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JUL 25 2011
PUBLIC SERVICE
COMMISSION

Jeff DeRouen, Executive Director
Public Service Commission of Kentucky
211 Sower Boulevard
P. O. Box 615
Frankfort, Kentucky 40602

Kentucky Utilities Company
State Regulation and Rates
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Robert M. Conroy
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July 25, 2011

RE: *The Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2011 Compliance Plan for Recovery by Environmental Surcharge*
Case No. 2011-00161

Dear Mr. DeRouen:

Enclosed please find an original and fifteen (15) copies of Kentucky Utilities Company's (KU) response to the Commission Staff's First Information Request dated July 12, 2011, in the above-referenced matter.

Also enclosed are an original and fifteen (15) copies of a Petition for Confidential Protection regarding certain information contained in response to Question Nos. 12, 28(a), 32(f), 32(i), 37, 44, and 46(b).

The verification page for Gary H. Revlett is being filed under a separate cover letter.

Should you have any questions regarding the enclosed, please contact me at your convenience.

Sincerely,

A handwritten signature in black ink, appearing to read 'R. M. Conroy', written over a horizontal line.

Robert M. Conroy

cc: Parties of Record

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE APPLICATION OF KENTUCKY UTILITIES)	
COMPANY FOR CERTIFICATES OF PUBLIC)	
CONVENIENCE AND NECESSITY AND)	
APPROVAL OF ITS 2011 COMPLIANCE PLAN)	CASE NO. 2011-00161
FOR RECOVERY BY ENVIRONMENTAL)	
SURCHARGE)	

KENTUCKY UTILITIES COMPANY
RESPONSE TO THE COMMISSION STAFF'S
FIRST INFORMATION REQUEST

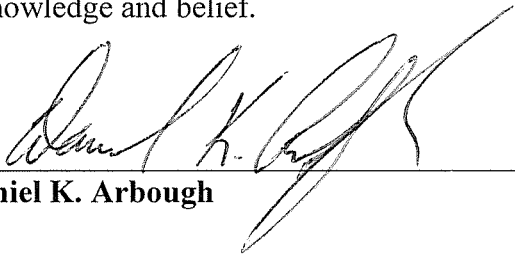
DATED JULY 12, 2011

FILED: JULY 25, 2011

VERIFICATION

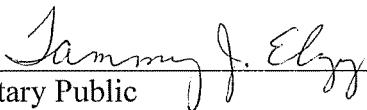
COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Daniel K. Arbough**, being duly sworn, deposes and says that he is Treasurer for 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.



Daniel K. Arbough

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 22nd day of July 2011.

 (SEAL)

Notary Public

My Commission Expires:

November 9, 2014

VERIFICATION

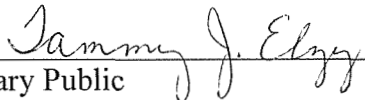
COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Lonnie E. Bellar**, being duly sworn, deposes and says that he is Vice President, State Regulation and Rates for 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 22nd day of July 2011.

 (SEAL)

Notary Public

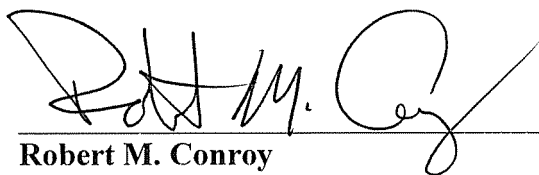
My Commission Expires:

November 9, 2014

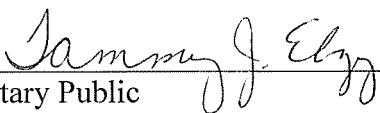
VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Robert M. Conroy**, being duly sworn, deposes and says that he is Director - Rates for 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.


Robert M. Conroy

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 22nd day of July 2011.

 (SEAL)
Notary Public

My Commission Expires:

November 9, 2014

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Charles R. Schram**, being duly sworn, deposes and says that he is Director – Energy Planning, Analysis and Forecasting for 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.

Charles R. Schram
Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 22nd day of July 2011.

Sammy J. Ely (SEAL)
Notary Public

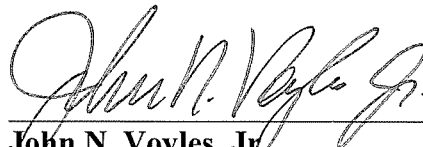
My Commission Expires:

November 9, 2014

VERIFICATION

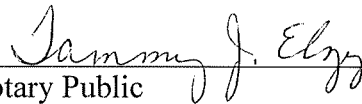
COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **John N. Voyles, Jr.**, being duly sworn, deposes and says that he is Vice President, Transmission and Generation Services for 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.



John N. Voyles, Jr.

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 22nd day of July 2011.

 (SEAL)

Notary Public

My Commission Expires:

November 9, 2014

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 1

Witness: Robert M. Conroy

- Q-1. Refer to Appendix A of the Application at page 1. The bill impact upon an average residential customer is based on average usage of 1,000 kWh per month.
- a. Provide the most recent actual average usage for a residential customer and using the actual average usage, provide the monthly increase on both a dollar and a percentage basis in 2012 and 2016.
 - b. Provide the information requested in Item 1.a for an electric space-heating customer.
 - c. Provide the information requested in item 1.a for an electric customer served under rate schedule GS.
- A-1. a. The bill impact provided in the Application and testimony was based on a residential customer using 1,000 kWh per month and was not meant to be representative of the actual average residential usage. Actual average usage for residential customers will vary from month to month. Therefore KU used 1,000 kWh per month as a general representation to reflect the impact on a residential customer's bill. The actual average usage for a residential customer for the 12-months ending May 31, 2011 is 1,297 kWh. The monthly bill impact on KU's average residential customer is as follows:

2012	2013	2014	2015	2016
\$1.43	\$4.12	\$8.13	\$10.91	\$11.97

The impact to KU customers shown as a percentage is based on the jurisdictional revenue requirement and the forecasted 12-month retail revenues. To calculate the residential customer bill impact, the resulting percentage, or billing factor, is then applied to the total of the basic service charge, energy charge, FAC billings and DSM billings. Therefore, a change in the residential usage assumption will impact the increase in dollars but does not change the billing factor.

- b. KU does not separately track electric space-heating customers. However, KU previously had a Full Electric Residential Service rate schedule that was eliminated in Case No. 2003-00434. KU can still identify those customers on that previous

schedule by rate code. The average usage for those customers for the 12-months ending May 31, 2010 is 1,488 kWh. The monthly bill impact is as follows:

2012	2013	2014	2015	2016
\$1.63	\$4.67	\$9.22	\$12.37	\$13.58

- c. For the 12-months ending May 31, 2011, the actual average usage for a GS customer taking single-phase service is 1,126 kWh and three-phase service is 5,642 kWh. The monthly bill impact is as follows:

	2012	2013	2014	2015	2016
GS Single-Phase	\$2.14	\$6.15	\$12.14	\$16.29	\$17.88
GS Three-Phase	\$7.92	\$22.74	\$44.88	\$60.20	\$66.06

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 2

Witness: Charles R. Schram

- Q-2. Refer to the Direct Testimony of Charles R. Schram ("Schram Testimony") and Exhibits CRS-1 and CRS-2. Mr. Schram explains the methodology used to analyze the projects included in KU's 2011 Environmental Compliance Plan, presents the evidence of the analysis, and makes the final recommendations related to the most cost effective method of complying with appropriate environmental laws and regulations.
- a. Was the effect of potential regulations concerning carbon mitigation considered in any of the analysis? Explain.
 - b. If the answer to a. above is no, would the consideration of carbon mitigation change the proposed 2011 Compliance Plan? Explain. Include in the explanation whether additional unit retirements could result.
- A-2.
- a. Yes, however it is not possible at this time to estimate the scope or costs of potential carbon mitigation regulations and the potential impact on coal and gas fired generating units. There remains considerable uncertainty associated with any future potential carbon mitigation legislation, but the regulations which resulted in the 2011 Compliance Plan are known and imminent. These regulations take effect as early as 2012 and the Company is obligated to comply with the regulations while providing reliable electricity in a least-cost manner.
 - b. It is unknown whether potential carbon mitigation regulations could change the proposed 2011 Compliance Plan. It is not possible at this time to estimate the scope or costs of potential carbon mitigation regulations and the potential impact on coal and gas fired generating units. Under its "Tailoring Rule", the EPA will regulate CO₂ emissions on a Best Available Control Technology ("BACT") basis, but current BACT solutions for fossil fueled generation, if triggered by permit actions, would not change the 2011 Compliance plan. Carbon capture and sequestration technologies are not commercially viable at this time.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 3

Witness: John N. Voyles, Jr.

- Q-3. Explain the availability of contractors for both the ash pond and emission control systems for which construction is proposed. Include whether contractors for the work are specifically dedicated to environmental compliance work and if so, whether there is concern as to the availability of the contractors to meet Environmental Protection Agency ("EPA") deadlines.
- A-3. At this time, the companies that perform these types of large emission control construction projects are available. We believe our plan positions us well to secure contractors from the engineering, procurement & construction (EPC) market and secure adequate resources to perform the work. However, we believe a significant risk exists regarding the availability of experienced contractors to perform the work for the installation of air quality control systems if we do not proceed with securing the contracts as planned. As other utilities enter the market place and compete for resources, we may experience difficulties hiring the best contractors which may ultimately delay the project, increase the cost, or affect quality and safety of the projects. The contractors that will perform the landfill scope are of different scale and experience of those to execute the air compliance projects.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 4

Witness: John N. Voyles, Jr.

Q-4. Provide the age and estimated remaining life of each of KU's coal-fired generation units.

A-4. The current age of each of KU's coal-fired units is shown in the table below.

Plant Name	Age (years)
Brown 1	54
Brown 2	48
Brown 3	40
Ghent 1	37
Ghent 2	34
Ghent 3	30
Ghent 4	27
Green River 3	57
Green River 4	52
Trimble County 2	0.5
Tyrone 3	58

KU believes that continuing a prudent level of ongoing maintenance and investment at its remaining generating units will ensure the ongoing reliable operation of the units and minimize the potential for a significant mechanical failure. Consistent with information provided to the Commission in previous IRP and other proceedings, KU has informally grouped units into categories for guiding investment decisions that ensure the remaining useful life is maintained. The expected remaining useful life of each coal unit is discussed below.

With respect to Trimble County 2, the new unit is expected to have a life expectancy of at least 60 years.

With respect to Brown Units and Ghent 1-2, KU will maintain the units in such a way as to ensure that, year over year, a minimum 20-year remaining useful life is expected. In other words, for each year KU operates and maintains these units, KU expects to have at least a 20-year remaining useful life commencing in that year. KU has made significant

investments in FGD and SCR equipment (Ghent 1, Brown 3) for the continued operation of these units.

With respect to Ghent Units 3-4, KU expects the units to have, year over year, a minimum of 30-years remaining useful life. Prudent investments will continue to be made to ensure operation of these units into the future. KU has made significant investments in FGD and SCR technology to meet expectations of continued operation of these units.

Although Green River 3-4 and Tyrone 3 are now planned to be retired in 2016, KU has maintained the units with the expectation for the units to have, year over year, a minimum 10-years of remaining useful life.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 5

Witness: John N. Voyles, Jr.

- Q-5. Explain whether there is currently any market for gypsum, or fly ash. Include in the explanation whether the EPA proposed ruling to establish federal guidelines for Coal Combustion Residuals ("CCRs) storage affects any potential marketability.
- A-5. Gypsum and fly ash are currently marketed from stations within the LG&E and KU fleet. Gypsum has been beneficially reused from Ghent station for a number of years. Likewise, over the past several years, ash and gypsum have beneficially been used from Mill Creek and Trimble County in the LG&E system. These markets have been less favorable in recent years and the amount of beneficial reuse from LG&E and KU have declined due to other coal-fired stations implementing WFGD technology. A large driver for beneficial reuse is the transportation cost, therefore, as other coal-fired stations implement WFGDs and market their CCRs, their location to the beneficial user becomes the most critical factor in our ability to market our CCR material. As more information becomes available regarding this potential ruling, the company will continue to evaluate the impact to those markets, especially if the EPA rules the material to be hazardous.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 6

Witness: John N. Voyles, Jr. / Charles R. Schram

- Q-6. Refer to Schram Testimony at page 4. Beginning at line 7, Mr. Schram states, "we assumed that the proposed suite of environmental facilities for each unit was the most cost-effective suite of facilities for the unit; in other words, an analysis of numerous combinations of possible environmental controls for each unit was not necessary." Explain fully the reason(s) for this assumption.
- A-6. The Companies did not base the economic analysis on assumptions for least cost facilities. The Companies clarify that the term "assumed", as used in the Schram testimony on page 4, lines 9-12, refers to the process of using the recommended suite of facilities from the Companies' work with Black and Veatch as inputs to the economic analysis. The Black and Veatch (B&V) study developed the least cost controls to meet emissions limits. The economic analysis then compared building those controls to retiring the unit(s) to determine the least cost compliance plan.

As described more fully in Exhibits JNV-2 and CRS-1 the Companies examined the emissions profile required by the regulations and identified the least-cost technologies to achieve the required emissions reductions. The Companies worked in concert with B&V on assessing potential technologies for each pollutant, the potential layouts of each technology, as well as a review of all B&V submitted draft reports.

Ultimately, the needs analysis identified that reductions in SO₂, Mercury, Particulate Matter and Sulfuric Acid Mists were required. Proven technology alternatives for reducing these emissions are limited. The least costly controls for meeting emissions limits were provided in the Black and Veatch study and used as inputs to the economic analysis.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 7

Witness: Charles R. Schram

- Q-7. Refer to Exhibit CRS-1 of the Application at page 4.
- a. The fourth column in Table 2 is labeled "Difference (A)-(B)". Should the column heading read "Difference (B)-(A)"?
 - b. It is stated that installation of additional environmental controls on the Green River, and Tyrone units is not cost effective and the units will be retired pursuant to the 2011 Compliance Plan.
 - (1) Provide the projected dates by which each unit is to be retired.
 - (2) Provide the generating capacity to be lost upon retirement of the units and KU's plan to replace the power.
- A-7.
- a. Yes, the heading should read "Difference (B)-(A)" to most accurately describe the arithmetic subtraction calculation to support the convention that a result greater than zero represents lower net present value of revenue requirements for building controls versus unit retirement.
 - b. (1) Green River Unit 3 and Unit 4 and Tyrone Unit 3 are assumed to be retired by December 31, 2015.
 - (2) The retirement of the Green River and Tyrone units results in a reduction of 234 MW of net summer capacity. KU is currently evaluating options for replacement capacity. This evaluation includes the responses to a Request for Proposal (RFP) for capacity and energy. KU anticipates that any necessary regulatory filings will take place in the fall of 2011.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 8

Witness: Charles R. Schram

- Q-8. Refer to Exhibit CRS-2 of the Application at page 6. The low gypsum production at Brown in 2011 is due to the burn of low-sulfur coal through 2011. Compare the cost premium for low-sulfur coal with the cost savings of reduced coal combustion residuals.
- A-8. Compared to burning high-sulfur coal, the use of low-sulfur coal at Brown would reduce gypsum production by approximately 60% and would reduce total ash production by approximately 10%. This would save approximately \$20 million (2011 PVRR) through 2040 for gypsum dewatering and landfill operating expenses. However, low-sulfur coal delivered to the Brown Station is expected to cost 23% more (\$0.70/MMBtu) than high-sulfur coal in 2012. Assuming that low-sulfur coal's current price premium continues, burning low-sulfur coal would result in approximately \$500 million (2011 PVRR) higher fuel expenses through 2040 compared to burning high-sulfur coal. In comparison, the PVRR of the landfill capital totals approximately \$100 million. In summary, the potential landfill related savings associated with burning low-sulfur fuel do not outweigh the increased cost of the fuel.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 9

Witness: John N. Voyles, Jr.

- Q-9. Refer to the Direct Testimony of Shannon L. Charnas ("Charnas Testimony") at page 4. KU proposes to make modifications to Ghent Units 1, 3, and 4 to expand the operating range of the units at which their Selective Catalytic Reduction equipment can function to reduce nitrogen oxide emissions, but it does not propose to recover operation and maintenance ("O&M") expenses associated with these modifications.
- a. Explain the nature of these modifications and the resultant O&M expenses.
 - b. Will the labor portion of the O&M expenses, if any, be performed by existing KU employees? Explain.
 - c. Explain the decision to not request recovery of the O&M expenses associated with these modifications.
- A-9.
- a. The engineering to determine the specific modifications to the boiler circuit to allow for increased utilization of the SCR has not been finalized, but is scheduled to be completed in early 2012. However, one option being explored and which is reflected in the costs submitted with this ECR filing is to modify the economizers (the last boiler circuit) by changing the surface area which will allow the generating unit to keep the flue gas temperatures higher when operating at lower loads and possibly cooler at higher loads. The higher temperatures at lower loads will allow the SCR to remain in operation at lower loads.
 - b. Operations and Maintenance activities are typically performed by KU employees but contracted labor is used to supplement the workforce as well.
 - c. As discussed in the testimony of Mr. Voyles, there is no additional O&M cost associated with this project.

Since the capital cost and O&M expense associated with the SCR were included in base rates in conjunction with Plan elimination from the ECR as of the Commission's Order in Case No. 2009-00548, KU believes that for simplicity it was not necessary to include the O&M in the ECR for this project.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 10

Witness: Charles R. Schram

- Q-10. Explain whether the 2011 Compliance Plan will result in de-rating any of the affected units. If so, identity the unit, current rating, and projected rating by unit.
- A-10. The tables in the subsections of Section 4.2 of Exhibit CRS-1 identify the unit-specific auxiliary power requirements for the controls contained in the 2011 Compliance Plan. These de-rates were used in the economic analysis.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 11

Witness: Gary H. Revlett

- Q-11. Refer to Exhibit GHR-3 of the Application, filed on CD-ROM. Pages 33-35 of the consent decree filed March 17, 2010 set out stipulated penalties for consent decree violations. For each penalty levied against KU since the consent decree became effective, identify:
- a. The date(s) of the violation;
 - b. The nature of the violation;
 - c. The amount of the penalty; and
 - d. Whether the penalty was, or is to be recovered from ratepayers, and if so, how the recovery was, or is to be recovered.
- A-11. EPA has not alleged any violations of the consent decree. No penalties or stipulated penalties have been assessed.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 12

Witness: Charles R. Schram

- Q-12. Explain whether the 2011 Compliance Plan will result in any of KU's units being taken offline? If yes, provide which units will be taken out of service and the specific period of time the units will be out of service.
- A-12. Please see the attached. The timing of the addition of new environmental controls will coincide with the Companies' planned outage schedule that may change from time to time. For most units, the addition of controls extends the planned outage by one to two weeks. The attached summary of the outages that include the addition of environmental controls as well as the number of additional outage weeks, if any, that can be attributed specifically to the environmental controls. Certain redacted information is being filed with the Commission under seal pursuant to a Petition for Confidential Protection.

CONFIDENTIAL INFORMATION REDACTED

Summary of Outages that Include the Addition of Environmental Controls

Unit	Start Date	End Date	Equipment	# Weeks Attributed to ECR Equipment
Brown 1			Baghouse, SAM Mitigation	0
Brown 2			Baghouse, SAM Mitigation	1
Brown 3			Baghouse	1
Ghent 1			Baghouse, SAM Mitigation/SCR Turn-Down	1
Ghent 2			SAM Mitigation	0
			Baghouse ¹	1
Ghent 3			SAM Mitigation/SCR Turn-Down	3
			Baghouse	0
Ghent 4			SAM Mitigation/SCR Turn-Down ²	1
			Baghouse ²	0
Mill Creek 1			FGD, Baghouse, SAM Mitigation	5
Mill Creek 2			FGD, Baghouse, SAM Mitigation	2
Mill Creek 3			SAM Mitigation/SCR Turn-Down	2
			FGD	0
			Baghouse	2
Mill Creek 4			SCR Upgrade	0
			FGD, Baghouse, SAM Mitigation/SCR Turn-Down	0
Trimble 1			Baghouse	0

¹GH2 outage for baghouse has since been moved to [REDACTED]
²Ghent 4 outages for SAM mitigation/SCR turn-down and baghouse have since been combined and moved to [REDACTED]

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 13

Witness: John N. Voyles, Jr. / Robert M. Conroy

- Q-13. Refer to Exhibit 1, 2011 Plan, page 2 of 2.
- a. For each project listed, provide a breakdown of the estimated operations and maintenance expenses and explain how they were calculated.
 - b. Ghent Unit 1 O&M expense increased from \$2,730,914 in 2013 to \$12,899,794 in 2014. Fully explain the reasons for an increase of this magnitude.
 - c. Ghent Unit 2 O&M expense increased from \$2,183,254 in 2014 to \$12,112,005 in 2015. Fully explain the reasons for an increase of this magnitude.
 - d. Ghent Unit 3 O&M expense increased from \$6,363,418 in 2015 to \$17,537,222 in 2016. Fully explain the reasons for an increase of this magnitude.
 - e. Ghent Unit 4 O&M expense increased from \$5,848,876 in 2015 to \$17,391,503 in 2016. Fully explain the reasons for an increase of this magnitude.
- A-13. a. See attached. The O&M expenses related to the air compliance projects were based on estimates provided by Black and Veatch as contained in Appendices to Exhibit JNV-2. The O&M expenses related to the amendment to Project 29 were developed based on the Company's landfill operations experience at other generating stations.
- b. The increase in magnitude from one year to the next is based on the in-service month of the facilities being installed. For Ghent 1, 2014 represents a full year of O&M expense. Please see the details contained in the attachment to the response for part a.
 - c. The increase in magnitude from one year to the next is based on the in-service month of the facilities being installed. For Ghent 2, 2015 represents a full year of O&M expense. Please see the details contained in the attachment to the response for part a.
 - d. The increase in magnitude from one year to the next is based on the in-service month of the facilities being installed. For Ghent 3, 2016 represents a full year of O&M expense. Please see the details contained in the attachment to the response for part a.

