taken by either KU or Gannett Fleming during this call.

A-11.

- a. There was a brief conference call that included Mr. Spanos, Mr. Blake and other Company employees. While there may have been a brief status update on the depreciation study, since that was ongoing at the time of the call, the deprecation study was not the subject of the meeting nor was there any substantive discussion of the depreciation study. Mr. Blake simply wanted to inquire of Mr. Spanos as to whether any utilities were doing anything different than the Companies with respect to two challenges in fully recovering plant in service via depreciation rates. Mr. Spanos indicated there was not. The two "issues" to which Mr. Blake inquired were as follows:
 1. Since a depreciation study sets depreciation rates for a plant as of a certain date based, in part, on the remaining life of the plant at that point in time, capital additions to that plant in subsequent years may not be fully recovered unless that life of the plant is extended.
 2. When utilities are investing capital at the rate of annual depreciation expense and thus keeping rate base and capitalization flat, they will often still incur regulatory lag as annual depreciation expense will continue to

grow since both Plant in Service and Accumulated Depreciation balances are growing and the approved depreciation rates are applied to the Plant in Service balance.

- b. See the response to part a.
- c. None.
- d. Neither Mr. Spanos nor Mr. Blake took notes during the meeting.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 12

Responding Witness: Lonnie E. Bellar

- Q-12. Please refer to Attachment 2 to Response to US DOD-1 Question No. 26 at page 1 of 16. The retirement dates for the steam units are provided that appear to match the retirement dates that Mr. Spanos utilized in the depreciation study. Please explain who conducted the analysis to determine these retirement dates, what methodology was utilized, and provide all documents, studies, analyses, etc. in their complete native format, that support these retirement dates.
- A-12. The analysis that produced these dates was conducted internally by LG&E and KU personnel.

See the attachment provided in response to Question No 2(b) and the attachment provided in response to US DOD 1-29 (a) for the supporting study.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 13

Responding Witness: Lonnie E. Bellar

- Q-13. Please provide in its entirety, the 2015 study, mentioned on the bottom of page 2 of Attachment to Response to DOD-1 Question No. 10(a).
- A-13. The Company assumes the reference should be to DOD-1 Question No. 29(a). See attached.

3/4/16

Methodology

Many factors influence the end of life for a generating station. To complete this analysis the following assumptions were made regarding factors outside the direct technical evaluation:

- All necessary environmental permits and licenses will be maintained
- Units will continue to operate in a manner that is consistent with recent operating practices, with a similar number of annual starts and stops, and annual generation
- Units will continue to be operated in accordance with good industry practices with required renewals and replacements made in a timely manner

The generating stations were reviewed at a high level and although many individual components could fail it was decided that those would not constitute an “end of life” event and could be mitigated. The boiler drum and turbine/generator were the two components/systems identified where catastrophic failure would be consideration for retirement.

Although the boiler is a complex system with many elements, the boiler drum is a large single component with approximately 240k hours of defined life and is significantly influenced by thermal cycling. Electric Power Research Institute (EPRI) studies indicate that after approximately 1,700 normal start/stop cycles the risk of a critical flaw developing is greatly increased.

The turbine/generator is a single system, whose failure could lead to significant downtime and repair/replacement costs. Several key factors are taken into consideration when evaluating the generator such as insulation type, winding age, recent inspection findings, and test results. Wear, cracking, and blade condition are key considerations for the turbine.

Review

The depreciation review process conducted by Generation Engineering consisted of evaluating key parameters (i.e. pressures, temperatures, voltages etc..) with equipment condition (i.e. inspection data, EPRI, IEEE, etc..) to provide a risk based assessment regarding the likelihood of equipment failure as compared to industry norms.

Boiler

EPRI states:

- A critical flaw size crack appears on average at around 30 years of service (240,000 hours).
- The average number of cycles of a coal drum unit is expected to be 1,700 normal starts/stops to drive a critical flaw to failure.
- Natural Circulation boilers are more susceptible to ligament cracking than are Forced Circulation boilers.