- e. The increase in magnitude from one year to the next is based on the in-service month of the facilities being installed. For Ghent 4, 2016 represents a full year of O&M expense. Please see the details contained in the attachment to the response for part a.

Incremental O&M Estimates for Projects in the 2011 ECR Plan

Kentucky Utilities Company

FERC Account	Scheduled In-Service	2012	2013	2014	2015	2016	2017	2018	2019	2020
Amended Project 29 - BR Landfill (Phase I)										
502012 / 512105	Jan-14	\$0	\$0	\$2,813,772	\$2,898,185	\$2,985,131	\$3,074,685	\$3,166,925	\$3,261,933	\$3,359,791
	ECR Landfill Operations & Maintenance	\$0	\$0	\$2,813,772	\$2,898,185	\$2,985,131	\$3,074,685	\$3,166,925	\$3,261,933	\$3,359,791
Project 34 - BR Air Compliance - Baghouses										
506156 / 512156		\$0	\$0	\$399,255	\$610,860	\$623,077	\$635,538	\$648,249	\$661,214	\$674,439
506151		\$0	\$0	\$1,160,254	\$1,775,189	\$1,810,693	\$1,846,906	\$1,883,844	\$1,921,521	\$1,959,952
	Baghouse Operations & Maintenance	\$0	\$0	\$399,255	\$610,860	\$623,077	\$635,538	\$648,249	\$661,214	\$674,439
	Activated Carbon	\$0	\$0	\$1,160,254	\$1,775,189	\$1,810,693	\$1,846,906	\$1,883,844	\$1,921,521	\$1,959,952
	Brown 1 - Baghouse	\$0	\$0	\$1,559,509	\$2,386,049	\$2,433,769	\$2,482,445	\$2,532,094	\$2,582,736	\$2,634,390
506159 / 512152		\$0	\$0	\$52,358	\$137,327	\$140,074	\$142,875	\$145,733	\$148,647	\$151,620
506152		\$0	\$0	\$871,477	\$2,285,759	\$2,331,474	\$2,378,104	\$2,425,666	\$2,474,179	\$2,523,663
	Sorbent Injection Operations & Maintenance	\$0	\$0	\$52,358	\$137,327	\$140,074	\$142,875	\$145,733	\$148,647	\$151,620
	Sorbent Reactant - Reagent Only	\$0	\$0	\$871,477	\$2,285,759	\$2,331,474	\$2,378,104	\$2,425,666	\$2,474,179	\$2,523,663
	Brown 1 - SAM Mitigation	\$0	\$0	\$923,835	\$2,423,086	\$2,471,548	\$2,520,979	\$2,571,398	\$2,622,826	\$2,675,283
	Total Brown 1	\$0	\$0	\$2,483,343	\$4,809,135	\$4,905,317	\$5,003,424	\$5,103,492	\$5,205,562	\$5,309,673
506156 / 512156		\$0	\$0	\$535,626	\$728,451	\$743,020	\$757,880	\$773,038	\$788,499	\$804,269
506151		\$0	\$0	\$2,735,529	\$3,720,319	\$3,794,726	\$3,870,620	\$3,948,033	\$4,026,993	\$4,107,533
	Baghouse Operations & Maintenance	\$0	\$0	\$535,626	\$728,451	\$743,020	\$757,880	\$773,038	\$788,499	\$804,269
	Activated Carbon	\$0	\$0	\$2,735,529	\$3,720,319	\$3,794,726	\$3,870,620	\$3,948,033	\$4,026,993	\$4,107,533
	Brown 2 - Baghouse	\$0	\$0	\$3,271,155	\$4,448,770	\$4,537,746	\$4,628,501	\$4,721,071	\$4,815,492	\$4,911,802
506159 / 512152		\$0	\$0	\$100,976	\$137,327	\$140,074	\$142,875	\$145,733	\$148,647	\$151,620
506152		\$0	\$0	\$1,680,705	\$2,285,759	\$2,331,474	\$2,378,104	\$2,425,666	\$2,474,179	\$2,523,663
	Sorbent Injection Operations & Maintenance	\$0	\$0	\$100,976	\$137,327	\$140,074	\$142,875	\$145,733	\$148,647	\$151,620
	Sorbent Reactant - Reagent Only	\$0	\$0	\$1,680,705	\$2,285,759	\$2,331,474	\$2,378,104	\$2,425,666	\$2,474,179	\$2,523,663
	Brown 2 - SAM Mitigation	\$0	\$0	\$1,781,681	\$2,423,086	\$2,471,548	\$2,520,979	\$2,571,398	\$2,622,826	\$2,675,283
	Total Brown 2	\$0	\$0	\$5,052,836	\$6,871,856	\$7,009,293	\$7,149,479	\$7,292,469	\$7,438,318	\$7,587,085
506156 / 512156		\$0	\$0	\$0	\$711,706	\$1,088,911	\$1,110,689	\$1,132,903	\$1,155,561	\$1,178,672
506151		\$0	\$0	\$0	\$3,975,413	\$6,082,381	\$6,204,029	\$6,328,109	\$6,454,672	\$6,583,765
	Baghouse Operations & Maintenance	\$0	\$0	\$0	\$711,706	\$1,088,911	\$1,110,689	\$1,132,903	\$1,155,561	\$1,178,672
	Activated Carbon	\$0	\$0	\$0	\$3,975,413	\$6,082,381	\$6,204,029	\$6,328,109	\$6,454,672	\$6,583,765
	Brown 3 - Baghouse	\$0	\$0	\$0	\$4,687,119	\$7,171,292	\$7,314,718	\$7,461,012	\$7,610,232	\$7,762,437
	Total Brown 3	\$0	\$0	\$0	\$4,687,119	\$7,171,292	\$7,314,718	\$7,461,012	\$7,610,232	\$7,762,437

Incremental O&M Estimates for Projects in the 2011 ECR Plan

Kentucky Utilities Company

FERC Account	Scheduled In-Service	2012	2013	2014	2015	2016	2017	2018	2019	2020
Project 35 - GH Air Compliance - Baghouses										
		\$ 8,692	\$ 8,229,481	\$ 25,061,610	\$ 41,503,865	\$ 64,806,127	\$ 66,102,250	\$ 67,424,295	\$ 68,772,781	\$ 70,149,237
506156 / 512156	Baghouse Operations & Maintenance	\$ 0	\$ 0	\$ 862,055	\$ 1,318,944	\$ 1,345,322	\$ 1,372,229	\$ 1,399,673	\$ 1,427,667	\$ 1,456,220
506151	Activated Carbon	\$ 0	\$ 0	\$ 7,023,782	\$ 10,746,386	\$ 10,961,314	\$ 11,180,540	\$ 11,404,151	\$ 11,632,234	\$ 11,864,879
	Ghent 1 - Baghouse	\$ 0	\$ 0	\$ 7,885,837	\$ 12,066,330	\$ 12,306,637	\$ 12,552,769	\$ 12,803,825	\$ 13,059,901	\$ 13,321,099
	Ghent 1 - SCR Turn-Down	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
506159 / 512152	Sorbent Injection Operations & Maintenance	\$ 0	\$ 60,690	\$ 111,427	\$ 113,655	\$ 115,928	\$ 118,247	\$ 120,612	\$ 123,024	\$ 125,485
506152	Sorbent Reactant - Reagent Only	\$ 0	\$ 2,670,224	\$ 4,902,551	\$ 5,000,581	\$ 5,100,593	\$ 5,202,605	\$ 5,306,657	\$ 5,412,790	\$ 5,521,046
	Ghent 1 - SAM Mitigation	\$ 0	\$ 2,730,914	\$ 5,013,957	\$ 5,114,237	\$ 5,216,521	\$ 5,320,852	\$ 5,427,269	\$ 5,535,814	\$ 5,646,630
	Total Ghent 1	\$ 0	\$ 2,730,914	\$ 12,899,794	\$ 17,179,567	\$ 17,523,158	\$ 17,873,621	\$ 18,231,093	\$ 18,595,715	\$ 18,967,630
506156 / 512156	Baghouse Operations & Maintenance	\$ 0	\$ 0	\$ 129,600	\$ 1,586,304	\$ 1,618,030	\$ 1,650,391	\$ 1,683,399	\$ 1,717,067	\$ 1,751,408
506151	Activated Carbon	\$ 0	\$ 0	\$ 751,424	\$ 9,197,426	\$ 9,381,375	\$ 9,569,002	\$ 9,760,382	\$ 9,955,590	\$ 10,154,702
	Ghent 2 - Baghouse	\$ 0	\$ 0	\$ 881,024	\$ 10,783,730	\$ 10,999,405	\$ 11,219,393	\$ 11,443,781	\$ 11,672,657	\$ 11,906,110
506159 / 512152	Sorbent Injection Operations & Maintenance	\$ 672	\$ 98,700	\$ 100,674	\$ 102,687	\$ 104,741	\$ 106,836	\$ 108,973	\$ 111,152	\$ 113,375
506152	Sorbent Reactant - Reagent Only	\$ 8,020	\$ 1,177,996	\$ 1,201,556	\$ 1,225,587	\$ 1,250,099	\$ 1,275,101	\$ 1,300,603	\$ 1,326,615	\$ 1,353,147
	Ghent 2 - SAM Mitigation	\$ 8,692	\$ 1,276,696	\$ 1,302,230	\$ 1,328,274	\$ 1,354,840	\$ 1,381,937	\$ 1,409,575	\$ 1,437,767	\$ 1,466,522
	Total Ghent 2	\$ 8,692	\$ 1,276,696	\$ 2,183,254	\$ 2,112,005	\$ 2,154,245	\$ 2,160,133	\$ 2,165,356	\$ 2,170,424	\$ 2,175,492
506156 / 512156	Baghouse Operations & Maintenance	\$ 0	\$ 0	\$ 0	\$ 163,109	\$ 1,330,969	\$ 1,357,589	\$ 1,384,741	\$ 1,412,435	\$ 1,440,684
506151	Activated Carbon	\$ 0	\$ 0	\$ 0	\$ 1,384,025	\$ 11,293,643	\$ 11,519,515	\$ 11,749,906	\$ 11,984,904	\$ 12,224,602
	Ghent 3 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 1,547,134	\$ 12,624,612	\$ 12,877,104	\$ 13,134,646	\$ 13,397,339	\$ 13,665,286
	Ghent 3 - SCR Turn-Down	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
506159 / 512152	Sorbent Injection Operations & Maintenance	\$ 0	\$ 15,317	\$ 112,488	\$ 114,738	\$ 117,033	\$ 119,373	\$ 121,761	\$ 124,196	\$ 126,680
506152	Sorbent Reactant - Reagent Only	\$ 0	\$ 627,636	\$ 4,609,359	\$ 4,701,546	\$ 4,795,577	\$ 4,891,489	\$ 4,989,318	\$ 5,089,105	\$ 5,190,887
	Ghent 3 - SAM Mitigation	\$ 0	\$ 642,953	\$ 4,721,847	\$ 4,816,284	\$ 4,912,610	\$ 5,010,862	\$ 5,111,079	\$ 5,213,301	\$ 5,317,567
	Total Ghent 3	\$ 0	\$ 642,953	\$ 4,721,847	\$ 6,363,418	\$ 17,537,222	\$ 17,887,966	\$ 18,245,725	\$ 18,610,640	\$ 18,982,853
506156 / 512156	Baghouse Operations & Maintenance	\$ 0	\$ 0	\$ 0	\$ 52,656	\$ 1,289,014	\$ 1,314,795	\$ 1,341,091	\$ 1,367,912	\$ 1,395,271
506151	Activated Carbon	\$ 0	\$ 0	\$ 0	\$ 434,371	\$ 10,633,402	\$ 10,846,070	\$ 11,062,992	\$ 11,284,251	\$ 11,509,937
	Ghent 4 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 487,027	\$ 11,922,417	\$ 12,160,865	\$ 12,404,082	\$ 12,652,164	\$ 12,905,207
	Ghent 4 - SCR Turn-Down	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
506159 / 512152	Sorbent Injection Operations & Maintenance	\$ 0	\$ 76,585	\$ 112,488	\$ 114,738	\$ 117,033	\$ 119,373	\$ 121,761	\$ 124,196	\$ 126,680
506152	Sorbent Reactant - Reagent Only	\$ 0	\$ 3,502,333	\$ 5,144,227	\$ 5,247,112	\$ 5,352,054	\$ 5,459,095	\$ 5,568,277	\$ 5,679,642	\$ 5,793,235
	Ghent 4 - SAM Mitigation	\$ 0	\$ 3,578,918	\$ 5,256,715	\$ 5,361,849	\$ 5,469,086	\$ 5,578,468	\$ 5,690,037	\$ 5,803,838	\$ 5,919,915
	Total Ghent 4	\$ -	\$ 3,578,918	\$ 5,256,715	\$ 5,848,876	\$ 17,391,503	\$ 17,739,333	\$ 18,094,120	\$ 18,456,002	\$ 18,825,122

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 14

Witness: Robert M. Conroy

- Q-14. Refer to Exhibit 3, Tariff. KU is proposing text changes in the "Availability of Service" section. Instead of listing the individual rate schedules to which the environmental cost recovery ("ECR") surcharge would apply, the proposed text lists the tariff sections to which ECR surcharge would apply. As a result of this proposed change, would the ECR surcharge apply to Rate Schedule RTP, Real-Time Pricing, when it does not apply to that schedule currently?
- A-14. The objective of the proposed text changes in the "Availability of Service" section is to reduce the opportunity to omit a rate schedule from the tariff that should otherwise be subject to the ECR surcharge. There is no customer impact since no customers have applied for service under RTP.

The Standard Rate Rider RTP, Real-Time Pricing Rider, is offered as an optional three (3) year pilot program and is available as a rider to the Company's P.S.C. No. 13, LTOD or IS rate schedules for customers having received service under those schedules for a minimum of one (1) year as of December 31, 2008. Although RTP is a Rate Rider, the proposed ECR verbiage specifically points to its application to Pilot Programs. This change is supported by the very nature of RTP. The standard rate schedule includes the charge to the customer for a baseline load but the ECR should reflect the customer's efforts to adjust that baseline load by applying it to the RTP charges.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 15

Witness: Daniel K. Arbough

Q-15. There appears to be evidence that credit markets have loosened. Discuss how KU will finance the proposed environmental compliance projects and explain whether it has received any indications of potential problems.

A-15. The credit markets are currently very attractive for solid investment grade utilities, particularly if the security being offered is a first mortgage bond. For example, KU was able to raise \$1.5 billion at an average cost of under 4% in November 2010 with maturities of approximately 19 years in a transaction where demand exceeded the supply of bonds. More recently, on July 12, PPL Electric Utilities sold \$250 million of 30 year first mortgage bonds with a coupon of 5.20%, and investor demand for these bonds was very high.

The Company intends to finance the proposed environmental compliance projects with a mix of debt and equity that will allow it to maintain its strong investment grade bond ratings. Specifically, during construction we expect to utilize existing short-term lines of credit and commercial paper until outstanding balances are significant enough to justify issuing a long-term first mortgage bond. The first mortgage bonds will likely have a minimum size of \$250 million to allow the bonds to be "index eligible" making the bonds more marketable and therefore more attractive to investors. However, the Company will monitor the bond markets and will issue somewhat in advance if market conditions are favorable or will wait to issue if market conditions are particularly unattractive.

In addition to first mortgage bonds, when possible and if market conditions are attractive, the Company will utilize tax-exempt bonds. Currently, only costs associated with solid waste assets qualify for tax-exempt issuance which would comprise only a portion of the costs of the proposed facilities. It is important to note that the tax-exempt market has been negatively impacted by the poor financial condition of many municipal and state governments resulting in the taxable market frequently being more attractive for issuers than the tax-exempt market since 2008.

The equity to be utilized in funding the costs of the projects will be from a combination of retaining earnings and equity contributions from LG&E and KU Energy LLC, the Company's immediate parent. The equity contributions are expected to be of a size to allow the Company to maintain a capital structure similar to the existing structure.

The Company has not received any indications of potential problems funding the proposed program utilizing the above structure. This is a very typical financing model for utilities in the U.S. which has proven to be very reliable, even in the difficult times of the recent economic recession.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 16

Witness: Daniel K. Arbough

- Q-16. Provide a copy of KU's latest reports from its bond rating agencies and any other reports from rating agencies and or banks which discuss any risks facing the company which will affect its ability to borrow the necessary project funds.
- A-16. The most recent bond rating agency reports for the Company are attached. The Company is not aware of reports issued by banks which discuss risks facing the Company in borrowing the necessary funds to construct the proposed projects.

**Attachment to KPSC Question No. 16 – Fitch Rating
Witness: Arbough**

Fitch Ratings

CORRECTION - FITCH ASSIGNS EXPECTED RTGS TO KY UTILITIES CO., LOUISVILLE G&E AND LG&E AND KU ENERGY

Fitch Ratings-New York-04 November 2010: (This is a correction for a release issued on Oct. 25, 2010. It amends the expected senior unsecured ratings for both Louisville Gas and Electric Company and Kentucky Utility Company to 'A'. In addition, the Issuer Default Ratings and short-term IDRs for all entities are now final and the Rating Outlooks Stable.)

Fitch Ratings expects to assign the ratings listed below to Kentucky Utilities Company (KU), Louisville Gas and Electric Company (LG&E), and LG&E and KU Energy LLC (currently E. ON U.S) following the close of PPL Corp.'s (Issuer Default Rating [IDR] 'BBB') acquisition of E.ON U.S. The expected ratings are as follows:

LG&E and KU Energy LLC

- Issuer Default Rating (IDR) 'BBB+';
- Senior unsecured debt 'BBB+';
- Short-term IDR 'F2'.

Kentucky Utilities Co.

- IDR 'A-';
- Secured debt 'A+';
- Senior unsecured debt 'A';
- Short-term IDR 'F2'.

Louisville Gas and Electric Co.

- IDR 'A-';
- Secured debt 'A+';
- Senior unsecured debt 'A';
- Short-term IDR 'F2'.

The proposed ratings reflect the currently sound credit quality of the two regulated utilities, PPL's balanced financing plan for completing the acquisition, constructive regulatory policies in Kentucky and the Kentucky Public Service Commission's (PSC) track record for timely rate decisions. Constructive regulatory policies include a monthly fuel adjustment clause and an environmental cost recovery (ECR) mechanism. The ECR mechanism substantially reduces the environmental risks associated with the companies' coal-fired generating portfolios. Regulatory statutes also include the inclusion of construction work in progress (CWIP) in rate base. Consequently, the utilities' investment in Trimble County unit 2 (TC2), a 760 mw coal plant expected to enter commercial operation by year-end, is already reflected in rate base. Moreover, the majority of its non-fuel operating costs were recognized in rates in the July 2010 rate order, which relied on a test year ended Oct. 31, 2009, at which time TC2 was already in testing mode and fully staffed. In July 2010, the two utilities each received constructive rate decisions from the Kentucky PSC that will enhance earnings and cash flow. The rate decisions were issued six months after the companies' filed their rate increase requests following a settlement agreement with intervenors.

The primary credit concerns, other than exposure to changing environmental regulations, is a provision in the change of control settlement that prohibits the companies from seeking a base rate adjustment that would be effective prior to Jan. 1, 2013 (excluding fuel and ECR adjustments), which will require the company to absorb cost increases in the interim, and the delay in commercial operation of TC2. Burner malfunctions and a transformer failure occurred during commissioning and testing activity of TC2 conducted in the second and third quarter of 2010 causing a delay in TC2 commercial operation. The unit is now expected to enter commercial operation by year end. Because TC2 was constructed with a fixed price contract with liquidated damages, the two utilities

are not expected to incur any significant additional capital costs from the start-up delay.

On April 28, 2010, E.ON AG entered into a definitive agreement to sell PPL Corp. (PPL) its equity interests in E.ON U.S. LLC, the parent company of LG&E and KU. The cash purchase price, excluding the assumption of \$925 million of pollution control bonds, is approximately \$6.7 billion. In June 2010, PPL issued an aggregate of \$3.6 billion of common equity and hybrid securities to complete the equity and hybrid security portion of the acquisition financing plan, including \$1.15 billion of equity units and \$2.484 billion of common equity (net proceeds of \$1.116 billion and \$2.409 billion, respectively). The remaining cash purchase price of approximately \$3.175 billion will be funded with a draw on PPL's existing credit facility, to be repaid with the proceeds of subsidiary debt to be issued after closing the transaction and cash. Management has indicated it plans to issue approximately \$2.1 billion of first mortgage bonds at the two utilities and to retire a similar amount of existing inter-company borrowings. Consequently, debt levels should not be meaningfully different from the June 30, 2010 levels and going forward leverage and interest coverage measures should benefit from recently implemented rate increases as well as accessing the capital markets during a period of exceptionally low interest rates. Planned debt financing at LG&E and KU Energy LLC of approximately \$800 million is well below the existing parent inter-company borrowings of more than \$2 billion.

PPL expects to close the acquisition in the fourth quarter of 2010. On Sept. 2, 2010, PPL reached a settlement agreement with all intervening parties in its change of control application in Kentucky. In the settlement, PPL agreed not to raise base rates before Jan. 1, 2013 (excluding fuel and ECR adjustments). Rate increases that took effect on Aug. 1, 2010 will remain in place. The change of control agreement also provides for 50/50 sharing of any earnings above a 10.75% ROE. On Sept. 30, 2010, the Kentucky PSC approved the proposed acquisition subject to PPL's acceptance of all conditions. State regulators in Tennessee and Virginia have also approved the merger. Other required approvals include the Federal Energy Regulatory Commission (FERC). Pennsylvania Public Utility Commission (PUC) approval is not required.

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Applicable Criteria and Related Research:

--'Corporate Rating Methodology' (Nov. 24, 2009)

--'Credit Rating Guidelines for Regulated utility Companies' (July 31, 2007)

--'U.S. Power and Gas Comparative Operating Risk (COR) Evaluation and Financial Guidelines'

(Aug. 22, 2007)

Applicable Criteria and Related Research:

Corporate Rating Methodology

http://www.fitchratings.com/creditedesk/reports/report_frame.cfm?rpt_id=546646

Credit Rating Guidelines for Regulated Utility Companies

http://www.fitchratings.com/creditedesk/reports/report_frame.cfm?rpt_id=334652

U.S. Power and Gas Comparative Operating Risk (COR) Evaluation and Financial Guidelines

http://www.fitchratings.com/creditedesk/reports/report_frame.cfm?rpt_id=338030

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Attachment to KPSC Question No. 16 – Standard & Poors, *Global Credit Portal* (KU)
dated March 22, 2011
Witness: Arbough



Global Credit Portal RatingsDirect®

March 22, 2011

Kentucky Utilities Co.

Primary Credit Analyst:

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Major Rating Factors

Rationale

CreditWatch

Related Criteria And Research

Kentucky Utilities Co.

Major Rating Factors

Strengths:

- Stable and predictable cash flows;
- Credit-supportive regulatory environment in Kentucky;
- Competitive rates; and
- Efficient operations and high customer satisfaction ratings.

Corporate Credit Rating

BBB/Watch Neg/A-3

Weaknesses:

- Little fuel diversity; the company's plants are virtually all coal-fired;
- Exposure to pending environmental standards, especially carbon dioxide; and
- Linked to parent credit quality.

Rationale

The ratings on vertically-integrated electric utility Kentucky Utilities Co. (KU) reflect the credit quality of ultimate parent PPL Corp. on that, along with affiliates KU, Louisville Gas & Electric Co. (LG&E), LG&E and KU Energy LLC (LKE), PPL Electric Utilities Corp. (PPELU), PPL Energy Supply LLC (PPL Energy), Western Power Distribution (South West) PLC, and Western Power Distribution (South Wales) PLC, are on CreditWatch with negative implications. Affiliate Western Power Distribution Holdings Ltd. is on CreditWatch with developing implications. The CreditWatch listings followed PPL's planned acquisition of E.ON UK's Central Networks West PLC (CNW) and Central Networks East PLC (CNE), two distribution networks in the U.K. The CreditWatch listing directly relates to the execution of the financing plan for the acquisition, which includes a commitment by the company for a substantial issuance of equity. Resolution of the CreditWatch will depend on the company's ability to complete its financing activities consistent with our expectations for the 'BBB' ratings.

Allentown, Pa.-based PPL has about \$13.4 billion of debt, including \$1.63 billion of junior subordinated notes.

PPL's purchase price of Central Networks utilities includes the assumption of \$800 million of public debt and cash of \$5.6 billion (excluding related transaction expenses and fees) that it will fund initially through a bridge loan and ultimately through a combination of cash, common equity issuance at PPL, unsecured debt at CNW and CNE, and unsecured debt at an intermediate holding company (generally UK Holdings) that will own CNW and CNE. In addition, PPL will issue equity units at PPL Capital Funding, which will likely receive high equity credit under our rating criteria. This acquisition will raise PPL's regulated cash flows to about 75% from the current level of 60%. Before PPL bought the Kentucky utilities, its regulated cash flows contributed less than 30%. The ratings change reflects our revisions, in accordance with our criteria, of PPL's business risk profile to excellent from strong (we categorize business risk profiles as excellent to vulnerable) and the company's financial risk profile to aggressive from significant (we rank financial profiles from minimal to highly leveraged).

Our revision of the business profile to excellent reflects the addition of fully regulated distribution utilities that have credit-supportive U.K. regulation and no commodity exposure, since nonaffiliated retail suppliers procure power for retail customers. The Central Networks utilities are contiguous to PPL's existing U.K. utilities. After the acquisition

of CNE and CNW, we expect U.K. operations to be about 30% of PPL's consolidated cash flow. With this transaction, we are viewing all of PPL's utility assets as part of a consolidated entity, whereas previously we considered only the quality of the utility's dividends to its parent. The stability of CNE and CNW, along with existing utility assets in the U.K., Kentucky, and Pennsylvania, which we assess as excellent, will more than offset the satisfactory business risk profile of PPL Energy's merchant generation, resulting in a consolidated business profile of excellent. We expect the merchant generation business to contribute less than 25% of pro forma consolidated cash flows.

KU's consolidated business risk profile that is considered excellent reflects the strengths of serving electric customers scattered throughout Kentucky including those in Lexington. The utility's strengths include relatively predictable utility operations with steady cash flows, constructive cost recovery, and relatively low rates stemming from low-cost coal-fired generation. Although it burns coal at most plants, they meet current environmental requirements and have a significant amount of capital spending through 2014 that should be recoverable through rates.

As KU's financial risk profile reflects that of PPL's consolidated profile, we consider it as aggressive. Our revision of the financial risk profile to aggressive reflects in part the company's financial policies toward acquisitions, including funding with aggressive levels of hybrid securities. Furthermore, due to the company's strategy of focusing on fully regulated operations and expanding its U.K. presence, we are incorporating consolidated financial measures for PPL in our analysis. When reviewing the financial metrics, we are now including all cash flows and debt obligations from the U.K. utilities and PPLEU in PPL's financial measures. We expect consolidated financial measures, including ratios of debt to EBITDA, funds from operations (FFO) to total debt, and debt to capital, to range in the aggressive category of our financial risk profile. Debt to EBITDA should range between 4x and 5x, while we expect the percentage of FFO to debt to be in the mid-teens. These measures will support ratings at the 'BBB' level when the company successfully completes the permanent financing.

Short-term credit factors

KU's short-term rating is A-3. Its liquidity position reflects that of PPL. We consider PPL's liquidity as strong under our corporate liquidity methodology, which categorizes liquidity in five standard descriptors. Liquidity supports PPL's 'BBB+' issuer credit rating. Projected sources of liquidity, mainly operating cash flow and available bank lines, exceed projected uses, mainly necessary capital expenditures, debt maturities, and common dividends, by more than 1.5x. Sources over uses would be positive even after a 50% EBITDA decline. Further supporting our description of liquidity as strong is PPL's ability to absorb high-impact, low-probability events with limited need for refinancing, its flexibility to lower capital spending, its sound bank relationships, its solid standing in credit markets, and generally prudent risk management.

Recovery analysis

We assign recovery ratings to First Mortgage Bonds (FMBs) issued by investment-grade U.S. utilities, which can result in issue ratings being notched above a utility's corporate credit rating (CCR) depending on the CCR category and the extent of the collateral coverage. We base the investment-grade FMB recovery methodology on the ample historical record of nearly 100% recovery for secured bondholders in utility bankruptcies and our view that the factors that supported those recoveries (limited size of the creditor class and the durable value of utility rate-based assets during and after a reorganization given the essential service provided and the high replacement cost) will persist in the future. Under our notching criteria, we consider the limitations of FMB issuance under the utility's indenture relative to the value of the collateral pledged to bondholders, management's stated intentions on future FMB issuance, as well as the regulatory limitations on bond issuance when assigning issue ratings to utility FMBs.

FMB ratings can exceed a utility's CCR by up to one notch in the 'A' category, two notches in the 'BBB' category, and three notches in speculative-grade categories.

KU's FMBs benefit from a first-priority lien on substantially all of the utility's real property owned or subsequently acquired. Collateral coverage of about 1.5x supports a recovery rating of '1+' and an issue rating two notches above the CCR.

CreditWatch

The CreditWatch listing will remain until PPL demonstrates progress on the permanent financing plan in line with our expectations. The acquisition requires large permanent financing that has attendant execution risks, and we will monitor PPL's ability to finalize this permanent financing. We could remove the CreditWatch listing and assign a stable outlook if financing is consistent with our expectation. We could lower the ratings if PPL can't fully execute its permanent financing plan in a credit-supportive manner consistent with our expectations for 'BBB' ratings.

Related Criteria And Research

- 2008 Corporate Criteria: Analytical Methodology
- Criteria Methodology: Business Risk/Financial Risk Matrix Expanded
- 2008 Corporate Criteria: Ratios And Adjustments
- Methodology And Assumptions: Standard & Poor's Standardizes Liquidity Descriptors For Global Corporate Issuers

Financial figures are not available because the company's figures are not currently public.

Ratings Detail (As Of March 22, 2011)	
Kentucky Utilities Co.	
Corporate Credit Rating	BBB/Watch Neg/A-3
Senior Secured (5 Issues)	A-/A-3
Senior Secured (2 Issues)	A-/NR
Senior Secured (3 Issues)	A-/Watch Neg
Corporate Credit Ratings History	
02-Mar-2011	BBB/Watch Neg/A-3
27-Mar-2009	BBB+/Stable/A-2
25-Mar-2009	BBB+/Stable/NR
Business Risk Profile	Excellent
Financial Risk Profile	Aggressive
Related Entities	
LG&E and KU Energy LLC	
Issuer Credit Rating	BBB/Watch Neg/--
Senior Unsecured (2 Issues)	BBB-/Watch Neg
Louisville Gas & Electric Co.	
Issuer Credit Rating	BBB/Watch Neg/A-3
Senior Secured (11 Issues)	A-/A-3

Ratings Detail (As Of March 22, 2011)* (cont.)

Senior Secured (1 Issue)	A-/NR
Senior Secured (2 Issues)	A-/Watch Neg
PPL Corp.	
Issuer Credit Rating	BBB/Watch Neg/NR
Junior Subordinated (2 Issues)	BB+/Watch Neg
Senior Unsecured (3 Issues)	BBB-/Watch Neg
PPL Electric Utilities Corp.	
Issuer Credit Rating	BBB/Watch Neg/A-3
Commercial Paper	
<i>Local Currency</i>	A-3/Watch Neg
Preference Stock (1 Issue)	BB+/Watch Neg
Senior Secured (8 Issues)	BBB+/Watch Neg
PPL Energy Supply LLC	
Issuer Credit Rating	BBB/Watch Neg/NR
Senior Unsecured (12 Issues)	BBB/Watch Neg
PPL Montana LLC	
Senior Secured (1 Issue)	BBB-/Positive
Western Power Distribution Holdings Ltd.	
Issuer Credit Rating	BBB-/Watch Dev/A-3
Senior Unsecured (2 Issues)	BBB-/Watch Neg
Western Power Distribution (South Wales) PLC	
Issuer Credit Rating	BBB/Watch Neg/A-3
Senior Unsecured (3 Issues)	BBB/Watch Neg
Western Power Distribution (South West) PLC	
Issuer Credit Rating	BBB/Watch Neg/A-3
Senior Unsecured (4 Issues)	BBB/Watch Neg

*Unless otherwise noted, all ratings in this report are global scale ratings. Standard & Poor's credit ratings on the global scale are comparable across countries. Standard & Poor's credit ratings on a national scale are relative to obligors or obligations within that specific country.

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**Attachment to KPSC Question No. 16 – Standard & Poor’s, *Global Credit Portal* (LG&E and
KU Energy LLC) dated March 22, 2011
Witness: Arbough**

March 22, 2011

LG&E and KU Energy LLC

Primary Credit Analyst:

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Secondary Contact:

Barbara A Eiseman, New York (1) 212-438-7666; barbara_eiseman@standardandpoors.com

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LG&E and KU Energy LLC

Major Rating Factors

Strengths:

- Owns utilities that produce stable and predictable cash flows;
- Utilities have a credit-supportive regulatory environment in Kentucky;
- Utilities have competitive rates; and
- Utilities have efficient operations and high customer satisfaction ratings.

Corporate Credit Rating

BBB/Watch Neg/--

Weaknesses:

- Utilities have little fuel diversity; virtually all are coal-fired;
- Utilities have exposure to pending environmental standards, especially carbon dioxide; and
- Linked to parent credit quality.

Rationale

The ratings on intermediate holding company LG&E and KU Energy LLC (LKE) reflect parent PPL Corp.'s consolidated credit profile that, along with its affiliates LKE, Kentucky Utilities Co. (KU), Louisville Gas & Electric Co. (LG&E), PPL Electric Utilities Corp. (PPLU), PPL Energy Supply LLC (PPL Energy), Western Power Distribution (South West) PLC, and Western Power Distribution (South Wales) PLC, are on CreditWatch with negative implications. Affiliate Western Power Distribution Holdings Ltd. is on CreditWatch with developing implications. The CreditWatch listings followed PPL's planned acquisition of E.ON UK's Central Networks West PLC (CNW) and Central Networks East PLC (CNE), two distribution networks in the U.K. The CreditWatch listing directly relates to the execution of the financing plan for the acquisition, which includes a commitment by the company for a substantial issuance of equity. Resolution of the CreditWatch will depend on the company's ability to complete its financing activities consistent with our expectations for the 'BBB' ratings.

Allentown, Pa.-based PPL has about \$13.4 billion of debt, including \$1.63 billion of junior subordinated notes.

PPL's purchase price of Central Networks utilities includes the assumption of \$800 million of public debt and cash of \$5.6 billion (excluding related transaction expenses and fees) that it will fund initially through a bridge loan and ultimately through a combination of cash, common equity issuance at PPL, unsecured debt at CNW and CNE, and unsecured debt at an intermediate holding company (generally UK Holdings) that will own CNW and CNE. In addition, PPL will issue equity units at PPL Capital Funding, which will likely receive high equity credit under our rating criteria. This acquisition will raise PPL's regulated cash flows to about 75% from the current 60%. Before PPL bought the Kentucky utilities, its regulated cash flows were less than 30%. The ratings change reflects our revisions, in accordance with our criteria, of PPL's business risk profile to excellent from strong (we categorize business risk profiles as excellent to vulnerable) and the company's financial risk profile to aggressive from significant (we rank financial profiles from minimal to highly leveraged).

The excellent business profile reflects the addition of fully regulated distribution utilities that have credit-supportive U.K. regulation and no commodity exposure, since power for retail customers is procured by nonaffiliated retail suppliers. The Central Networks utilities are contiguous to PPL's existing U.K. utilities. After the acquisition of CNE

and CNW, we expect U.K. operations to be about 30% of PPL's consolidated cash flow. With this transaction, we are viewing all of PPL's utility assets as part of a consolidated entity, whereas previously we considered only the quality of the utility's dividends to its parent. The stability of CNE and CNW along with existing utility assets in the U.K., Kentucky, and Pennsylvania, which we assess as excellent, will more than offset the satisfactory business risk profile of PPL Energy's merchant generation, resulting in a consolidated business profile of excellent. We expect the merchant generation business to contribute less than 25% of pro forma consolidated cash flows.

LKE's business risk profile incorporates the strengths of subsidiaries LG&E and KU that serve electric and natural gas customers scattered throughout Kentucky, including Louisville and Lexington. The strengths of these utilities include relatively predictable utility operations with steady cash flows, constructive cost recovery, and relatively low rates derived from low-cost coal-fired generation. Although generation is mostly coal-fired, the plants meet current environmental requirements and have a significant amount of capital spending through 2014 that the company should be able to recover through rates.

As LKE's financial risk profile reflects that of PPL's consolidated profile, we consider it as aggressive. Our revision of the financial risk profile to aggressive reflects in part the company's financial policies toward acquisitions, including funding with aggressive levels of hybrid securities. Furthermore, due to the company's strategy of focusing on fully regulated operations and also expanding its U.K. presence, we are incorporating consolidated financial measures for PPL in our analysis. When reviewing the financial metrics, we are now including all cash flows and debt obligations from the U.K. utilities and PPLEU in PPL's financial measures. We expect consolidated financial measures, including ratios of debt to EBITDA, funds from operations (FFO) to total debt, and debt to capital, to range in the aggressive category of our financial risk profile. Debt to EBITDA should range between 4x and 5x, while we expect the percentage of FFO to debt to be in the mid-teens. These measures will support ratings at the 'BBB' level when the company successfully completes the permanent financing.

Short-term credit factors

LKE's liquidity position reflects that of PPL. We consider PPL's liquidity strong under Standard & Poor's corporate liquidity methodology, which categorizes liquidity in five standard descriptors. Liquidity supports PPL's 'BBB+' issuer credit rating. Projected sources of liquidity, mainly operating cash flow and available bank lines, exceed projected uses, mainly necessary capital expenditures, debt maturities, and common dividends, by more than 1.5x. Sources over uses would be positive even after a 50% EBITDA decline. Additional factors that support the liquidity are PPL's ability to absorb high-impact, low-probability events with limited need for refinancing, its flexibility to lower capital spending, its sound bank relationships, its solid standing in credit markets, and generally prudent risk management.

CreditWatch

The CreditWatch listing will remain until the company demonstrates progress on its permanent financing plan in line with our expectations. The acquisition requires large permanent financing that has attendant execution risks, and we will monitor PPL's ability to finalize this permanent financing. We could remove the CreditWatch listing and assign a stable outlook if financing is consistent with our expectation. We could lower the ratings if PPL can't fully execute its permanent financing plan in a credit-supportive manner consistent with our expectations for 'BBB' ratings.

Related Criteria And Research

- 2008 Corporate Criteria: Analytical Methodology
- Criteria Methodology: Business Risk/Financial Risk Matrix Expanded
- 2008 Corporate Criteria: Ratios And Adjustments
- Methodology And Assumptions: Standard & Poor's Standardizes Liquidity Descriptors For Global Corporate Issuers

Financial figures are not available because the company's figures are not currently public.

Ratings Detail (As Of March 22, 2011)	
LG&E and KU Energy LLC	
Corporate Credit Rating	BBB/Watch Neg/--
Senior Unsecured (2 Issues)	BBB-/Watch Neg
Corporate Credit Ratings History	
02-Mar-2011	BBB/Watch Neg/--
04-Aug-2003	BBB+/Stable/--
12-Sep-2002	A-/Stable/--
Business Risk Profile	Excellent
Financial Risk Profile	Aggressive
Related Entities	
Kentucky Utilities Co.	
Issuer Credit Rating	BBB/Watch Neg/A-3
Senior Secured (5 Issues)	A-/A-3
Senior Secured (2 Issues)	A-/NR
Senior Secured (3 Issues)	A-/Watch Neg
Louisville Gas & Electric Co.	
Issuer Credit Rating	BBB/Watch Neg/A-3
Senior Secured (11 Issues)	A-/A-3
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PPL Corp.	
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Senior Unsecured (3 Issues)	BBB-/Watch Neg
PPL Electric Utilities Corp.	
Issuer Credit Rating	BBB/Watch Neg/A-3
Commercial Paper	
<i>Local Currency</i>	A-3/Watch Neg
Preference Stock (1 Issue)	BB+/Watch Neg
Senior Secured (8 Issues)	BBB+/Watch Neg
PPL Energy Supply LLC	
Issuer Credit Rating	BBB/Watch Neg/NR
Senior Unsecured (12 Issues)	BBB/Watch Neg

Ratings Detail (As Of March 22, 2011)* (cont.)

PPL Montana LLC

Senior Secured (1 Issue) BBB-/Positive

Western Power Distribution Holdings Ltd.

Issuer Credit Rating BBB-/Watch Dev/A-3

Senior Unsecured (2 Issues) BBB-/Watch Neg

Western Power Distribution (South Wales) PLC

Issuer Credit Rating BBB/Watch Neg/A-3

Senior Unsecured (3 Issues) BBB/Watch Neg

Western Power Distribution (South West) PLC

Issuer Credit Rating BBB/Watch Neg/A-3

Senior Unsecured (4 Issues) BBB/Watch Neg

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**Attachment to KPSC Question No. 16 – Moody’s Investors Services, Credit Option (KU)
dated January 29, 2010
Witness: Arbough**



Moody's Investors Service

Global Credit Research
Credit Opinion
29 JAN 2010

Credit Opinion: Kentucky Utilities Co.

Kentucky Utilities Co.

Lexington, Kentucky, United States

Ratings

Category	Moody's Rating
Outlook	Stable
Issuer Rating	A2
Ult Parent: E.ON AG	
Outlook	Stable
Senior Unsecured -Dom Curr	A2
Commercial Paper	P-1
Parent: E. ON U.S. LLC	
Outlook	Stable
Issuer Rating	A3

Contacts

Analyst	Phone
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William L. Hess/New York	212.553.3837

Opinion

Rating Drivers

E.ON AG ownership strengthens KU's financial position

Regulatory compact allows for the timely recovery of costs

Elevated capital expenditure spending program

Ability to manage a successful outcome for a recently filed rate case

Corporate Profile

Kentucky Utilities (KU) is a regulated public utility engaged in the generation, transmission and distribution of electricity. It provides electricity to approximately 512,000 customers in 77 counties in central, southeastern and western Kentucky and to approximately 30,000 customers in 5 counties in southwestern Virginia and 5 customers in Tennessee. KU's coal-fired electric generating plants produce approximately 99% of its electricity with the remainder generated by a hydroelectric power plant and natural gas and oil fueled combustion turbines. In Virginia, KU operates under the name Old Dominion Power Company. The company also sells wholesale electric energy to 12 municipalities.

KU is a wholly-owned subsidiary of E.ON U.S. LLC (A3 Issuer Rating). E.ON U.S. is an indirect wholly-owned subsidiary of E.ON AG (A2 senior unsecured). KU's affiliate Louisville Gas and Electric Company (LG&E: A2 Issuer Rating), is a regulated public utility also operating in Kentucky. Although LG&E and KU are separate legal entities, they are operated as a single, fully integrated system and provide the majority of the consolidated earnings and cash flow of E.ON U.S. LLC.

SUMMARY RATING RATIONALE

Moody's evaluates KU's consolidated financial performance relative to the Regulated Electric and Gas Utilities rating methodology published in August 2009 and as depicted in the grid below, KU's indicated rating under this methodology is A3 compared to its A2 senior unsecured rating.