The boiler review included previous inspection reports and a review of design vs typical operating temperatures and pressures.

Generator

Generators are regularly inspected and electrically tested. Those results were reviewed along with any other known issues. In most cases where the generator winding was beyond design life, no known issues have been observed and no concerns exist regarding condition. However, assessments of Brown 1 and Brown 2 have identified discounts on their expected end of life due to generator condition.

Brown 1 has asphalt insulation and an observed shorted turn in the field winding. Electrical test results have been within normal expectations, however the armature winding is 59 years old with a design life of 30.

Brown 2 inspection and electrical test results have been as expected, however the armature winding has been in service for 52 years with an expected life of 30.

Turbine

Turbines are inspected on a routine basis with periodic repairs/overhauls to bring the unit to as designed operation. To-date, no issues have been observed which did not allow a return to as designed operation.

Summary

Based on EPRI's research and the Generation Services Engineering review of units comparing their data, the boiler drum should not reduce the retirement year of each unit. While the EPRI "average end of drum life" for MC3 & MC4 are just short of the previous end of life depreciation study, the difference is not significant when considering these are typical and average numbers used from the analysis.

The end of life for Brown Unit 1 has been reduced 5 years from 2028 to 2023. The end of life for Brown Unit 2 has been reduced 5 years from 2034 to 2029.

There are no concerns regarding Turbine condition impacting unit end of life.

Case No. 2018-00294
Attachment to Response to US DOD-2 Question No. 13
Page 3 of 3
Bellar

Station MC	Unit 1	Current Retirement 2032	Revised Retirement 2032
MC	2	2034	2034
MC	3	2038	2038
MC	4	2042	2042
TC	1	2050	2050
TC	2	2066	2066
TC	5	2032	2032
TC	6	2032	2032
TC	7	2034	2034
TC	8	2034	2034
TC	9	2034	2034
TC	10	2034	2034
CR	7		no change
CR	11	2018	2018
BR	1	2028	2023
BR	2	2034	2029
BR	3	2035	2035
BR	5	2031	2031
BR	6	2029	2029
BR	7	2029	2029
BR	8	2025	2025
BR	9	2031	2031
BR	10	2031	2031
BR	11	2026	2026
GH	1	2034	2034
GH	2	2034	2034
GH	3	2037	2037
GH	4	2038	2038
PR	11	2018	2018
PR	12	2018	2018
PR	13	2031	2031
OF	ALL	2045	2045
HA	ALL	2020	2020
DIX	ALL	2041	2041

12-14-18 updated file to correct that MC4 was identified as MC2.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 14

Responding Witness: Lonnie E. Bellar / Christopher M. Garrett

- Q-14. Please refer to Attachment to Response to US DOD-1 Question No. 29(b).
- a. Please explain how these coal ash ponds can retire earlier than the associated generating units.
 - b. Please provide all studies or analyses conducted that support these proposed retirement dates for the ash ponds.
 - c. Please provide a detailed narrative explaining why the change to the retirement dates for the ash ponds is necessary at this time.
- A-14.
- a. Kentucky Utilities Company received approval in 2016 to close the coal ash ponds in Case No. 2016-00026, *The Application of Kentucky Utilities Company's for Certificates of Public Convenience and Necessity and Approval of its 2016 Compliance Plan for Recovery by Environmental Surcharge*. The requirement to close the coal ash ponds prior to the retirement of the associated generating facility is the result of the issuance of the Coal Combustion Residuals Rule (CCR Rule) published by the Environmental Protection Agency as well as applicable state regulations. One goal of KU's CCR Rule compliance program is to meet the requirements set forth in the CCR Rule while having minimal to no impact to power generation. To achieve this goal it was determined that modifications to existing stations' wet CCR storage and handling processes were required, including the conversion of CCR storage and handling systems to dry or closed loop, installation of Process Water Systems to treat CCR process waters, and construction of new non-CCR process water ponds to handle and treat the stations' process waters. These process modifications essentially take the coal ash ponds out of each station's operational processes, thus allowing them to be closed while the stations remain in operation. As a result of the steps taken above, KU is able to comply with the CCR Rule (retire coal ash ponds) earlier than the associated generating units.