KU receives a one notch rating lift from its ownership by E.ON AG. Specifically, E.ON AG's size, scale and credit profile has historically provided KU considerable liquidity and financial flexibility primarily in the form of inter-company funding and a liberal dividend policy that in our opinion considerably strengthens KU's financial position. Inter-company debt accounted for approximately 80% of KU's approximate \$1.7 billion of debt at September 30, 2009.

The rating and outlook of KU could be affected if E.ON AG's senior unsecured rating were to be pressured.

In addition to its ownership by E.ON AG, KU's A2 senior unsecured rating reflects its historical financial metrics combined with regulatory supportiveness provided by the Kentucky Public Service Commission (KPSC) and its historical ability to recover costs in a timely manner.

STRONG FINANCIAL PROFILE AND CONSERVATIVE FINANCIAL POLICY

While down slightly from prior levels due primarily to inter-company debt incurred to fund its environmental spending requirements and construction of its Trimble 2 generating facility, KU's key financial metrics remain within a notch or two of its current rating. Specifically, KU's ratio of consolidated cash flow before changes in working capital (CFO pre W/C) to debt and CFO pre-W/C interest coverage for the twelve months ended September 30, 2009 were approximately 18% and 4.5 times, respectively.

In January 2009, a significant winter ice storm passed through KU's service territory causing approximately 199,000 customer outages, followed closely by a severe wind storm in February 2009, causing approximately 44,000 customer outages. KU incurred \$62 million of incremental operation and maintenance expenses related to the restoration following the two storms. KU has been allowed by the KPSC to establish a regulatory asset for its 2009 storm costs and has requested recovery of these costs. In September 2009, the company recognized a regulatory asset of \$57 million for actual costs incurred.

KU's rating is notched upward to reflect the benefits associated with its ownership by E.ON AG. The benefits include inter-company funding support and a dividend policy that has not required KU to make any dividend payments since its capital spending requirements began to ramp up in 2005. Rather, KU has received equity contributions during this timeframe in order to maintain an approximate 53% equity capitalization.

CONSTRUCTIVE REGULATORY ENVIRONMENT

KU has an environmental cost recovery mechanism in its electric rates that allow for the recovery of environmental costs, including a 10.63% return on equity. This is an important factor given that KU and LG&E's combined environmental capital spending has been estimated to be approximately \$700 million in aggregate during the three-year period ending 2011. Proceedings are conducted every two years to evaluate the operation of the environmental cost recovery mechanism. The utilities also benefit from a fuel adjustment clause that eliminates supply cost volatility.

KU filed a rate case in January 2010 requesting a \$135 million or 11.5% base electric rate increase with a proposed effective date of March 1, 2010. The rate increase is needed to cover increased costs, to provide a return on the company's considerable investments in its infrastructure, primarily the new 750MW Trimble 2 coal plant, and to recover costs associated with storm restorations. The KPSC has the ability to suspend the proposed rate increase for up to 6 months. The current weak statewide economic environment could present a challenge for KU in its efforts to manage a successful rate outcome.

LARGE CAPITAL EXPENDITURE PROGRAM

The company is nearing construction completion of the Trimble 2 generating station of which LG&E and KU own undivided 14.25% and 60.75% interests, respectively. The remaining 25% interest is owned by regional municipal power entities. The generating station is expected to begin commercial operation during the summer of 2010 at a total cost to KU and LG&E of approximately \$900 million.

KU's capital expenditures are expected to still remain significant going forward, estimated at \$1,300 million for the three year period ending December 31, 2011. Incremental inter-company funding is anticipated in order to finance in part these expenditures. KU's capital expenditures totaled \$378 million for nine months ended September 30, 2009 and \$690 million for FY 2008.

Liquidity

KU's external sources for liquidity includes a \$35 million bilateral line of credit with a third party lender due June 2012 and an inter-company money pool agreement where E.ON U.S. and/or LG&E make up to \$400 million of funds available to KU. KU's borrowing under the inter-company money pool at September 30, 2009 was \$23 million. There were no borrowings under the bilateral line of credit, which is used to backstop a similar amount of pollution control revenue bonds that are subject to tender for purchase at the option of the holder.

E.ON U.S. maintains revolving credit facilities totaling \$313 million at September 30, 2009 with an affiliated company to ensure funding availability for the money pool.

Rating Outlook

The stable rating outlook reflects Moody's expectation that KU will continue to show strong fundamentals and that inter-company funding support will continue to be provided by E.ON AG.

What Could Change the Rating - Up

In light of KU's sizeable expenditure program, limited prospects exist for the rating to be upgraded over the next several years. Longer-term, core financial metrics would need to improve considerably, such as CFO pre W/C to debt greater than 30%, for Moody's to consider an upgrade.

What Could Change the Rating - Down

Moody's would consider a rating downgrade if E. ON AG's senior unsecured rating was downgraded from its current A2 level, if inter-company funding support was discontinued or significant changes were made to the environmental cost recovery mechanism or if CFO pre-W/C declined to below 15%.

Rating Factors

Kentucky Utilities Co.

Regulated Electric and Gas Utilities	Aaa	Aa	A	Baa	Ba	B
Factor 1: Regulatory Framework (25%)				X		
Factor 2: Ability to Recover Costs and Earn Returns (25%)			X			
Factor 3: Diversification (10%)						
a) Market Position (5%)				X		
b) Generation and Fuel Diversity (5%)					X	
Factor 4: Financial Strength, Liquidity and Key Financial Metrics (40%)						
a) Liquidity (10%)			X			
b) CFO pre-WC + Interest / Interest (7.5%) (3yr Avg)		X				
c) CFO pre-WC / Debt (7.5%) (3yr Avg)			X			
d) CFO pre-WC - Dividends / Debt (7.5%) (3yr Avg)			X			
e) Debt / Capitalization or Debt / RAV (7.5%) (3yr Avg)			X			
Rating:						
a) Methodology Implied Senior Unsecured Rating				A3		
b) Actual Senior Unsecured Rating				A2		

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**Attachment to KPSC Question No. 16 – Moody’s Investors Services, Rating
dated November 9, 2010
Witness: Arbough**

MOODY'S INVESTORS SERVICE

Rating Action: Moody's downgrades rating to LG&E from A2 to Baa2

Approximately \$2.9 billion of debt securities affected

New York, November 09, 2010 -- Moody's Investors Service has assigned ratings of A2 to \$1,500 million of first mortgage bonds issued by Kentucky Utilities Company (KU: Baa1 Issuer Rating) and \$535 million of first mortgage bonds issued by Louisville Gas and Electric Company (LG&E: Baa1 Issuer Rating). Moody's also assigned a Baa2 rating to \$875 million of senior unsecured notes issued by their intermediate parent holding company, LG&E and KU Energy LLC (LKE: Baa2 Issuer Rating). The rating outlooks for KU, LG&E and LKE are stable.

Assignments:

..Issuer: Kentucky Utilities Co.

...Senior Secured First Mortgage Bonds, Assigned A2

..Issuer: LG&E and KU Energy LLC

...Senior Unsecured Regular Bond/Debenture, Assigned Baa2

..Issuer: Louisville Gas & Electric Company

...Senior Secured First Mortgage Bonds, Assigned A2

RATINGS RATIONALE

Proceeds from these offerings will be used to repay intercompany debt arising from PPL Corporation's (PPL: Baa3 senior unsecured) acquisition of LKE and its subsidiaries on November 1, 2010 for approximately \$7.625 billion.

KU and LG&E's Issuer Ratings are supported by their sound financial performance and the supportive regulatory environment in which they operate offset in part by a lack of fuel diversity and modestly sized service territories. It is Moody's policy to generally rate first mortgage bonds of investment-grade rated utilities two alpha-numeric ratings higher than its Issuer Rating or senior unsecured debt rating. The Baa2 rating assigned to LKE's senior unsecured debt is the same as its Issuer Rating and one-notch below KU and LG&E's Issuer Ratings due to the structural subordination of its debt to the debt issued at its utility subsidiaries.

Please refer to Moody's.com for additional research relating to KU, LG&E and LKE.

The principal methodology used in this rating was *Regulated Electric and Gas Utilities* published in August 2009.

PPL is a diversified energy holding company headquartered in Allentown, Pennsylvania.

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Information sources used to prepare the credit rating are the following: parties involved in the ratings, parties not involved in the ratings, public information, confidential and proprietary Moody's Investors Service information, and confidential and proprietary Moody's Analytics information.

Moody's Investors Service considers the quality of information available on the issuer or obligation satisfactory for the purposes of assigning a credit rating.

Moody's adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources Moody's considers to be reliable including, when appropriate, independent third-party sources. However, Moody's is not an auditor and cannot in every instance independently verify or validate information received in the rating process.

Please see ratings tab on the issuer/entity page on Moody's.com for the last rating action and the rating history.

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Please see the Credit Policy page on Moody's.com for the methodologies used in determining ratings, further information on the meaning of each rating category and the definition of default and recovery.

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Attachment to KPSC Question No. 16 – Standard & Poors, *Global Credit Portal* (E.ON U. S. LLC) dated May 6, 2010
Witness: Arbough

May 6, 2010

E.ON U.S. LLC

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Major Rating Factors

Rationale

Outlook

Related Criteria And Research

E.ON U.S. LLC

Major Rating Factors

Strengths:

- Stable and relatively predictable utility operations and associated cash flows;
- Credit supportive regulatory environment in Kentucky;
- Competitive rates; and
- Efficient operations and high customer satisfaction ratings.

Corporate Credit Rating

BBB+/Stable/--

Weaknesses:

- Little fuel diversity; virtually all coal-fired;
- Heavy construction program;
- Rate relief needs during a time of unusual economic weakness; and
- Somewhat weak consolidated financial metrics.

Rationale

Our ratings on E.ON U.S. are currently based on the credit profile of its two operating utilities in Kentucky, Louisville Gas & Electric (LG&E) and Kentucky Utilities (KU) and the company's focus on operating the fully integrated utilities. Current ratings are linked to ultimate parent E.ON AG (A/Stable/A-1).

On April 28, 2010, PPL Corp. announced its plan to acquire E.ON U.S. for \$7.625 billion in cash. The transaction includes the assumption of \$574 million of tax-exempt debt at LGE and \$351 million of tax-exempt debt at KU. The acquisition requires approvals by state regulators in Kentucky, Virginia and Tennessee, and by the FERC. The transaction is expected to close by the end of 2010.

The inclusion of LG&E and KU into PPL will rebalance PPL's portfolio toward a greater regulated mix. With regulated operations contributing 60%-65% of the overall cash flow post acquisition compared with about 30% in 2009, the "excellent" business risk profile of the utility businesses will more than offset the "satisfactory" business risk profile of the generation business. This will result in a pro forma "strong" consolidated business risk profile. We expect consolidated debt to EBITDA and total debt to total capital ratios to range in the "significant" financial risk profile category. Projected FFO to total debt of 23.5%-25% will likely support ratings at the higher end of the 'BBB' rating category on successful completion of the acquisition.

The acquisition requires large permanent financing that has attendant execution risks. If the transaction with PPL is not ultimately consummated, we will affirm the 'BBB+' ratings on E.ON U.S., LG&E, and KU.

We view E.ON U.S.'s consolidated business risk profile as 'excellent' (we categorize business risk profiles as 'excellent' to 'vulnerable') and its financial profile as 'aggressive' (financial profiles are ranked from 'minimal' to 'highly leveraged'). The company's business risk profile is supported by relatively low-risk, regulated vertically integrated electric and natural gas distribution operations, a stable and credit supportive regulatory environment in Kentucky, efficient generation facilities that allow for competitive rates, consistently high customer satisfaction rankings, and effective cost containment. The company's electric operations benefit from a fuel and purchased power (energy only) adjustment clause, an environmental cost recovery surcharge, and other timely cost recovery

mechanisms, while its smaller gas operations benefit from a gas supply clause. These strengths are tempered by the lack of fuel diversity (nearly all coal-fired), a relatively heavy construction program, and rate relief needs during a period of unusual economic weakness. Construction outlays focus on the company's 75% ownership share in the 750 MW Trimble County Unit 2 coal-fired facility that's slated for completion later this year, ongoing environmental requirements, and other project betterments.

On July 16, 2009, the power plant lease arrangement between E.ON U.S.'s subsidiary Western Kentucky Energy Corp. and Big Rivers Electric Corp. was terminated. While unwinding of the contract required a large one-time cash payment of \$575 million and other concessions, it significantly reduces E.ON U.S.'s dependence on riskier unregulated activities, and enhances the company's business risk profile within the "excellent" category.

Currently pending before the Kentucky Public Service Commission are rate applications for a \$94.6 million (12.1%) electric rate hike and a \$22.6 million (7.7%) natural gas rate increase for LG&E and a \$135 million (11.5%) electric rate hike for KU. The rate requests are predicated upon an 11.5% return on equity. Commission orders are expected this summer. Higher rates are needed to recover the utilities' investment in Trimble County Unit 2, damage costs related to severe storms, and higher costs. The fact that the state regulators will be reviewing somewhat large rate hike requests in a weakened economy is a credit concern. Therefore, the company's ability to manage regulatory risk will be critical to credit quality.

E.ON U.S.'s consolidated financial metrics have declined somewhat, owing primarily to its heavy construction program. However, with well controlled operating and maintenance expenses, continued efficient operations, responsive regulatory treatment, and credit supportive actions by management, bondholder protection parameters should strengthen to levels more commensurate with the current rating level.

Short-term credit factors

Standard & Poor's expects E.ON U.S.'s capital spending to exceed cash flow from operations primarily because of significant environmental expenditures and outlays to complete the Trimble County Unit 2 station. The steady internal cash flow generated by KU's and LG&E's regulated operations will not be enough to meet these obligations, thus creating a reliance on outside capital. Such funding is expected to be concentrated at Germany-based parent E.ON AG, which will also provide support in the case of short-term liquidity needs. (An E.ON AG-related entity provides a credit facility to E.ON U.S. to ensure funding availability for its money pool.

Outlook

The stable outlook on E.ON U.S. is based on corporate strategy that maintains a primarily low-risk, utility-based business risk profile. Standard & Poor's could lower the ratings absent future sufficient rate relief, if construction expenditures materially increase resulting in higher-than-expected reliance on debt, and if cash flow metrics erode. In light of a prospectively heavy capital program and subpar financial metrics, higher ratings are not envisioned in the foreseeable future.

Related Criteria And Research

- "2008 Corporate Criteria: Analytical Methodology," April 15, 2008.
- "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

E.ON U.S. is a private company and does not release financial information publicly.

Ratings Detail (As Of May 6, 2010)*	
E.ON U.S. LLC	
Corporate Credit Rating	BBB+/Stable/--
Corporate Credit Ratings History	
04-Aug-2003	BBB+/Stable/--
12-Sep-2002	A-/Stable/--
09-Apr-2001	BBB+/Watch Pos/--
Business Risk Profile	Excellent
Financial Risk Profile	Aggressive
Related Entities	
Central Networks East PLC	
Issuer Credit Rating	A/Stable/A-1
E.ON AG	
Issuer Credit Rating	A/Stable/A-1
Commercial Paper	A-1
Senior Unsecured (50 Issues)	A
Short-Term Debt (1 Issue)	A-1
E.ON Energy Ltd.	
Issuer Credit Rating	A/Stable/A-1
E.ON International Finance B.V.	
Commercial Paper	
Local Currency	A-1
E.ON U.K. PLC	
Issuer Credit Rating	A/Stable/A-1
Senior Unsecured (1 Issue)	A
Kentucky Utilities Co.	
Issuer Credit Rating	BBB+/Stable/A-2
Senior Unsecured (3 Issues)	BBB+
Senior Unsecured (4 Issues)	BBB+/A-2
Louisville Gas & Electric Co.	
Issuer Credit Rating	BBB+/Stable/NR
Senior Unsecured (8 Issues)	BBB+
Senior Unsecured (4 Issues)	BBB+/A-2
Powergen (East Midlands) Investments	
Issuer Credit Rating	A/Stable/--

*Unless otherwise noted, all ratings in this report are global scale ratings. Standard & Poor's credit ratings on the global scale are comparable across countries. Standard & Poor's credit ratings on a national scale are relative to obligors or obligations within that specific country.

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Attachment to KPSC Question No. 16 – Standard & Poors, *Global Credit Portal* (KU) dated
May 6, 2010
Witness: Arbough



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May 6, 2010

Kentucky Utilities Co.

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Kentucky Utilities Co.

Major Rating Factors

Corporate Credit Rating
BBB+/Stable/A-2

Major Rating Factors

Strengths:

- Stable and relatively predictable utility operations and associated cash flows;
- Credit supportive regulatory environment in Kentucky;
- Competitive rates; and
- Efficient operations and high customer satisfaction ratings.

Weaknesses:

- Little fuel diversity, virtually all coal-fired;
- Heavy construction program;
- Rate relief needs during a time of unusual economic weakness; and
- Somewhat subpar consolidated financial metrics.

Rationale

The ratings on Kentucky Utilities Co. (KU) are based primarily on parent E.ON U.S. LLC's credit profile. The ratings on E.ON U.S. are based primarily on the credit profile of its two operating utilities in Kentucky--Louisville Gas & Electric Co. (BBB+/Stable/-) and KU--and the company's focus on operating the fully integrated utilities. Current ratings are linked to ultimate parent E.ON AG (A/Stable/A-1).

On April 28, 2010, PPL Corp. announced its plan to acquire E.ON U.S. for \$7.625 billion in cash. The transaction includes the assumption of \$574 million of tax-exempt debt at LGE and \$351 million of tax-exempt debt at KU. The acquisition requires approvals by state regulators in Kentucky, Virginia and Tennessee, and by the FERC. The transaction is expected to close by the end of 2010.

The inclusion of LG&E and KU into PPL will rebalance PPL's portfolio toward a greater regulated mix. With regulated operations contributing 60%-65% of the overall cash flow post acquisition compared with about 30% in 2009, the "excellent" business risk profile of the utility businesses will more than offset the "satisfactory" business risk profile of the generation business. This will result in a pro forma "strong" consolidated business risk profile. We expect consolidated debt to EBITDA and total debt to total capital ratios to range in the "significant" financial risk profile category. Projected FFO to total debt of 23.5%-25% will likely support ratings at the higher end of the 'BBB' rating category on successful completion of the acquisition.

The acquisition requires large permanent financing that has attendant execution risks. If the transaction with PPL is not ultimately consummated, we will affirm the 'BBB+' ratings on E.ON U.S., LG&E, and KU.

We view E.ON U.S.'s consolidated business risk profile as 'excellent' (we categorize business risk profiles as 'excellent' to 'vulnerable') and its financial profile as 'aggressive' (financial profiles are ranked from 'minimal' to 'highly leveraged'). The company's business risk profile is supported by relatively low-risk, regulated vertically

integrated electric and natural gas distribution operations, a stable and credit supportive regulatory environment in Kentucky, efficient generation facilities that allow for competitive rates, consistently high customer satisfaction rankings, and effective cost containment. The company's electric operations benefit from a fuel and purchased power (energy only) adjustment clause, an environmental cost recovery surcharge, and other timely cost recovery mechanisms, while its smaller gas operations benefit from a gas supply clause. These strengths are tempered by the lack of fuel diversity (nearly all coal-fired), a relatively heavy construction program, and rate relief needs during a period of unusual economic weakness. Construction outlays focus on the company's 75% ownership share in the 750 MW Trimble County Unit 2 coal-fired facility that's slated for completion later this year, ongoing environmental requirements, and other project betterments.

On July 16, 2009, the power plant lease arrangement between E.ON U.S.'s subsidiary Western Kentucky Energy Corp. and Big Rivers Electric Corp. was terminated. While unwinding of the contract required a large one-time cash payment of \$575 million and other concessions, it significantly reduces E.ON U.S.'s dependence on riskier unregulated activities, and enhances the company's business risk profile within the "excellent" category.

Currently pending before the Kentucky Public Service Commission are rate applications for a \$94.6 million (12.1%) electric rate hike and a \$22.6 million (7.7%) natural gas rate increase for LG&E and a \$135 million (11.5%) electric rate hike for KU. The rate requests are predicated upon an 11.5% return on equity. Commission orders are expected this summer. Higher rates are needed to recover the utilities' investment in Trimble County Unit 2, damage costs related to severe storms, and higher costs. The fact that the state regulators will be reviewing somewhat large rate hike requests in a weakened economy is a credit concern. Therefore, the company's ability to manage regulatory risk will be critical to credit quality.

E.ON U.S.'s consolidated financial metrics have declined somewhat, owing primarily to its heavy construction program. However, with well controlled operating and maintenance expenses, continued efficient operations, responsive regulatory treatment, and credit supportive actions by management, bondholder protection parameters should strengthen to levels more commensurate with the current rating level.

Short-term credit factors

Standard & Poor's expects E.ON U.S.'s capital spending to exceed cash flow from operations primarily because of significant environmental expenditures and outlays to complete the Trimble County Unit 2 station. The steady internal cash flow generated by KU's and LG&E's regulated operations will not be enough to meet these obligations, thus creating a reliance on outside capital. Such funding is expected to be concentrated at Germany-based parent E.ON AG, which will also provide support in the case of short-term liquidity needs. (An E.ON AG-related entity provides a credit facility to E.ON U.S. to ensure funding availability for its money pool.)

Outlook

The stable outlook on KU mirrors that of parent E.ON U.S. and is based on corporate strategy that maintains a primarily low-risk, utility-based business risk profile. Standard & Poor's could lower the ratings absent future sufficient rate relief, if construction expenditures materially increase resulting in higher-than-expected reliance on debt, and if cash flow metrics erode. In light of a prospectively heavy capital program and subpar financial metrics, higher ratings are not envisioned in the foreseeable future.

Related Criteria And Research

- "2008 Corporate Criteria: Analytical Methodology," April 15, 2008.
- "Criteria Methodology: Business Risk/Financial Risk Matrix Expanded," May 27, 2009.