- b. The CCR Rule 40 CFR Part 257 establishes the minimum requirements that must be met for a coal ash pond to remain in operation. If these minimum requirements cannot be achieved, the coal ash pond must be closed per the timeline established in the CCR Rule. Please reference Exhibits JNV-3 and JNV-4, in *The Application of Kentucky Utilities Company's for Certificates of Public Convenience and Necessity and Approval of its 2016 Compliance Plan for Recovery by Environmental Surcharge*, in Case No. 2016-00026 for additional detail regarding KU's CCR Rule compliance program, including the planned retirements.

- c. A change in the retirement dates was required to comply with the timelines established in the CCR Rule. Since the issuance of the last depreciation study for the year ended 2015, the Company has issued numerous contracts establishing updated timelines for the closure of the coal ash ponds. The dates provided in response to US DOD 1-29(b) reflect these updated dates.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 15

Responding Witness: Christopher M. Garrett / John J. Spanos

Q-15. Please refer to 2018_US_DOD_DR1_KU_Attach_to_Q31_-_Table_2.xlsx

- a. Please provide the capacity in MW for each plant assumed to determine terminal net salvage.
- b. Please provide the nameplate capacity for each power plant.
- c. Please confirm that terminal net salvage was calculated assuming \$40/kW.
- d. Please provide the currently approved interim net salvage rates.

A-15.

- a. See attached which sets forth MWs utilized in the terminal net salvage calculation for the Depreciation Study versus the nameplate capacity listed for each generating facility.
- b. See attachment to response in part a).
- c. It is confirmed that the terminal net salvage component was calculated using a \$40/kW.
- d. The list below sets forth the currently approved interim net salvage percent by account:

Account 311 = (30)

Account 312 = (25)

Account 314 = (10)

Account 315 = (15)

Account 316 = (5)

KENTUCKY UTILITIES COMPANY

KU_DoD_2-15

<u>UNIT NAME</u>	<u>USED IN DEPRECIATION STUDY (MW)</u>	<u>NAME PLATE (MW)</u>
BROWN UNIT 1	106	114
BROWN UNIT 2	166	180
BROWN UNIT 3	411	464
GHENT UNIT 1	493	557
GHENT UNIT 2	490	556
GHENT UNIT 3	454	557
GHENT UNIT 4	487	556
TRIMBLE COUNTY UNIT 2	335	510

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 16

Responding Witness: John J. Spanos

- Q-16. Please refer to 2018_US_DOD_DR1_KU_Attach_to_Q32b_-_Reserve_Adjustments.xlsx. Please provide a detailed explanation of the reasons why the GF reserve adjustments shown in column 4 are necessary and accurate.
- A-16. The reserve adjustments shown in column 4 of the referenced attachment were reclassifications to more appropriately align the reserve to the plant in service by account and generating unit as of December 31, 2017 based on the theoretical recovery of each unit.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 17

Responding Witness: John J. Spanos

- Q-17. Please refer to KU's response to DOD-1 question No. 33.
- a. Please provide an answer to the question in part b., which requested a narrative explaining how these alleged comparable facilities are comparable to KU's.
 - b. Please identify each generating plant in each of the states listed that are comparable to KU's facilities, as was requested in part a.
- A-17.
- a. As stated in the original response, the facilities are similar based on size, type of assets at the site and the process anticipated to be utilized to decommission. The \$40/kW is expected to be a conservative figure because it is based on the experience with demolition of Cane Run units which were not supported by additional environmental controls such as bag houses and other equipment located at KU and LG&E's remaining generation units.
 - b. The specific identification of generating plant and state is considered to be proprietary and cannot be presented for decommissioning costs; however, a listing of the utilities represented by the states set forth in response to US DOD 1-33 is attached.