Table 1.

Kentucky Utilities Co. -- Financial Summary*					
Industry Sector: Electric					
--Fiscal year ended Dec. 31--					
	2009	2008	2007	2006	2005
Rating history	BBB+/Stable/A-2	BBB+/Stable/A-2	BBB+/Stable/A-2	BBB+/Stable/A-2	BBB+/Stable/A-2
(Mil. \$)					
Revenues	1,355.0	1,404.0	1,273.0	1,210.0	1,206.6
Net income from continuing operations	133.0	158.0	167.0	152.0	112.1
Funds from operations (FFO)	291.7	308.1	323.9	249.6	234.4
Capital expenditures	522.4	703.9	745.3	349.5	140.0
Cash and short-term investments	2.0	12.0	0.0	6.0	6.7
Debt	1,917.8	1,780.9	1,465.5	1,146.9	1,061.8
Preferred stock	0	0	0	0	0
Equity	1,952.0	1,744.0	1,435.0	1,193.0	974.9
Debt and equity	3,869.8	3,524.9	2,900.5	2,339.9	2,036.7
Adjusted ratios					
EBIT interest coverage (x)	3.4	3.8	4.9	6.1	5.8
FFO int. cov. (x)	4.1	4.7	5.8	6.3	7.0
FFO/debt (%)	15.2	17.3	22.1	21.8	22.1
Discretionary cash flow/debt (%)	(13.6)	(22.7)	(29.5)	(11.0)	2.7
Net Cash Flow / Capex (%)	55.8	43.8	43.5	71.4	130.4
Debt/debt and equity (%)	49.6	50.5	50.5	49.0	52.1
Return on common equity (%)	7.2	9.9	12.7	13.7	11.1
Common dividend payout ratio (un-adj.) (%)	0	0	0	0	45.3

*Fully adjusted (including postretirement obligations).

Table 2.

Reconciliation Of Kentucky Utilities Co. Reported Amounts With Standard & Poor's Adjusted Amounts (Mil. \$)*								
--Fiscal year ended Dec. 31, 2009--								
Kentucky Utilities Co. reported amounts								
	Debt	Operating income (before D&A)	Operating income (before D&A)	Operating income (after D&A)	Interest expense	Cash flow from operations	Cash flow from operations	Capital expenditures
Reported	1,727.0	402.0	402.0	269.0	75.0	253.0	253.0	516.0
Standard & Poor's adjustments								
Operating leases	26.1	8.0	1.2	1.2	1.2	6.8	6.8	6.4
Postretirement benefit obligations	104.0	18.0	18.0	18.0	7.0	3.3	3.3	--

Table 2.

Reconciliation Of Kentucky Utilities Co. Reported Amounts With Standard & Poor's Adjusted Amounts (Mil. \$)* (cont.)								
Power purchase agreements	38.6	1.8	1.8	1.8	1.8	--	--	--
Asset retirement obligations	22.1	2.0	2.0	2.0	2.0	(1.3)	(1.3)	--
Reclassification of nonoperating income (expenses)	--	--	--	6.0	--	--	--	--
Reclassification of working-capital cash flow changes	--	--	--	--	--	--	30.0	--
Total adjustments	190.8	29.8	23.0	29.0	12.0	8.7	38.7	6.4

Standard & Poor's adjusted amounts

	Debt	Operating income (before D&A)	EBITDA	EBIT	Interest expense	Cash flow from operations	Funds from operations	Capital expenditures
Adjusted	1,917.8	431.8	425.0	298.0	87.0	261.7	291.7	522.4

*Kentucky Utilities Co. reported amounts shown are taken from the company's financial statements but might include adjustments made by data providers or reclassifications made by Standard & Poor's analysts. Please note that two reported amounts (operating income before D&A and cash flow from operations) are used to derive more than one Standard & Poor's-adjusted amount (operating income before D&A and EBITDA, and cash flow from operations and funds from operations, respectively). Consequently, the first section in some tables may feature duplicate descriptions and amounts.

Ratings Detail (As Of May 6, 2010)

Kentucky Utilities Co.

Corporate Credit Rating	BBB+/Stable/A-2
Senior Unsecured (3 Issues)	BBB+
Senior Unsecured (4 Issues)	BBB+/A-2

Corporate Credit Ratings History

27-Mar-2009	BBB+/Stable/A-2
25-Mar-2009	BBB+/Stable/NR
04-Aug-2003	BBB+/Stable/A-2

Business Risk Profile

Excellent

Financial Risk Profile

Aggressive

Related Entities

Central Networks East PLC

Issuer Credit Rating	A/Stable/A-1
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E.ON AG

Issuer Credit Rating	A/Stable/A-1
Commercial Paper	A-1
Senior Unsecured (50 Issues)	A
Short-Term Debt (1 Issue)	A-1

E.ON Energy Ltd.

Issuer Credit Rating	A/Stable/A-1
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E.ON International Finance B.V.

Commercial Paper	
Local Currency	A-1

Ratings Detail (As Of May 6, 2010)* (cont.)

E.ON U.K. PLC

Issuer Credit Rating	A/Stable/A-1
Senior Unsecured (1 Issue)	A

E.ON U.S. LLC

Issuer Credit Rating	BBB+/Stable/--
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Louisville Gas & Electric Co.

Issuer Credit Rating	BBB+/Stable/NR
Senior Unsecured (8 Issues)	BBB+
Senior Unsecured (4 Issues)	BBB+/A-2

Powergen (East Midlands) Investments

Issuer Credit Rating	A/Stable/--
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*Unless otherwise noted, all ratings in this report are global scale ratings. Standard & Poor's credit ratings on the global scale are comparable across countries. Standard & Poor's credit ratings on a national scale are relative to obligors or obligations within that specific country.

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The McGraw-Hill Companies

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 17

Witness: Daniel K. Arbough

Q-17. Provide a copy of any bond rating agency and or bank reports which discuss any issues surrounding obtaining regulatory approval for construction projects based upon EPA rules that have not been finalized.

A-17. The Company is not aware of any reports that are responsive to this request.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 18

Witness: Lonnie E. Bellar

- Q-18. Explain whether KU is aware of any other electric generation utility that has filed a CPCN application with its state regulatory agency prior to EPA's new rules being finalized.
- A-18. KU is not aware of the position other electric generation utilities have taken with respect to CPCN applications for compliance with the EPA's new rules.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 19

Witness: Lonnie E. Bellar

- Q-19. Refer to the Direct Testimony of Lonnie E. Bellar ("Bellar Testimony") at pages 10-12. In the final order in KU's most recent base rate case, at pages 26-31, there is discussion of testimony which supported return on equity ("ROE") estimates over a wide range for KU. The Commission found that KU's "required ROE for electric operations falls within a range of 9.75 to 10.75 percent with a midpoint of 10.25 percent." Pursuant to KRS 278.183(2)(b), the Commission must establish a reasonable return on capital expenditures for projects included in an environmental compliance plan.
- a. Notwithstanding that the parties in Case No. 2009-00548, with the exception of the Attorney General, signed settlement agreeing to an ROE of 10.63 percent, explain why a 10.63 percent ROE is appropriate on a going forward basis.
 - b. Provide all economic analyses performed by or for KU that demonstrate a ROE of 10.63 percent is reasonable based on current economic conditions.
 - c. If it is appropriate for the Commission to consider the 10.63 percent ROE established in KU's last rate case, and in the absence of any new testimony addressing the derivation of ROE estimates, explain why it would not be appropriate to consider the ROE testimony also.
 - d. Provide all support for the position that the Commission's decision in KU's last rate case to accept a 10.63 percent ROE for environmental cost recovery obligates the Commission to now adopt that same ROE for a new environmental compliance plan absent a showing that a 10.63 percent ROE is now reasonable.
- A-19. a. The 10.63 percent ROE, as agreed to by the eight signatories to the Stipulation in Case No. 2009-00548, is appropriate and reasonable on a going-forward basis. First, the 10.63 percent not only falls within the ROE for electric operations set forth in the Stipulation (10.25% to 10.75%), but likewise falls within the range set forth in the Commission's Order of July 30, 2010 (9.75% to 10.75%). Second, while the Commission issued independent findings that varied from certain terms in the Stipulation, the Commission approved the provisions in the Stipulation containing the 10.63% ROE for ECR purposes "in their entirety." Moreover, KU currently has a pending rate case in Virginia (PUE-2011-00013) in which it has requested a ROE of 11.0 percent, the midpoint of 10.5% and 11.5%. The requested ROE in that

proceeding is reflective of the current economic conditions and provides further evidence that the 10.63 percent ROE remains reasonable.

- b. Please see the attached direct testimony of Mr. William E Avera, dated April 1, 2011, referenced in response to KPSC Question No. 19(a) on CD in the folder titled Question 19b.
- c. The Commission can consider the ROE testimony from the record in Case No. 2009-00548. Please note that the agreed upon 10.63 percent value remains within the range (9.75% to 10.75%) set forth in the Commission's final Order in that proceeding.
- d. The 10.63 percent ROE for environmental cost recovery was first approved by the Commission in its February 5, 2009 Order in Case No. 2008-00251, which was a base rate case. The Commission's Order stated that "[t]ypically, an electric utility with an environmental surcharge approved pursuant to KRS 278.183 uses the ROE from its most recent rate case in the return component of the environmental costs included in its surcharge." The Commission then stated that the 10.63 percent ROE had been agreed to by the parties and approved its use. In KU's last base rate case, the signatories to the Stipulation agreed to continue use of the 10.63 percent ROE, despite agreeing upon a separate ROE for electric operations. Similarly, the Commission permitted KU to continue use of the 10.63 ROE for environmental cost recovery, but approved a separate ROE for electric operations. The Stipulation contained the resolution of various other items which at the time represented a balanced resolution of the issues under consideration in that case. In keeping with the Commission's precedent, it is reasonable to allow KU to utilize the specific ROE for environmental costs approved in KU's last rate case, which is the 10.63 percent requested in this proceeding.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 20

Witness: John N. Voyles, Jr. / Charles R. Schram

- Q-20. Refer to Schram Testimony at pages 3-4. The testimony references two related analyses which were performed by KU's Project Engineering department, along with Black & Veatch.
- a. Provide the reports and all supporting workpapers for the suite of environmental compliance facilities for each coal unit in the generation fleet to determine whether all of the proposed facilities would be necessary to meet the applicable environmental regulations.
 - b. Provide the reports and all supporting workpapers for the determination for each generating unit if it would be more cost effective to install the facilities or to retire the unit and buy replacement power or generation.
 - c. If not included in parts a. and b. above, explain how the analyses considered the purchase of power (renewable or otherwise) and provide the workpapers and assumptions for each specific power purchase scenario.
 - d. As the costs of environmental compliance are realized, the relative price of smaller decentralized power generation becomes more attractive. Other utilities and companies in Kentucky are exploring the development of potential sources of generation including landfill methane, bio-digesters, biomass, and small natural gas wellheads. Explain whether the analyses considered the development of these or other potential distributed generation sources and provide the workpapers and assumptions for each scenario.
 - e. As the costs of environmental compliance are realized, the relative price of Demand Side Management and energy efficiency programs becomes more attractive. If not included in parts a. and b. above, explain whether and how the development of new and the expansion of existing programs is considered in the analyses.
- A-20. a. The report and documentation is included in Exhibit JNV-2.
- b. Exhibit CRS-1 contains the material supporting the determination for building controls or retiring the unit and constructing replacement generation.

- c. The analyses do not consider power purchases, renewable or otherwise. Ultimately, market availability of suitable replacement capacity and energy is determined through the RFP process when replacing generation.
- d. The Companies' 2011 Integrated Resource Plan evaluated multiple technologies, including renewable technologies, in the supply side screening process. The Companies have not seen information which supports the cost-effectiveness of decentralized power generation at the scale required to replace the generation assumed to be retired in the 2011 Compliance filing. Replacement generation for the units recommended for retirement will need to be dispatchable to meet the customers' energy needs and be of sufficient scale to replace the retired units' capacity. The RFP for new capacity and energy issued in December 2010 resulted in multiple responses from parties marketing renewable generation resources. The Companies have, and continue to, explore these options as well.
- e. The analyses include the impact of programs in the 2011 DSM filing, but do not consider further energy efficiency programs. The need for replacement generation due to retirements of units assumed in the 2011 Compliance plan is unlike any plan to use incrementally increasing energy efficiency programs to meet incremental growth in load requirements. The scale of the retirements and their timing, all by the end of 2015, create an immediate need for capacity and energy at that time.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 21

Witness: Charles R. Schram

- Q-21. Refer to Schram Testimony, Exhibit CRS-1, Section 6.0, Appendix A–Analysis Assumptions at page 48. Explain the derivation of the Desired Return on Rate Base of 6.71 percent.
- A-21. The Desired Return on Rate Base is the weighted average of the Companies' return on equity and after-tax cost of debt. The attachment to this response shows the derivation. Because the majority of the costs evaluated in the decisions to install controls or retire/replace capacity are non-ECR costs, the Companies utilized a weighted average cost of capital for non-ECR projects in its analysis. A summary of the Companies' weighted average cost of capital for ECR projects is also included.

2010 Year-End, WACC

	<u>LGE</u>	<u>KU</u>	<u>Combined Companies- 50/50 Weighting</u>	<u>Combined Companies- Wtd Avg</u>
<u>Non-ECR Projects (10.5% ROE)</u>				
Financing Contribution	45.54%	47.13%	46.52%	46.52%
Common Stock Contribution	54.46%	52.87%	53.48%	53.48%
Permanent Financing Cost of Debt	3.97%	3.76%	3.87%	3.84%
Equity Return	10.50%	10.50%	10.50%	10.50%
Tax Rate	38.9%	38.9%	38.9%	38.9%
WACC	6.82%	6.63%	6.72%	6.71%
<u>ECR Projects (10.63% ROE)</u>				
Financing Contribution	45.54%	47.13%	46.52%	46.52%
Common Stock Contribution	54.46%	52.87%	53.48%	53.48%
Permanent Financing Cost of Debt	3.97%	3.76%	3.87%	3.84%
Equity Return	10.63%	10.63%	10.63%	10.63%
Tax Rate	38.90%	38.90%	38.90%	38.90%
WACC	6.89%	6.70%	6.78%	6.78%

2010

	Unadjusted Capitilization	Weighting	Cost Rate		Gross Up	CER Input	
LGE							
Short-Term Debt	174,876	7.13%	2.133%	0.15%	0.15%	Debt Rate	Debt %
A/R Securitization	0	0.00%	0.000%	0.00%	0.00%	3.97%	45.54%
Long-Term Debt	942,156	38.41%	4.313%	1.66%	1.66%		
Preferred Stock	0	0.00%	0.000%	0.00%	0.00%		
Common Equity	1,335,909	54.45%	10.500%	5.72%	9.36%		
Totals	2,452,941	99.99%					

						CER Input	
KU							
Short-Term Debt	10,434	0.27%	0.250%	0.00%	0.00%	Debt Rate	Debt %
A/R Securitization	0	0.00%	0.000%	0.00%	0.00%	3.76%	47.13%
Long-Term Debt	1,839,956	46.87%	3.779%	1.77%	1.77%		
Preferred Stock	0	0.00%	0.000%	0.00%	0.00%		
Common Equity	2,075,467	52.87%	10.500%	5.55%	9.08%		
Totals	3,925,857	100.00%					

						CER Input	
50/50 Combined Company Weighting							
Short-Term Debt	92,655	2.91%	1.192%	0.03%	0.03%	Debt Rate	Debt %
A/R Securitization	0	0.00%	0.000%	0.00%	0.00%	3.87%	46.52%
Long-Term Debt	1,391,056	43.61%	4.046%	1.76%	1.76%		
Preferred Stock	0	0.00%	0.000%	0.00%	0.00%		
Common Equity	1,705,688	53.48%	10.500%	5.62%	9.20%		
Totals	3,189,399	100.00%					

						CER Input	
Combined Company Weighting							
Short-Term Debt	185,310	2.91%	2.027%	0.06%	0.06%	Debt Rate	Debt %
A/R Securitization	0	0.00%	0.000%	0.00%	0.00%	3.84%	46.52%
Long-Term Debt	2,782,112	43.61%	3.960%	1.73%	1.73%		
Preferred Stock	0	0.00%	0.000%	0.00%	0.00%		
Common Equity	3,411,376	53.48%	10.500%	5.62%	9.20%		
Totals	6,378,798	100.00%					

Tax Rate 38.9000%

Other financial notes:

- The property tax rate of 0.15% is based on the rate for manufacturing equipment as shown in KRS 132.020(1).
- The insurance rate of 0.07% is used as an estimate for the composite insurance rate for generation assets as an input to the Strategist CER module.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 22

Witness: Shannon L. Charnas

- Q-22. Refer to Charnas Testimony at page 4, lines 11-15 which indicates the accounts that KU proposes to use to identify and track O&M costs for the Compliance Plan projects.
- a. Are other expenses charged to these accounts that are not related to the Compliance Plan projects?
 - b. If so, how will KU ensure that only O&M expenses related to the Compliance Plan projects are recovered through the environmental surcharge?
- A-22. a. Yes, there are expenses that are not related to the Compliance Plan projects recorded to accounts 502, Steam Expenses – Operation; 506, Miscellaneous Steam Power Expenses; and 512, Maintenance of Boiler Plant.
- b. The expenses that are related to the Compliance Plan are recorded in subaccounts for ECR related activity and identified by location. These subaccounts contain only ECR related costs. See the testimony of Shannon L. Charnas at page 5, lines 10-14.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 23

Witness: Robert M. Conroy

Q-23. Refer to the Direct Testimony of Robert M. Conroy ("Conroy Testimony") at page 6, lines 5-8. Can KU's accounting system allow for the use of additional subaccounts to permit accumulation of SAM sorbent costs by the project for which it is consumed?

A-23. KU's accounting system does allow for the use of additional subaccounts to the SAM sorbent costs by the project for which it is consumed. As stated in testimony, from an operational perspective, it is very difficult to track separately SAM sorbent being used by multiple environmental facilities related to different ECR projects at the same generating unit with any reasonable certainty. Also, KU records all of a unit's SAM sorbent costs in the same subaccount, regardless of which system on the unit consumes the sorbent. It is important to note that multiple environmental facilities related to different ECR projects at the same generating unit will consume the same sorbent. It is not practical for the plants to maintain and track separate inventories of the same sorbent that has multiple uses.

In the alternative, KU would have to use an allocation to assign the sorbent costs to the appropriate approved project.

The purpose of KU's proposed method for sorbent cost recovery is for practical necessity and to provide the clearer reporting to the Commission.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 24

Witness: Lonnie E. Bellar

Q-24. Refer to Bellar Testimony at pages 5-6. At page 5, item 9, the projected cost is \$691 million. At page 6, line 20, the estimated cost of Project 35 is \$712 million. What is the total estimated capital cost for Project 35 at Ghent?

A-24. As stated in testimony, Project 35 includes the addition of Particulate Matter Control Systems to serve all four Ghent units. Also included in Project 35 is the addition to Ghent Unit 2 of SAM mitigation equipment similar to that installed on Ghent Units 1, 3, and 4 under Project 24 (which the Commission approved as part of KU's 2006 Plan). In addition, the SAM mitigation equipment on Ghent Units 1, 3, and 4 will be upgraded.

KU is seeking Certificates of Public Convenience and Necessity ("CPCN") to construct the Particulate Matter Control Systems but not for the SAM mitigation equipment on Ghent Unit 2 or the upgrades to the SAM mitigation equipment on Ghent Units 1, 3, and 4. As stated in the Application at page 5, item 9, the projected cost of the Particulate Matter Control Systems is \$691 million. The projected cost of the SAM mitigation equipment is \$21 million. The total estimated cost of Project 35 is \$712 million.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 25

Witness: Lonnie E. Bellar

Q-25. Refer to Bellar Testimony at page 12, lines 9-13. Mr. Bellar implies that an alternative revenue allocation should be considered. Is Mr. Bellar suggesting any alternative for consideration in this proceeding?

A-25. The Company is not suggesting a specific alternative revenue allocation should be considered in this proceeding. The issue of revenue allocation is not a new topic and has been discussed extensively in previous ECR Plan cases. Given the amount of KU's proposed investment in ECR facilities compared to KU's current rate base, it would be reasonable to consider alternative revenue allocations that balance the interests of all customers.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 26

Witness: John N. Voyles, Jr.

Q-26. Refer to Bellar Testimony at page 14, lines 20-21. Mr. Bellar states that "contracting for certain parts of work" has commenced. List any contracts that KU has entered related to Projects 29, 34 and 35. Include the date of the contract, a description of the services and/or equipment included and the dollar amount of the contract.

A-26. No contracts for Projects 34 and 35 have been entered into with regards to detailed engineering, procurement of equipment or materials, or construction. Contracts to date include only preliminary engineering assessments, scope development and specification development.

Contract: 43658
Date: April 28, 2010
Cost: Not to Exceed \$135,000

Scope: Black and Veatch contracted to perform Air Quality Control Studies for E.W. Brown, Ghent, Cane Run, Mill Creek, Trimble County and Green River stations. No equipment included in the contract.

Contract: 496789
Date: August 28, 2010
Cost: Not to Exceed \$1,593,000

Scope: Black and Veatch contracted to perform facility specific air quality control studies consisting of conceptual design and budgetary cost estimates for E.W. Brown, Ghent and Mill Creek Stations. No equipment purchases were included in the contract.

Contract: 510845
Date: June 9, 2011
Cost: Not to Exceed \$374,517

Scope: Black and Veatch contracted to prepare the technical specifications for the WFGDs, Fabric Filters (baghouses) and Fans. Additionally, Black and Veatch will support LGE/KU with the technical review of bids for the aforementioned equipment. No equipment purchases were included in the contract.

The following contracts have been entered into for the proposed amendment to Project 29 for the landfill:

Contract: 501781
Date: January 4, 2010
Cost: Not to Exceed \$699,100

Scope: MACTEC Engineering and Consulting, Inc. was contracted to provide the Engineering Design for the E.W. Brown CCR Landfill Project.

Contract: 511600
Date: June 23, 2011
Cost: Not to Exceed \$19,500

Scope: MACTEC Engineering and Consulting, Inc. was contracted to provide three (3) bathymetric surveys of the E.W. Brown Aux Pond.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 27

Witness: Lonnie E. Bellar / Counsel

Q-27. Refer to Bellar Testimony at page 15, lines 15-16. Mr. Bellar states, "by filing now, KU has ensured that the CATR and HAPs Rule should be final before the Commission must issue its final order in this proceeding."

a. In the event the HAPs rule is not final at the time the final order in this proceeding is due, what is KU's proposal to the Commission with regard to the approval of the certificates of convenience and necessity?

A-27. The CATR rule (renamed by the EPA as the Cross-State Air Pollution Rule or "CSAPR") has become final since KU filed its application. With regard to the HAPs rule, the EPA is required pursuant to court order to publish the final rule by November 16, 2011, well in advance of the date by which the Commission is required to issue a final order in this proceeding. If, unexpectedly, the rule is not final before the Commission must issue its final order in this proceeding, the Commission can still grant the certificates of convenience and necessity KU has requested. The Commission has, in many cases, recognized the importance of expedient action. In so doing, the Commission has successfully discharged its responsibility under KRS Chapter 278 by ruling upon cases before it without waiting on the resolution of all related issues. For example, in Case No. 2000-00112 the Commission granted a certificate of convenience to KU and LG&E for the construction of selective catalytic reduction technologies although the final emissions limit was pending before the U.S. Court of Appeals for the District of Columbia.¹ Because the impending implementation date was not stayed, KU and LG&E filed their application for certificates of convenience and necessity based upon the most stringent emissions limit within the Court's consideration. KU and LG&E explained that they would only construct the number of units necessary to comply with the ultimate emissions limit. This is very analogous to the present situation, as KU must seek certificates of convenience and necessity in this proceeding in order to comply with the implementation date although the final rules are not yet issued.

¹ *In the Matter of: Application of Kentucky Utilities Company and Louisville Gas and Electric Company for a Certificate of Convenience and Necessity to Construct Selective Catalytic Reduction (SCR) NOx Control Technologies*, PSC Case No. 2000-00112 (Order dated June 22, 2000).

Further, the Commission has routinely issued final orders conditioned upon the occurrence of future necessary events.² Likewise, the Commission has taken into account relevant time frames when they affect the bottom lines of utilities.³ As explained in KU's application, it is prudent to seek Commission approval before the rule becomes final in order to construct the proposed projects at a reasonable cost. Thus, even if the HAPs rule is not final by the date the Commission must issue its final order, the Commission may still grant the certificates of convenience and necessity.

² See, e.g., *Application of Bluegrass Wireless LLC for Issuance of a Certificate of Public Convenience and Necessity to Construct a Cell Site (Woodbine) in Rural Service Area #11 (Whitley) of the Commonwealth of Kentucky*, PSC Case No. 2008-00080 (Order dated Sept. 26, 2008) (issuing final order even though the applicant's applications with the Federal Aviation Administration and the Kentucky Airport Zoning Commission remained pending, and instructing the applicant to file copies of the final decisions of the FAA and KAZC within ten days of receiving them); *Joint Application of Classic Construction, Inc. and Coolbrook Utilities, LLC for Approval of the Transfer of Wastewater Treatment Plant to Coolbrook Utilities, LLC*, PSC Case No. 2008-00257 (Order dated Oct. 21, 2008) (approving the transfer of the utility upon the condition that the buyer obtain an irrevocable letter of credit and line of credit and the necessary permits for the operation of the utility, including a Kentucky Pollutant Discharge Elimination System Permit); *Joint Application for Transfer of Louisville Gas and Electric Company and Kentucky Utilities Company in Accordance with E.ON AG's Planned Acquisition of Powergen PLC*, PSC Case No. 2001-104 (Order dated Aug. 6, 2001) (approving the transfer upon numerous conditions, including the requirement that the necessary approvals of other federal and state agencies be filed with the Commission within ten days of receipt)

³ See, e.g., *Application of the North Hopkins Water District for a Certificate of Public Convenience and Necessity to Construct and Finance an Improvements Project Pursuant to KRS 278.300*, PSC Case No. 2001-243 (Order dated Aug. 30, 2001) (granting a deviation from numerous filing requirements of 807 KAR 5:001, to save the utility the time of compiling the financial information because the construction project had been bid and the loss of time would risk loss of favorable bids); *Application of Henry County Water District No. 2 to Issue Securities in the approximate Principal Amount of \$2,958,000 for the Purpose of Refunding Certain Outstanding Revenue Bonds of the District Pursuant to the Provisions of KRS 278.300 and 807 KAR 5:001*, PSC Case No. 2002-00411 (Order dated Dec. 16, 2002) (granting a deviation from filing requirements of 807 KAR 5:001 because the "volatility of the bond market" made it risky to delay the closing of the loan while the utility expended the time necessary to compile the necessary financial information).

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 28

Witness: John N. Voyles, Jr.

- Q-28. Refer to the Direct Testimony of John N. Voyles ("Voyles Testimony") at pages 9-10. Regarding the role of Black and Veatch:
- a. Provide a copy of the contract(s) with Black and Veatch.
 - b. Will the expenditures associated with the Black and Veatch contract(s) be included in the ECR?
 - c. Have the expenditures that have been incurred to date been assigned to Projects 29, 34 and/or 35?
 - d. If so, provide the amounts currently charged to each of the projects.
- A-28.
- a. Please see the attached contracts. Certain redacted information is being filed with the Commission under seal pursuant to a Petition for Confidential Protection.
 - b. The expenditures associated with the work conducted by Black and Veatch will eventually be assigned to the Projects 34 and 35.
 - c. No Black and Veatch expenses have been assigned to Projects 29, 34 and/or 35.
 - d. Please see the response to part c.

**Attachment to KPSC Question No. 28(a) – Contract No. 43658 – Black & Veatch Corporation
Air Quality Control Study**

Witness: Vayles

CONTRACT NO. 43658

**BLACK & VEATCH CORPORATION
AIR QUALITY CONTROL STUDY
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SIGNATURES REQUIRED ON THE FOLLOWING PAGES NOTED BELOW:

Contract Signature (Return two originals) ----- 5
Safety Policy Signature (Return one with original signature) ----- 27

E.ON U.S. Services Inc. Company

CONTRACT No. 43658

AIR QUALITY CONTROL STUDY

FOR:

E.W. BROWN UNITS 1, 2, AND 3
GHENT UNITS 1, 2, 3, AND 4
CANE RUN UNITS 4, 5, AND 6
MILL CREEK UNITS 1, 2, 3, AND 4
TRIMBLE COUNTY UNITS 1 AND 2
GREEN RIVER UNITS 3 AND 4

This Contract is entered into, effective as of April 28, 2010, between E.ON U.S. Services Inc. (hereinafter referred to as "E.ON U.S. or Company"), whose address is 820 Broadway, Louisville, KY 40202, and Black & Veatch Corporation (hereinafter referred to as "Contractor") whose address is 11401 Lamar Avenue, Overland Park, KS 66211. The parties hereto agree as follows:

1.0 GENERAL

Contractor shall perform the following: Air Quality Control Study to include: E.W Brown Units 1, 2, and 3; Ghent Units 1, 2, 3, and 4; Cane Run Units 4, 5, and 6; Mill Creek Units 1, 2, 3, and 4; Trimble County Units 1 and 2; and Green River Units 3 and 4, as more specifically described in Articles 2.0 and 3.0 hereof (hereinafter referred to as the "Work") and E.ON U.S. shall compensate the Contractor on a time and material basis NOT TO EXCEED ONE HUNDRED THIRTY FIVE THOUSAND DOLLARS for the Work, under all the terms and conditions hereof.

2.0 DESCRIPTION OF WORK

- 2.1 Except as otherwise expressly provided herein, Contractor shall supply all labor, supervision, materials, equipment, tools and warehousing, and shall pay all expenses, necessary or appropriate in the performance of the Work.
- 2.2 No materials containing asbestos shall be supplied or used in the performance of Work.
- 2.3 Without limitation, Contractor shall meet all requirements set forth in the Lead Construction Standard 29 CFR 1926.62.
- 2.4 The Work shall include but not be limited to the following:
 - 2.4.1 Air Quality Control Study for E.ON U.S. Fleet (see Exhibit No. 1)

3.0 EXHIBITS AND SCOPE OF WORK

All work shall be performed in strict accordance with the following exhibits and Scope of Work which are incorporated herein by reference.

3.1 EXHIBITS

<u>EXHIBIT NO.</u>	<u>TITLE</u>
Exhibit No. 1	Scope of Work
Exhibit No. 2	General Services Agreement, "The Standard Terms", Executed 5 November 2009.

EXHIBIT NO.	TITLE
Exhibit No. 2 (i)	E.ON U.S. Contractor/Subcontractor Safety Policy (incorporated herein by reference)
Exhibit No. 2(ii)	Drug Testing Requirements (incorporated herein by reference)
Exhibit No. 2(iii)	E.ON U.S. Contractor Code of Conduct (incorporated herein by reference)
Exhibit No. 3	Project Cost / Manpower Summary
Exhibit No. 4	Bidder Comment Log
Exhibit No. 5	Passport Overview (incorporated herein by reference)
Exhibit No. 6	Project Specific Hazard Analysis
Exhibit No. 7	Hazard Mitigation Plan

4.0 TERM

This Contract shall become effective upon full execution and continue through completion of Work, subject to the Article titled "Termination at E.ON U.S.'s Option" set forth in the attached Standard Terms. E.ON U.S. makes no promise or guarantee as to the amount of Work to be performed under this Contract.

5.0 PERFORMANCE SCHEDULE

5.1 Contractor shall commence performance of the Work on execution of this Contract and shall complete Work not later than the dates listed below.

Kick- Off meeting:	Week of May 3, 2010
Visits to plant sites:	Week of May 24, 2010
First Draft Report due:	June 1, 2010
Comments from E.ON Returned to Contractor	June 11 2010
Second Draft Report	June 18, 2010
Final Report due:	July 2, 2010

5.2 Contractor shall notify E.ON U.S. of all subcontractors to be utilized in performance of Work at least forty-eight (48) hours prior to start of Work. Subcontractors will be denied access to E.ON U.S. facilities without the required notification. See the Article titled "Subcontracts and Purchase Orders" in the Standard Terms.

5.3 Company may terminate this Contract "for cause" should Contractor not maintain the performance schedules set-forth herein, Because time is of the essence, Contractor shall not be given an opportunity to cure its performance.

6.0 STANDARD TERMS AND CONDITIONS

E.ON U.S. Services Inc.'s General Services Agreement (the Standard Terms) executed by your company on November 5, 2009 (Exhibit No. 1) as part of E.ON U.S./E.ON U.S.'s Supplier Certification process, or the most current fully executed General Services Agreement, and the Contractor Code of Business Conduct and Contractor Safety Policies are hereby incorporated by reference herein and are thereby made a part of this Contract.

7.0 CONTRACTOR DRUG AND ALCOHOL TESTING

7.1 **Plant Outage, Plant Project, or Major Construction Work:** The work under this Contract is considered "Plant Project Work". In accordance with the revised E.ON-US Contractor /

Subcontractor Safety Policy effective 1-31-08, all contractor employees working on-site shall fully comply with the terms and conditions of the executed General Services Agreement to include compliance with Company's Drug, Alcohol, and Safety Policies. E.ON-US Corporate Health and Safety will be auditing Contractor compliance with these requirements. Any cost associated with compliance shall be the responsibility of the Contractor.

8.0 SPECIFIC REPORTING REQUIREMENTS

Contractor shall promptly submit the schedules and reports set forth below:

- 8.1 Weekly progress Reports and action items list.
- 8.2 First Draft Project Report due June 1, 2010
- 8.3 Second Draft Report due June 18, 2010 assuming EON response to draft issued by June 11, 2010.
- 8.4 Final Report Due July 2, 2010

9.0 COMPENSATION

9.1 Time and Materials Not To Exceed

Full compensation to Contractor for full and complete performance of the Work, compliance with all terms and conditions of this Contract and payment by Contractor of all obligations incurred in, or applicable to, Contractor's performance of the Work (hereinafter referred to as the "Contract Price") shall be in accordance with Schedule A, attached hereto and made a part of this Contract, with a NOT TO EXCEED PRICE OF ONE HUNDRED THIRTY FIVE THOUSAND DOLLARS (\$135,000), inclusive of travel, unless otherwise approved in writing by E.ON U.S.

9.1.1 For accounting purposes only, the time and materials price is broken down as follows:

		TOTAL
Task	Coal-Fired Fleet Wide Assessment	
1	Project Initiation	\$5,360.00
2	Project Kick-off Meeting and Site Visits	\$26,936.00
3	Review and Confirm Air Emission Levels	\$4,572.00
4.1	Project Design Memo	\$7,966.00
4.2	Technology Description & Selection	\$18,632.00
4.3	Cost Estimate (Capital, O&M, Layouts, etc.)	\$47,926.00
5	Report	\$23,608.00
	Man-hours	
	Billing Rate (\$/mh)	
	Labor Subtotal	\$135,000.00
<i>Note:</i>	<i>Travel costs are estimated at \$10,000 for 6 staff for 5 days.</i>	

9.2 PRICING FOR CHANGES IN SCOPE OF WORK

At E.ON U.S.'s sole option, adjustments to the Contract Price for changes in the scope or description of Work shall be on a lump sum basis, unit price basis, or in accordance with Schedule A attached to and made a part of this Contract

9.3 SPECIAL INVOICING INSTRUCTIONS

9.3.1 See the Article titled "Invoices and Effect of Payments" in the Standard Terms.

9.3.2 Invoices shall be prepared in one original and one copy distributed as follows:

Original:	E.ON U.S. Services Inc. 820 West Broadway Louisville, KY 40202 Attn: Judy Disney										
Copy:	E.ON U.S. Services Inc. 820 West Broadway Louisville, KY 40202 Attn: Eileen Saunders										
Invoice Information	<table border="0"> <tr> <td>CPA Number</td> <td>43658</td> </tr> <tr> <td>Project #</td> <td>TBA</td> </tr> <tr> <td>Task #</td> <td>TBA</td> </tr> <tr> <td>E.ON U.S. Contact</td> <td>Eileen Saunders</td> </tr> <tr> <td>Contractor Contact</td> <td>Kyle Lucas</td> </tr> </table>	CPA Number	43658	Project #	TBA	Task #	TBA	E.ON U.S. Contact	Eileen Saunders	Contractor Contact	Kyle Lucas
CPA Number	43658										
Project #	TBA										
Task #	TBA										
E.ON U.S. Contact	Eileen Saunders										
Contractor Contact	Kyle Lucas										

10.0 CONTRACTUAL NOTICES

See the Article titled "Notices" in the Standard Terms for provisions governing contractual notices. In addition, a copy of all notices to E.ON U.S. Services Inc. shall be sent to:

10.1 E.ON U.S.'s address: E.ON U.S. Services Inc.
820 West Broadway
Louisville, KY 40202
Attn: Joe Clements
(502) 627-2760
Joe.clements@eon-us.com

10.2 Contractor's Address: MikeKing, P.E.
Regional General Manager
Black & Veatch
3550 Green Court
Ann Arbor, MI. 48105
Phone: (734) 622-8516
Fax: (734) 622-8700
e-mail: kingml@bv.com

11.0 ENTIRE AGREEMENT

This Contract, including all specifications, exhibits and drawings listed in this Contract and the Standard Terms, constitutes the entire agreement between the parties relating to the Work and

supersedes all prior or contemporaneous oral or written agreements, negotiations, understandings and statements pertaining to the Work or this Contract.

The parties hereto have executed this Contract on the dates written below, but it is effective as of the date first written above.

E.ON U.S. Services Inc.

BY:

NAME (Print): Joe Clements

TITLE: Mgr. CONTRACTS

DATE: 5/3/10

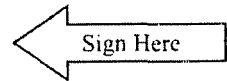
Black & Veatch Corporation

BY:

NAME (Print): KENT D. POLLINS

TITLE: Sr Vice President

DATE: 30 Apr 10



-END-

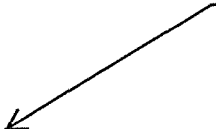
COMMERCIAL SCHEDULE A LABOR HOURLY RATES

THE WORK SHALL BE PERFORMED AND BILLED AT A BLENDED BILL RATE OF [REDACTED]

1. The above rates may be used for agreed to Change Orders and Standby Time.
2. Except as may be expressly provided otherwise elsewhere in this Contract, the rates set forth above are inclusive of all direct wage rates, fringe benefits, labor allowances, payroll taxes, insurance, small tools which cost Contractor less than \$1,500 per tool, temporary construction facilities, consumables, expendables, overhead profit and all other costs and expenses incurred by Contractor in performing the Work and this Contract.
3. The rates will only apply to actual hours worked or standby time, as agreed and attested to by an E.ON U.S. Representative.
4. Individual travel time to and/or from respective job sites are not billable hours.
5. Individual travel, per-diem, and related travel expenses are to be billed at cost.

**Attachment to KPSC Question No. 28(a) – Contract No. 496789 – Black & Veatch
Corporation Air Quality Control Study
Witness: Voyles**

Contract No. 496789



CONTRACT NO. (TO BE ASSIGNED)

**BLACK & VEATCH CORPORATION
AIR QUALITY CONTROL STUDY
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 Exhibit No. 5 :Project Specific Hazard Mitigation Plan 45

SIGNATURES REQUIRED ON THE FOLLOWING PAGES NOTED BELOW:

Contract Signature (Return two originals) 5
 Safety Policy Signature (Return one with original signature) 35

E.ON U.S. Services Inc. Company
C O N T R A C T No. To Be Assigned

Contract No. 496789

PHASE II: AIR QUALITY CONTROL STUDY

FOR:

E.W. BROWN UNITS 1, 2, AND 3
GHEENT UNITS 1, 2, 3, AND 4
MILL CREEK UNITS 1, 2, 3, AND 4

This Contract is entered into effective as of August 26, 2010 (the "Effective Date") by and between (i) E.ON U.S. Services Inc., a Kentucky corporation and any of its Affiliates to the extent applicable, namely Louisville Gas and Electric Company and Kentucky Utilities Company, both Kentucky corporations (hereinafter collectively referred to as "E.ON U.S. or Company"), whose address is 820 Broadway, Louisville, Kentucky 40202 and (ii) Black & Veatch Corporation, a Delaware corporation (hereinafter referred to as "Contractor"), whose address is 11401 Lamar Avenue, Overland Park, Kansas 66211. E.ON U.S. and Contractor are individually referred to as a "party" and collectively as the "parties". The parties hereto agree as follows:

1.0 GENERAL

Contractor shall perform the following: Phase II Air Quality Control Study to include: E.W Brown Units 1, 2, and 3; Ghent Units 1, 2, 3, and 4; and, Mill Creek Units 1, 2, 3, and 4; as more specifically described in Articles 2.0 and 3.0 hereof (hereinafter referred to as the "Work") and E.ON U.S. shall compensate the Contractor on a time and material basis NOT TO EXCEED \$ ONE MILLION FIVE HUNDRED TEN THOUSAND FIVE HUNDRED NINETY THREE DOLLARS for the Work, under all the terms and conditions hereof.

2.0 DESCRIPTION OF WORK

- 2.1 Except as otherwise expressly provided herein, Contractor shall supply all labor, supervision, materials, equipment, tools and warehousing, and shall pay all expenses, necessary or appropriate in the performance of the Work.
- 2.2 No materials containing asbestos shall be supplied or used in the performance of Work.
- 2.3 Without limitation, Contractor shall meet all requirements set forth in the Lead Construction Standard 29 CFR 1926.62.
- 2.4 The Work shall include but not be limited to the following:
 - 2.4.1 Phase II Air Quality Control Study for E.ON U.S. Fleet (Exhibit No. 1)

3.0 EXHIBITS AND SCOPE OF WORK

All work shall be performed in strict accordance with the following exhibits and Scope of Work which are incorporated herein by reference.

3.1 EXHIBITS

<u>EXHIBIT NO.</u>	<u>TITLE</u>
Exhibit No. 1	Scope of Work

SSA & Executed Contract No. 496789

EXHIBIT NO.	TITLE
Exhibit No. 2	General Services Agreement, "The Standard Terms", Executed 5 November 2009.
Exhibit No. 2 (i)	E.ON U.S. Contractor/Subcontractor Safety Policy
Exhibit No. 2(ii)	Drug Testing Requirements
Exhibit No. 2(iii)	E.ON U.S. Contractor Code of Conduct (incorporated herein by reference)
Exhibit No. 3	Passport Overview
Exhibit No. 4	Project Specific Hazard Analysis
Exhibit No. 5	Hazard Mitigation Plan

4.0 **TERM**

This Contract shall become effective as of August 26, 2010 continue through completion of Work, subject to the Article titled "Termination at E.ON U.S.'s Option" set forth in the attached Standard Terms. E.ON U.S. makes no promise or guarantee as to the amount of Work to be performed under this Contract.

5.0 **PERFORMANCE SCHEDULE**

5.1 Contractor shall commence performance of the Work on execution of this Contract and shall complete Work not later than the dates listed below.