COMPANY

DUKE ENERGY PROGRESS
PACIFICORP
DUKE ENERGY CAROLINAS
DUKE ENERGY KENTUCKY
PORTLAND GENERAL ELECTRIC CO
OKLAHOMA GAS & ELECTRIC
INDIANAPOLIS POWER & LIGHT
PUBLIC SERVICE COMPANY OF OKLAHOMA
KANSAS CITY POWER & LIGHT CO - GREATER MISSOURI OPERATIONS
AMEREN CORPORATION - UNION ELECTRIC COMPANY (MO)
NEVADA POWER COMPANY
SIERRA PACIFIC POWER COMPANY
FLORIDA POWER AND LIGHT
OMAHA PUBLIC POWER DISTRICT
KANSAS CITY POWER & LIGHT CO
DUKE ENERGY INDIANA
DOMINION VIRGINIA POWER COMPANY
BLACK HILLS POWER
ALLIANT ENERGY
IDAHO POWER COMPANY
NORTHERN INDIANA PUBLIC SERVICE COMPANY
MIDAMERICAN ENERGY
PUGET SOUND ENERGY

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 18

Responding Witness: Lonnie E. Bellar

- Q-18. Please provide a detailed narrative explaining why KU has not conducted (in-house or through a third party) a detailed decommissioning cost estimate for its steam production facilities.
- A-18. KU has not conducted detailed decommissioning cost estimates for its steam production facilities that remain operational after 2019 due to the expense of doing such. Decommissioning costs do not include demolition costs, i.e., the removal of the facility structure. As listed in Mr. Spanos' direct testimony in Exhibit JJS-KU-1, the steam production facilities that remain operational after 2019 do not retire until 2032 at the earliest. The use of industry data to estimate the decommissioning cost is reasonable given the length of time before retirement of these facilities, especially when considering the cost to perform a study and prepare a report could approach \$250,000 or more per facility, while not avoiding the need to re-perform the study and prepare an estimate closer to 2032 to ensure any market or facility changes that occurred over the decade before were accounted for.

KENTUCKY UTILITIES COMPANY

**Response to Supplemental Request for Information of the U. S. Department of
Defense**

Dated December 13, 2018

Case No. 2018-00294

Question No. 19

Responding Witness: Daniel K. Arbough

Q-19. Please refer to Att_KU_PSC_1-65_Depreciation_Exp_Wkpr.xlsx at cell BL510, which shows a total depreciation expense for the year ending April 2020 of \$358,688,938.28.

- a. Please confirm that this is the total level of depreciation expense KU is requesting to be recovered through tariff rates associated with the revenue requirement in this proceeding. If this is incorrect, please provide the exact level of depreciation expense and a citation to the company's filing that supports the level of depreciation expense to be recovered through tariff rates associated with the revenue requirement in this proceeding.
- b. Please confirm that if the currently approved depreciation rates were effective for the year ending April 2020, the total depreciation expense would be \$292,598,238.35. If this is incorrect, please provide the correct value.
- c. Please confirm that KU's proposal to alter the depreciation rates for its steam production plants will increase depreciation expense by \$66,090,699.93 for the year ending April 2020. If this is incorrect, please provide the correct value.

A-19.

- a. Not confirmed. The \$358,688,938 amount is the KU Unadjusted Total Company depreciation and amortization expense as reflected on Schedule C-2.1, Page 12 of 12. The amount of KU depreciation and amortization expense to be recovered in the revenue requirement in this proceeding is \$268,954,148 as reflected on Schedule C-1, Page 1 of 1.
- b. Not confirmed. The \$292,598,238 is the KU Unadjusted Total Company depreciation and amortization expense if the current rates were to remain in effect. The amount of KU depreciation and amortization expense to be recovered in the revenue requirement if the current rates were to remain in effect is \$235,258,822.

- c. Not confirmed. The \$66,090,700 increase is the KU Unadjusted Total Company depreciation and amortization expense increase due to the proposed steam production rates. The additional amount of KU depreciation and amortization expense to be recovered in the revenue requirement due to the proposed steam rates is \$33,695,326.