Major Milestone Schedule			
Activity	Mill Creek	Ghent	Brown
Notice to Proceed	Aug 26, 2010	Aug 26, 2010	Aug 26, 2010
Project Kickoff and Site Visit Meeting (Task 1)	Sep 14, 2010	Oct 4, 2010	Nov 8, 2010
Begin AQC Validation (Task 6)	Sep 7, 2010	Oct 11, 2010	Nov 15, 2010
Select AQC Technologies - Meeting (Task 6)	Nov 8, 2010	Dec 6, 2010	Jan 10, 2011
Begin Conceptual Design (Task 7)	Nov 15, 2010	Dec 13, 2010	Jan 17, 2011
Begin Cost Estimate (Task 8)	Dec 13, 2010	Jan 10, 2011	Feb 7, 2011
Issue Draft Report (Task 11)	Feb 7, 2011	Mar 14, 2011	Apr 11, 2011
Final Report – Presentation Meeting (Task 11)	Mar 7, 2011	Apr 11, 2011	May 7, 2011

5.2 Contractor shall notify E.ON U.S. of all subcontractors to be utilized in performance of Work at least forty-eight (48) hours prior to start of Work. Subcontractors will be denied access to E.ON U.S. facilities without the required notification. See the Article titled "Subcontracts and Purchase Orders" in the Standard Terms.

5.3 Company may terminate this Contract "for cause" should Contractor not maintain the performance schedules set-forth herein.

6.0 **STANDARD TERMS AND CONDITIONS**

E.ON U.S. Services Inc.'s General Services Agreement (the "Standard Terms") executed by and between the parties on November 5, 2009 (Exhibit No. 2) as part of E.ON U.S.'s Supplier

SSA & Executed Contract No. 496789

CONFIDENTIAL INFORMATION REDACTED

Certification process, or the most current fully executed General Services Agreement or any amendments thereto, and the Contractor Code of Business Conduct and Contractor Safety Policies, are all hereby incorporated by reference herein and, collectively, are expressly made a part of this Contract. The Standard Terms shall govern and control over any conflicting terms and conditions of this Contract.

7.0 **CONTRACTOR DRUG AND ALCOHOL TESTING**

7.1 **Plant Outage, Plant Project, or Major Construction Work:** The work under this Contract is considered "Plant Project Work". In accordance with the revised E.ON-US Contractor / Subcontractor Safety Policy effective 1-31-08, all contractor employees working on-site shall fully comply with the terms and conditions of the executed General Services Agreement to include compliance with Company's Drug, Alcohol, and Safety Policies. E.ON-US Corporate Health and Safety will be auditing Contractor compliance with these requirements. Any cost associated with compliance shall be the responsibility of the Contractor.

8.0 **SPECIFIC REPORTING REQUIREMENTS**

Contractor shall promptly submit the schedules and reports set forth below:

- 8.1 Monthly progress Reports and weekly teleconferences and action items list.
- 8.2 First Draft Project Reports due per the Major Milestone Schedule for each Facility
- 8.3 Final Report/Presentations due per the Major Milestone Schedule for each Facility

9.0 **COMPENSATION**

9.1 **Time and Materials Not To Exceed**

Full compensation to Contractor for full and complete performance of the Work, compliance with all terms and conditions of this Contract and payment by Contractor of all obligations incurred in, or applicable to, Contractor's performance of the Work (hereinafter referred to as the "Contract Price") shall be in accordance with Schedule A, attached hereto and made a part of this Contract, with a NOT TO EXCEED PRICE OF ONE MILLION FIVE HUNDRED TEN THOUSAND FIVE HUNDRED NINETY THREE (\$1,510,593.00), inclusive of travel, unless otherwise approved in writing by E.ON U.S.

9.1.1 For accounting purposes only, the time and materials price is broken down as follows:

Task Description	Mill Creek	Ghent	Brown	Total
Task 1 - Project Initiation, Kick-off, and Site Visit	\$23,039	\$14,179	\$14,179	\$51,398
Task 2 - Environmental Regulatory Considerations	\$9,008	\$4,504	\$4,504	\$18,016
Task 3 - Develop Project Instruction Memorandum	\$2,051	\$1,517	\$1,517	\$5,085
Task 4 - Project Management	\$117,794	\$60,324	\$57,952	\$236,069
Task 5 - Develop Project Design Memorandum	\$10,019	\$10,019	\$10,019	\$30,057
Task 6 - AQC Technology Validation/Selection	\$100,297	\$79,666	\$75,607	\$255,570
Task 7 - Develop Preliminary Conceptual Design	\$181,630	\$148,477	\$141,890	\$471,997
Task 8 - Project Cost Estimate	\$36,982	\$26,503	\$22,638	\$86,123
Task 9 - Implementation Schedule	\$17,678	\$17,678	\$13,504	\$48,861
Task 10 - Constructability Plan	\$19,163	\$16,561	\$16,561	\$52,285
Task 11 - Evaluation Report	\$37,197	\$33,710	\$33,710	\$104,618
Total Estimated Labor	\$554,859	\$413,139	\$392,080	\$1,360,078
Total Estimated Man-hours	4,721	3,523	3,333	11,577
Travel Expenses (Assumes 3 trips 4-5 persons each)	\$13,500	\$10,500	\$10,500	\$34,500
Office Expenses	\$33,047	\$24,661	\$23,331	\$81,039

SSA & Executed Contract No. 496789

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Sub-Totals	\$601,406	\$448,300	\$425,911	\$1,475,617
Fabric Filter Letter Specification and Vendor Workshop				\$29,528
Total Estimated Man-hours				264
Travel Expenses (Assumes 1 trip of 4 persons)				\$3,600
Office Expenses				\$1,848
				<hr/>
				\$34,976
				<hr/>
				\$1,510,593

9.2 PRICING FOR CHANGES IN SCOPE OF WORK

At E.ON U.S.'s sole option, adjustments to the Contract Price for changes in the scope or description of Work shall be on a lump sum basis, unit price basis, or in accordance with Schedule A attached to and made a part of this Contract

9.3 SPECIAL INVOICING INSTRUCTIONS

9.3.1 See the Article titled "Invoices and Effect of Payments" in the Standard Terms.

9.3.2 Invoices shall be prepared in one original and one copy distributed as follows:

Original: E.ON U.S. Services Inc.
820 West Broadway
Louisville, KY 40202
Attn: Judy Disney

Copy: E.ON U.S. Services Inc.
820 West Broadway
Louisville, KY 40202
Attn: Eileen Saunders

Invoice	CPA Number	
Information	Project #	TBA
	Task #	TBA
	E.ON U.S. Contact	Eileen Saunders
	Contractor Contact	Tim Hillman

10.0 CONTRACTUAL NOTICES

See the Article titled "Notices" in the Standard Terms for provisions governing contractual notices. In addition, a copy of all notices to E.ON U.S. Services Inc. shall be sent to:

10.1 E.ON U.S.'s address: E.ON U.S. Services Inc.
820 West Broadway
Louisville, KY 40202
Attn: Joe Clements
(502) 627-2760
Joe.clements@eon-us.com

SSA & Executed Contract No. 496789

10.2 Contractor's
Address:

Mike King, P.E.
Regional General Manager
Black & Veatch
3550 Green Court
Ann Arbor, MI. 48105
Phone: (734) 622-8516
Fax: (734) 622-8700
e-mail: kingml@bv.com

11.0 ENTIRE AGREEMENT

This Contract, including all specifications, exhibits and drawings listed in this Contract and the Standard Terms, constitutes the entire agreement between the parties relating to the Work and supersedes all prior or contemporaneous oral or written agreements, negotiations, understandings and statements pertaining to the Work or this Contract.

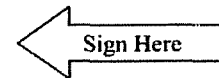
The parties hereto have executed this Contract on the dates written below, but it is effective as of the date first written above.

E.ON U.S. Services Inc.

BY: Joe Clements
NAME (Print): Joe Clements
TITLE: Mgr. CONTRACTS
DATE: 9/8/10

Black & Veatch Corporation

BY: Kent D. Pollins
NAME (Print): KENT D. POLLINS
TITLE: SR. V.P.
DATE: 7 Sep 10



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**COMMERCIAL SCHEDULE A
LABOR HOURLY RATES**

Salary Plan -- Title (see Client Billings and Notes)	Grade	B&V Hourly Rate (\$USD/Hour)
[REDACTED]		

SSA & Executed Contract No. 496789

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Salary Plan - Title (see Client Billings and Notes)	Grade	B&V Hourly Rate (\$USD/Hour)
[REDACTED]		

SSA & Executed Contract No. 496789

CONFIDENTIAL INFORMATION REDACTED

Salary Plan -- Title (see Client Billings and Notes)	Grade	B&V Hourly Rate (\$/SD/Hour)

SSA & Executed Contract No. 496789

1. The above rates may be used for agreed to Change Orders and Standby Time.
2. Except as may be expressly provided otherwise elsewhere in this Contract, the rates set forth above are inclusive of all direct wage rates, fringe benefits, labor allowances, payroll taxes, insurance, small tools which cost Contractor less than \$1,500 per tool, temporary construction facilities, consumables, expendables, overhead profit and all other costs and expenses incurred by Contractor in performing the Work and this Contract.
3. The rates will only apply to actual hours worked or standby time, as agreed and attested to by an E.ON U.S. Representative.
4. Individual travel time to and/or from respective job sites are not billable hours.
5. Individual travel, per-diem, and related travel expenses are to be billed at cost.

**Attachment to KPSC Question No. 28(a) – Contract No. 510845 – Black & Veatch
Corporation Air Quality Equipment Technical Specification Development
Witness: Vayles**

**LOUISVILLE GAS & ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY
CONTRACT NO. 510845**

**BLACK & VEATCH CORPORATION
AIR QUALITY EQUIPMENT
TECHNICAL SPECIFICATION DEVELOPMENT**

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SIGNATURES REQUIRED ON THE FOLLOWING PAGES NOTED BELOW:

Contract Signature (Return two originals)	5
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**Louisville Gas & Electric Company
Kentucky Utilities Company
C O N T R A C T No. 510845**

**PHASE III: AIR QUALITY EQUIPMENT
TECHNICAL SPECIFICATIONS**

FOR:

E.W. BROWN UNITS 1, 2, AND 3

GHENT UNITS 1, 2, 3, AND 4

MILL CREEK UNITS 1, 2, AND 4

TRIMBLE COUNTY UNIT 1

This "Contract" is a Statement of Work within the meaning of the General Service Agreement (the "GSA") with an Effective Date of November 5, 2009 (and as may have been subsequently amended) by and between (i) **LG&E and KU Services Company** (formerly E.ON U.S. Services Inc. by name change amendment), a Kentucky corporation, acting on behalf of its affiliates, KU and LGE (as hereinafter defined) and (ii) **Black & Veatch Corporation**, a Delaware corporation ("Contractor").

This Contract is entered into effective **June 9, 2011** (the "Effective Date") between each of Kentucky Utilities Company, an affiliate of LG&E and KU Services Company (hereinafter referred to as "**KU**") and Louisville Gas and Electric Company, also an affiliate of LG&E and KU Services Company (hereinafter referred to as "**LG&E**"), whose address is 220 West Main Street, Louisville, KY 40202 (LG&E and KU Services Company, KU and LG&E, as applicable, are collectively referred to as "**Company**") and Contractor whose address is 11404 Lamar Avenue, Overland Park, Kansas 66211.

1.0 GENERAL

Contractor shall perform the following: Phase III Air Quality Equipment Technical Specifications to include: E.W Brown Units 1, 2, and 3; Ghent Units 1, 2, 3, and 4; Trimble County Unit 1; and, Mill Creek Units 1, 2, 3, and 4; as more specifically described in Articles 2.0 and 3.0 hereof (hereinafter referred to as the "Work") and COMPANY shall compensate the Contractor on a time and material basis NOT TO EXCEED THREE HUNDRED SEVENTY FOUR THOUSAND FIVE HUNDRED SEVENTEEN DOLLARS (\$374,517.00) for the Work, under all the terms and conditions hereof.

2.0 DESCRIPTION OF WORK

2.1 Except as otherwise expressly provided herein, Contractor shall supply all labor, supervision, materials, equipment, tools and warehousing, and shall pay all expenses, necessary or appropriate in the performance of the Work.

2.2 The Work shall include but not be limited to the following:

2.2.1 Phase III Air Quality Equipment Technical Specification Development for COMPANY Fleet (Exhibit No. 1)

3.0 EXHIBITS AND SCOPE OF WORK

All work shall be performed in strict accordance with the following exhibits and Scope of Work which are incorporated herein by reference.

3.1 EXHIBITS

<u>EXHIBIT NO.</u>	<u>TITLE</u>
Exhibit No. 1	Scope of Work
Exhibit No. 2	Project Resource Allocation and Cost Estimate
Exhibit No. 3	Project Milestone Schedule
Exhibit No. 4	General Services Agreement, "GSA", Executed 5 November 2009 (only signature page attached).
Exhibit No. 4 (i)	LG&E and KU Contractor/Subcontractor Safety Policy
Exhibit No. 4(ii)	Drug Testing Requirements
Exhibit No. 4(iii)	LG&E and KU Contractor Code of Conduct
Exhibit No. 5	Passport Overview
Exhibit No. 6	Project Specific Hazard Analysis
Exhibit No. 7	Hazard Mitigation Plan

4.0 TERM

This Contract shall become effective as of the Effective Date and continues through completion of Work subject to the Article titled "Term & Termination" set forth in the GSA. COMPANY makes no promise or guarantee as to the amount of Work to be performed under this Contract, nor does it convey an exclusive right to the Contractor to perform Work of the type or nature set forth in this Contract.

5.0 PERFORMANCE SCHEDULE

- 5.1 Contractor shall commence performance of the Work on execution of this Contract and shall complete Work in accordance with Milestone Schedule attached as Exhibit No. 3.
- 5.2 Contractor shall notify COMPANY of all subcontractors to be utilized in performance of Work at least forty-eight (48) hours prior to start of Work. Subcontractors will be denied access to COMPANY facilities without the required notification. See the Article titled "Subcontracts and Purchase Orders" in the GSA.
- 5.3 If Company reasonably determines that Contractor has fallen behind its schedule for completing the Work and has reasonable concerns whether Contractor will meet the scheduled dates for the milestones set forth in Section 5.1 above, Company may terminate the Contract for cause.

6.0 STANDARD TERMS AND CONDITIONS

LG&E AND KU SERVICES COMPANY's General Services Agreement (GSA) executed by your company as part of LG&E AND KU SERVICES COMPANY's Supplier Certification process, with an effective date of November 5, 2009, and the Contractor Code of Business Conduct and Contractor Safety Policies are hereby incorporated by reference herein and are thereby made a part of this Contract. The GSA shall govern and control over any conflicting terms and conditions of this Contract.

7.0 CONTRACTOR DRUG AND ALCOHOL TESTING

- 7.1 **Plant Outage, Plant Project, or Major Construction Work:** The work under this Contract is considered "Plant Project Work". In accordance with the revised LG&E AND KU SERVICES COMPANY Contractor / Subcontractor Safety Policy effective 1-31-08, all contractor employees working on-site shall fully comply with the terms and conditions of the executed General Services Agreement to include compliance with Company's Drug, Alcohol, and Safety Policies. LG&E AND KU SERVICES COMPANY Corporate Health and Safety

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will be auditing Contractor compliance with these requirements. Any cost associated with compliance shall be the responsibility of the Contractor.

8.0 SPECIFIC REPORTING REQUIREMENTS

Contractor shall promptly submit the schedules and reports set forth below:

- 8.1 Monthly progress Reports, weekly teleconferences and action items list.
- 8.2 First Draft Specification Reports due per the Major Milestone Schedule shown as Exhibit No. 3 for each Facility.
- 8.3 Preliminary Specification Report/Presentations due per the Major Milestone Schedule for each Facility as shown in attached Exhibit No. 3.

9.0 COMPENSATION

9.1 Time and Materials Not To Exceed

Full compensation to Contractor for full and complete performance of the Work, compliance with all terms and conditions of this Contract and payment by Contractor of all obligations incurred in, or applicable to, Contractor's performance of the Work (hereinafter referred to as the "Contract Price") shall be in accordance with Schedule A, attached hereto and made a part of this Contract, with a NOT TO EXCEED PRICE OF THREE HUNDRED SEVENTY FOUR THOUSAND FIVE HUNDRED SEVENTEEN DOLLARS (\$374,517.00), inclusive of travel (as this amount may be adjusted pursuant to Article 4 of the GSA as a result of a change in Scope of Work requested by COMPANY).

9.1.1 For accounting purposes only, the time and materials price is broken down as follows:

Not To Exceed Cost				
LG&E KU Global Procurement Program				
Task	Labor Hours	Labor Cost	Expenses	Total Cost
Project Management, Kickoff Mtg, Division of Work, Project Instructions		\$29,153	\$6,328	\$35,481
WFGD Specification				
Review/Update LG&E KU Specification		\$32,277	\$2,176	\$34,453
Incorporate Site Specific Requirements		\$19,252	\$1,136	\$20,388
Finalize Specification		\$16,868	\$1,024	\$17,892
Subtotal		\$68,397	\$4,336	\$72,733
PJFF Specification				
Common Specification Requirements		\$60,662	\$4,048	\$64,710
Site Specific Technical Requirements		\$32,223	\$1,904	\$34,127
Finalize Specification		\$34,085	\$2,064	\$36,149
Subtotal		\$126,970	\$8,016	\$134,986
Fan Specification				
Common Specification Requirements		\$65,300	\$4,112	\$69,412
Site Specific Technical Requirements		\$27,322	\$1,616	\$28,938
Finalize Specification		\$31,260	\$1,872	\$33,132
Subtotal		\$123,717	\$7,600	\$131,317
TOTAL		\$348,237	\$26,280	\$374,517

9.2 PRICING FOR CHANGES IN SCOPE OF WORK

At COMPANY'S sole option, adjustments to the Contract Price for changes in the scope or description of Work shall be on a lump sum basis, unit price basis, or in accordance with Schedule A attached to and made a part of this Contract

9.3 SPECIAL INVOICING INSTRUCTIONS

9.3.1 See the Article titled "Invoices and Effect of Payments" in the GSA.

9.3.2 Invoices shall be prepared in one original and one copy distributed as follows and separating charges for Work at each COMPANY facility individually:

Original: KENTUCKY UTILITES COMPANY.
820 West Broadway
Louisville, KY 40202
Attn: Judy Disney

Copy: KENTUCKY UTILITIES COMPANY
820 West Broadway
Louisville, KY 40202
Attn: Eileen Saunders

Invoice Information Contract Number 510845

LGE PORTION
Org: 002020
Project: 131693
MILL CREEK TASK: OUTSERV
TRIMBLE COUNTY TASK: OUTSERV-TC

KU PORTION
Org: 015730
Project: 131694
GHENT TASK: OUTSERV-GH
BROWN TASK: OUTSERV-BR

Company Contact Eileen Saunders
Contractor Contact David Upchurch

10.0 CONTRACTUAL NOTICES

See the Article titled "Notices" in the GSA for provisions governing contractual notices. In addition, a copy of all notices to COMPANY shall be sent to:

10.1 COMPANY address: KENTUCKY UTILITIES COMPANY
820 West Broadway
Louisville, KY 40202
Attn: Joe Clements
(502) 627-2760
Joe.clements@lge-ku.com

10.2 Contractor's
Address:

David Upchurch
Project Manager / Associate Vice President
Black & Veatch
11404 Lamar Avenue
Overland Park, KS 66211
Phone: (913) 458-7721
Fax: (913) 458-2934
e-mail: upchurchde@bv.com

11.0 **ENTIRE AGREEMENT**

This Contract, including all specifications, exhibits and drawings listed in this Contract and the GSA, constitutes the entire agreement between the parties relating to the Work and supersedes all prior or contemporaneous oral or written agreements, negotiations, understandings and statements pertaining to the Work or this Contract.

The parties hereto have executed this Contract on the dates written below, but it is effective as of the date first written above.

**LOUISVILLE GAS & ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

BY: _____

NAME (Print): _____

TITLE: _____

DATE: _____

BLACK AND VEATCH CORPORATION

BY: _____

NAME (Print): _____

TITLE: _____

DATE: _____



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COMMERCIAL SCHEDULE A
LABOR HOURLY RATES

CONFIDENTIAL ^{Notes}
BLACK & VEATCH

BILLING RATES AND EXPENSE SCHEDULE
FOR
HOME OFFICE CONSULTING ENGINEERING SERVICES

CALENDAR YEAR 2011

Salary Plan - Title (see Client Billings and Notes)	Grade	B&V Hourly Rate (USD/Hour)
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

CONFIDENTIAL INFORMATION REDACTED

CONFIDENTIAL ^{7/10/11}
BLACK & VEATCH

BILLING RATES AND EXPENSE SCHEDULE
FOR
HOME OFFICE CONSULTING ENGINEERING SERVICES

CALENDAR YEAR 2011

Salary Plan - Title (see Client Billings and Notes)	Grade	B&V Hourly Rate (USD/Hour)
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

CONFIDENTIAL INFORMATION REDACTED

CONFIDENTIAL ^{Notes}
BLACK & VEATCH

BILLING RATES AND EXPENSE SCHEDULE
FOR
HOME OFFICE CONSULTING ENGINEERING SERVICES
CALENDAR YEAR 2011

Salary Plan – Title (see Client Billings and Notes)	Grade	B&V Hourly Rate (\$USD/Hour)
[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]

* Non-exempt.
** Selected positions are non-exempt.

Client Billings: Client shall pay to Engineer for the performance of the Services the sum of the following amounts unless the compensation is otherwise stated in the specific task assignment.

[REDACTED]

Notes:
[REDACTED]

1. The above rates may be used for agreed to Change Orders.
2. The rates will only apply to actual hours worked, as agreed and attested to by a COMPANY Representative.
3. Individual travel time to and/or from respective job sites outside normal working hours are not billable hours.
4. Individual travel, per-diem, and related travel expenses are to be billed at cost.

Exhibit No. 1
Scope of Work
Air Quality Control Global Purchase Program Support

The purpose of this Scope of Work is to support LG&E KU with its Global Purchase Program of Air Quality Control Equipment at the Mill Creek, Ghent, Brown, and Trimble County facilities. Black & Veatch (B&V) will support LG&E KU with the following 3 Tasks:

- Task 1 – WFGD Specification Development and Support through Award
- Task 2 – PJFF Specification Development and Support through Award
- Task 3 – Fan Specification Development and Support through Award

Scope of work

Project Kick-off Meeting and Site Visit

B&V shall initiate this project with a kick-off meeting and site visit to finalize project objectives and overall project schedule. The overall approach to this project is to build upon the previously developed conceptual designs and execute the below tasks. The project kick-off meeting and site visits will take place at LG&E KU facilities in Louisville 1 week after project award for duration of 1 day and will be attended by B&V Project Manager, Engineering Manager, and design team leads to accomplish the following main objectives:

- Discuss project objectives, expectations, and constraints.
- Discuss project communication procedures and identify project team contacts for both LG&E KU and B&V for utilization in updating the existing *Project Instructions Memorandum*.
- Obtain or identify any additional key site specific drawings, plant performance data, and existing equipment information not previously collected.
- Obtain any key design information for Trimble County Unit 1.
- Establish and agree upon the overall project schedule and deliverables.
- Identify additional information needs specific to each task are identified below.
- Begin development of a division of work (DOW) document that will be used as a basis for the development of each specification. The DOW will define the scope of detailed design, supply, and erection for each specification. This Scope is based on an island approach for each specification which assumes that the Contractor would also furnish support steel, electrical gear, fans, motors, and controls, etc... associated within the scrubber, fabric filter, or fan island.

Task 1 - WFGD Specification Development and Support through Award

B&V will perform a technical review of LG&E KU's updated as-bid WFGD Specification for Unit 1 and 2 (combined WFGD) and Unit 4 at Mill Creek. B&V understands that LG&E KU has successfully procured and installed WFGDs with the existing Specification.

LG&E KU will update and modify the WFGD specification to reflect lessons learned from their current scrubber projects. LG&E KU will provide this updated version of the specification to B&V to review and for B&V to insert Mill Creek – specific design criteria, design basis, and arrangement drawings.

A key input to the development of this specification is verification of the conceptual design feed currently being completed by B&V under the phase II study effort. Conceptual design issues related to each Site / Unit are identified in Tasks 1.1, 1.2 and 1.3. B&V assumes that this will be available from the phase II study and will only require a cursory review.

- 1.1 Mill Creek Unit 1. LG&E KU has recently requested that B&V (under the phase II study effort), develop costs and an arrangement for combining Units 1 and 2 into a single new scrubber with a new chimney.
- 1.2 Mill Creek Unit 2. Refer to Task 1.1.
- 1.3 Mill Creek Unit 4. LG&E KU has recently requested that B&V (under the phase II study effort), develop costs and a drawing showing a new “C” arrangement for the Unit 4 scrubber.

B&V will be working on these additional activities associated with the conceptual engineering work while LG&E KU is updating their existing scrubber specification. Once the final conceptual engineering work is done and LG&E KU has updated their scrubber specification, B&V will configure the scrubber specification for issue to the bidders. The two activities required to complete this task are identified in Tasks 1.4 and 1.5.

- 1.4 Finalize Design Basis and Combustion Calculations. Upon receipt of information from phase II, B&V will finalize the design basis calculations developed for the conceptual engineering work for each Site and Unit. This specification will also need to account for a range of fuels using the coal specified for the study and a coal box to be established by LG&E KU. The specification will need to include operating conditions that have previously not been calculated using the specified coal. B&V will work with LG&E KU to determine an appropriate range of fuels and operation conditions to be included in the Specification. When these parameters are finalized, B&V will update existing combustion calculations to include ranges required for Mill Creek Units 1/2 and 4. B&V will also perform calculations to envelope the operation of the units (i.e. low load and maximum load conditions). Finally, B&V will perform all the quality assurance checks of the calculations that are required to issue a specification. The quality assurance requirements for specifications are more rigorous than those required for a conceptual engineering design.
- 1.5 Review the LG&E Specification and Provide Recommended B&V Language. After receipt of the updated WFGD Specification in MS Word format, B&V will review and provide comments and suggestions to the Specification. B&V will distribute the Specification to lead discipline engineers as well as the air quality control engineer for review. During the review B&V will compare the Specification to our standard specifications and complete missing design information. All comments will be consolidated as tracked changes to a single document. Suggested supplemental information such as drawings or technical data sheets will be listed in a single document. B&V will submit our comments to LG&E KU as an electronic copy.
- 1.6 Workshop. B&V shall conduct a workshop in our Kansas City office to work collaboratively with LG&E KU to review comments and finalize WFGD Specification.
- 1.7 Finalize Specification. B&V will revise the specification to address all comments received from the workshop. B&V will transmit a finalized technical specification to LG&E KU. LG&E KU will append the commercial requirements and issue the completed specification for bids.
- 1.8 Bid Evaluation Support. After the specification is finalized, B&V will continue to assist LG&E KU with bid evaluations through contract award on a time and material basis. B&V's role will include availability for technical input and clarification and evaluation of bidders. B&V will have primary responsibility for the technical evaluation while LG&E KU will lead the commercial evaluation.
- 1.9 Contract Negotiations. B&V will provide support to the LG&E KU and participate in negotiation meetings with the winning bidder. The B&V support team will include the project manager, one or more lead discipline engineers, and air quality control.

B&V Deliverables

EXHIBIT NO. 1: SCOPE OF WORK

- Consolidated comments to WFGD Specification.
- Design Basis for Mill Creek Station.

Summary of Steps in Task 1

- LG&E update their wet FGD specification to incorporate lessons learned from previous projects.
- LG&E issue their wet FGD specification to B&V for review.
- B&V finalize combustion calculations in parallel with Specification review efforts.
- B&V review the specification provided by LG&E and update technical content.
- Conduct final WFGD Specification workshop for collaborative review.
- Evaluate bids and award contract.

Task 2 - PJFF Specification Development and Support through Award

B&V will develop a technical Pulse Jet Fabric Filter (PJFF) furnish and erect Specification for the global purchase of PJFFs for Mill Creek Units 1-4, Ghent Units 1-4, Brown Units 1-3, and Trimble County Unit 1. A single technical PJFF Specification document will be created using B&V's OneSpec standard specification templates. For each Unit, the technical Specification will be supplemented with a Design Basis and arrangement drawings for each Unit.

A key input to the development of this specification is verification of the conceptual design feed currently being completed by B&V under the phase II study effort. Conceptual design issues related to each Site / Unit are identified in Tasks 2.1 through 2.12.

- 2.1 Mill Creek Unit 1. LG&E KU has recently requested that B&V (under the phase II study effort), develop costs and an arrangement for combining Units 1 and 2 into a single scrubber with a new chimney.
- 2.2 Mill Creek Unit 2. Refer to Task 2.1.
- 2.3 Mill Creek Unit 3. B&V understands that phase II conceptual design information is complete.
- 2.4 Mill Creek Unit 4. LG&E KU has recently requested that B&V (under the phase II study effort), develop costs and a drawing showing a new "C" arrangement for the Unit 4 scrubber.
- 2.5 Ghent Unit 1. B&V has issued the draft Phase II conceptual design for LG&E KU's review and comment.
- 2.6 Ghent Unit 2. B&V has issued the draft Phase II conceptual design for LG&E KU's review and comment
- 2.7 Ghent Unit 3. B&V has issued the draft Phase II conceptual design for LG&E KU's review and comment
- 2.8 Ghent Unit 4. B&V has issued the draft Phase II conceptual design for LG&E KU's review and comment
- 2.9 Brown 1. LG&E KU has recently requested that B&V (under the phase II study effort), develop costs and an arrangement for combining Units 1 and 2 into a single fabric filter.
- 2.10 Brown 2. Refer to Task 2.9.
- 2.11 Brown 3. B&V will issue the draft Phase II conceptual design for LG&E KU's review and comment during the week of May 2, 2011.
- 2.12 Trimble County 1. B&V has not conducted a Phase II study on Trimble County 1. Data gathering and necessary conceptual design activities are included as part of this proposal.
- 2.13 Design Basis Calculations. Upon receipt of this information from phase II, B&V will finalize the design basis calculations and general arrangements developed for the conceptual engineering work. It should be noted that while the technology is common, each PJFF may carry specific physical constraints that are unique to each Unit / Site. As such, each Unit will need to be considered separately and addressed accordingly in the specification.

This specification will also need to account for a range of fuels using the coal specified for the study and a coal box to be established by LG&E KU. The specification will need to include operating conditions that have previously not been calculated. B&V will work with LG&E KU to determine an appropriate range of fuels and operation conditions to be included in the Specification. When these parameters are finalized, B&V will update existing combustion calculations to include ranges required for each unit. B&V will also perform calculations to envelope the operation of the units (i.e. low load and maximum load conditions). Finally, B&V will perform all the quality assurance checks of the calculations that are required to issue a specification. The quality assurance requirements for specifications are more rigorous than those required for a conceptual engineering design.

For Trimble County Unit 1, B&V will perform new combustion calculations and perform the required quality assurance checks.

- 2.14 PJFF Specification Development. B&V will utilize our OneSpec System in developing the content and assembling of the technical specification. This system is an online repository and document assembly tool for technical, operational and construction specification requirements that are maintained by industry experts at B&V. The basis for this proposal is to utilize the OneSpec System documentation and assembly format for development of the specification. In parallel with specification development for the PJFF, B&V will create technical supplementals that will be used to supplement technical specification content. It should be noted that technical supplementals contain boilerplate technical information that will be used in the specifications developed. B&V will send draft report of technical PJFF Specification and Design Basis for each unit to LG&E KU for review and comments.
- 2.15 Workshop. B&V shall conduct a workshop in our Kansas City office to work collaboratively with LG&E KU to review comments and finalize PJFF Specification.
- 2.16 Finalize Specification. B&V will revise the specification to address all comments received from the workshop. B&V will transmit a finalized technical specification to LG&E KU. LG&E KU will append the commercial requirements and issue the completed specification for bids.
- 2.17 Bid Evaluation Support. After the specification is finalized, B&V will continue to assist LG&E KU with bid evaluations through contract award on a time and material basis. B&V's role will include availability for technical input and clarification and evaluation of bidders. B&V will have primary responsibility for the technical evaluation while LG&E KU will lead the commercial evaluation.
- 2.18 Contract Negotiations. B&V will provide support to the LG&E KU and participate in negotiation meetings with the winning bidder. The B&V support team will include the project manager and one or more lead discipline engineers or air quality control specialists with specific experience in design, specification and technical evaluation.

B&V Deliverables

- Technical PJFF Specification
- Technical Supplementals (boilerplate) to supplement PJFF specification content.
- Design Basis for each unit

Summary of Steps in Task 2

- B&V confirm conceptual design is complete and ready for use in the PJFF specification.
- B&V finalize combustion calculations and other design basis information in parallel with Specification review and development efforts
- B&V develop technical specifications and technical supplementals for LG&E KU review.

- Conduct final PJFF Specification workshop for collaborative review.
- Evaluate bids and award contract.

Task 3 – Fan Specification Development and Support through Award

B&V will develop a technical Fan Specification for the global purchase of fans to support AQC upgrades for Mill Creek Units 1-4, Ghent Units 1-4, Brown Units 1-3, and Trimble County Unit 1. A single technical Fan Specification document will be created using B&V OneSpec standard specification templates. For each Unit the technical Specification will be supplemented with a Design Basis that incorporates existing conceptual design documents, combustion calculations developed in Task 1 and 2, and general arrangement drawings. B&V will develop the technical Specification and Design Basis for each unit while LG&E KU will develop the commercial specification.

A key input to the development of this specification is verification of the conceptual design feed currently being completed by B&V under the phase II study effort. B&V also understands that the phase II effort is considering the relocation of fans and turnaround of the existing ESPs to allow for better PJFF performance. This could potentially affect the fan materials of construction and sizing. Other phase II issues related to additional scrubber and fabric filter studies identified in Tasks 1 and 2 could also redefine the fan specification requirements. Conceptual design issues related to each Site / Unit are identified in Tasks 3.1 through 3.12.

- 3.1 Mill Creek Unit 1. Under the phase II study, B&V is also developing costs and an arrangement for combining Units 1 and 2 into a single scrubber with a new chimney.
- 3.2 Mill Creek Unit 2. Refer to Task 3.1.
- 3.3 Mill Creek Unit 3. Under the phase II study, B&V is investigating fan relocation as a result of de-tuning the existing ESP to improve PJFF performance.
- 3.4 Mill Creek Unit 4. Under the phase II study, B&V is investigating fan relocation as a result of de-tuning the existing ESP to improve PJFF performance. B&V is also developing costs and a drawing showing a new “C” arrangement for the Unit 4 scrubber.
- 3.5 Ghent Unit 1. Under the phase II study, B&V is investigating fan relocation as a result of de-tuning the existing ESP to improve PJFF performance.
- 3.6 Ghent Unit 2. Under the phase II study, B&V is investigating fan relocation as a result of de-tuning the existing ESP to improve PJFF performance.
- 3.7 Ghent Unit 3. Under the phase II study, B&V has issued the draft Phase II conceptual design for LG&E KU’s review and comment.
- 3.8 Ghent Unit 4. Under the phase II study, B&V has issued the draft Phase II conceptual design for LG&E KU’s review and comment.
- 3.9 Brown 1. Under the phase II study, B&V is developing costs and an arrangement for combining Units 1 and 2 into a single fabric filter.
- 3.10 Brown 2. Refer to Task 3.9.
- 3.11 Brown 3. Under the phase II study, B&V will issue the draft Phase II conceptual design for LG&E KU’s review and comment during the week of May 2, 2011
- 3.12 Trimble County 1. B&V has not conducted a Phase II study on Trimble County 1. Data gathering and necessary conceptual design activities are included as part of this proposal
- 3.13 Design Basis Calculations. Upon receipt of this information from phase II, B&V will finalize the design basis calculations and general arrangements developed for the conceptual engineering work.
- 3.14 Fan Specification Development. B&V will utilize our OneSpec System in developing the content and assembling of the technical specification. This system is an online repository and document assembly tool for technical, operational and construction specification requirements that are maintained by industry experts at B&V. The basis shall be to utilize the OneSpec System documentation and assembly format for development of the specification. In parallel with specification development for the fans, B&V will create any additional technical supplementals that

were not previously developed during Task 2. It should be noted that technical supplementals contain boilerplate technical information that will be used in the specifications. B&V will send draft report of technical Fan Specification and Design Basis for each unit to LG&E KU for review and comments.

- 3.15 Workshop. B&V proposes conducting a workshop in our Kansas City office to work collaboratively with LG&E KU to review comments and finalize Fan Specification.
- 3.16 Finalize Specification. B&V will revise the specification to address all comments received from the workshop. B&V will transmit a finalized technical specification to LG&E KU. LG&E KU will append the commercial requirements and issue the completed specification for bids.
- 3.17 Bid Evaluation Support. After the specification is finalized, B&V will continue to assist LG&E KU with bid evaluations through contract award on a time and material basis. B&V's role will include availability for technical input and clarification and evaluation of bidders. B&V will have primary responsibility for the technical evaluation while LG&E KU will lead the commercial evaluation.
- 3.18 Contract Negotiations. B&V will provide support to the LG&E KU and participate in negotiation meetings with the winning bidder. The B&V support team will include the project manager and one or more lead discipline engineers or air quality control specialists with specific experience in design, specification and technical evaluation.

B&V Deliverables

- Technical Fan Specification
- Technical Supplementals (boilerplate) to supplement fan specification content.
- Design Basis for each unit

Summary of Steps in Task 3

- B&V confirm conceptual design is complete and ready for use in the Fan specification.
- B&V finalize combustion calculations and other design basis information in parallel with Specification review and development efforts
- B&V develop technical specifications and technical supplementals for LG&E KU review.
- Conduct final Fan Specification workshop for collaborative review.
- Evaluate bids and award contract.

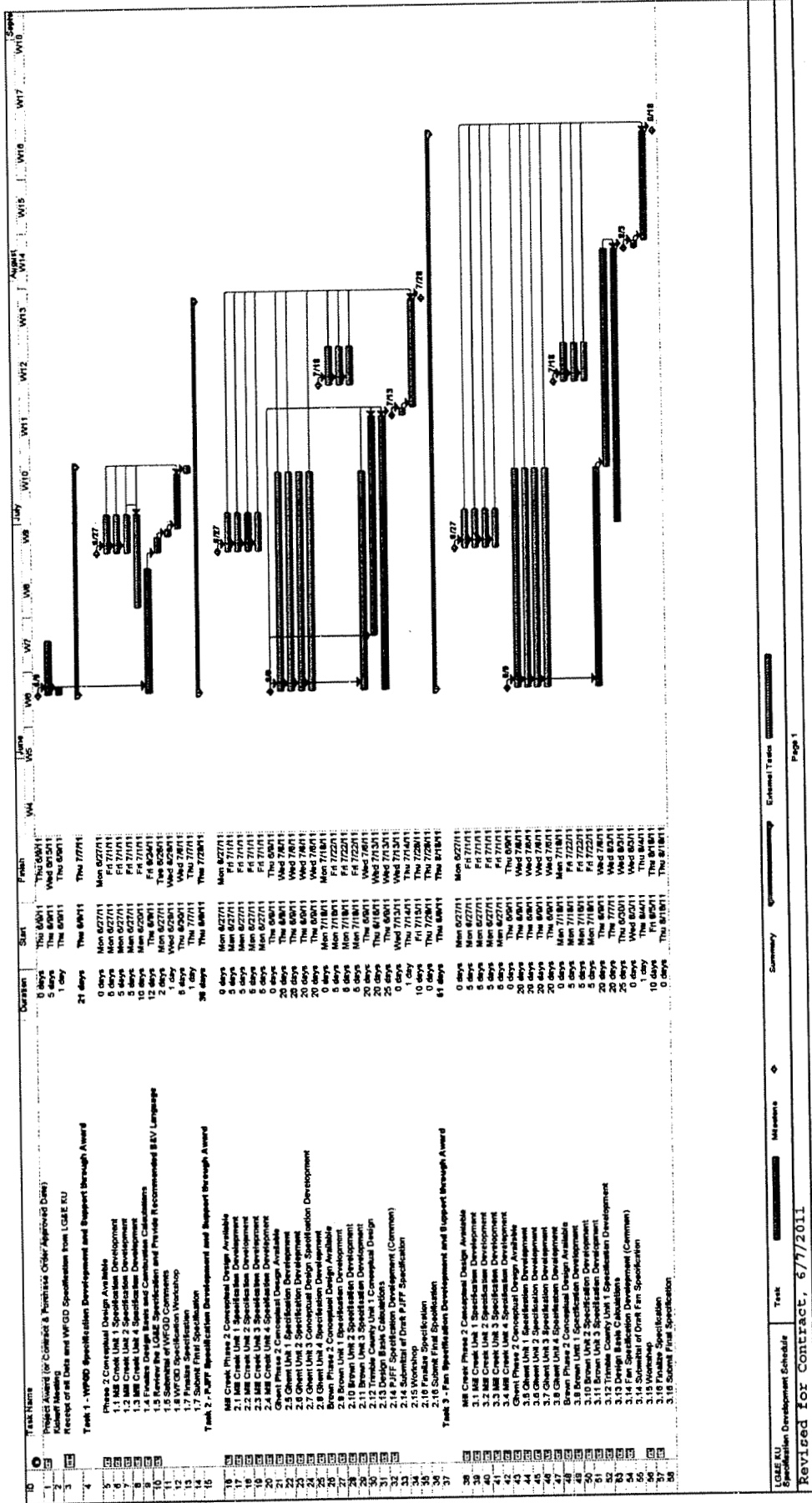
Attachment to Response to KU KPSC Question No. 28(c)

LG&E and KU Contract No. 510845

Black & Veatch Corporation

Air Quality Equipment Technical Specification Development

CONFIDENTIAL INFORMATION REDACTED

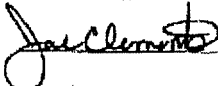


IN WITNESS WHEREOF, the parties have entered into this Agreement as of the Effective Date.

COMPANY:

E.ON U.S. SERVICES INC.

Authorized Signature



Name (Please Print)

Joe Clements

Title

MANAGER, CONTRACTS

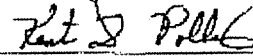
Date

Nov. 11, 2009

CONTRACTOR:

Black & Veatch Corporation

Authorized Signature



Name (Please Print)

KENT D. POLLINS

Title

Sr. V.P.

Date

10 Nov 09

LG&E and KU Services Company

Contractor / Subcontractor Safety Policy

PURCHASE ORDER #: _____ CONTRACT JOB #: _____

NAME OF CONTRACTOR: BLACK & VEATCH CORPORATION

SCOPE OF WORK: AQS TECHNICAL SPECIFICATION DEVELOPMENT

WORK LOCATION: EW BROWN, GENT, TRIMBLE COUNTY, AND MILL CREEK

CONTACT NAME: _____ WORK ORDER #: _____
(AUTHORIZED CONTRACTOR/SUBCONTRACTOR REPRESENTATIVE)

1. Contractor / Subcontractor Safety Policy

General

LG&E and KU Services Company is committed to safety excellence and in providing a safe and healthful work environment for anyone working on our property. The personal safety and health of each employee, contractor and the safety of the general public are of primary importance to LG&E and KU Services Company. Accordingly, there is no job so important that safety policies and procedures or legal obligations are compromised.

This Policy does not replace the Contractor's/subcontractor's ("Contractor") existing safety and health program(s), provided that their program(s) meet or exceed these and any additional site specific minimum requirements. Contractor's employees not following this Policy will be subject to removal from the job site.

The Contractor is required to comply with all federal and state safety laws and all provisions of the LG&E and KU Services Company, Health & Safety Manual. The Contractor is responsible for conducting its work and activities safely. LG&E and KU Services Company expect and require that you continuously update your employees with respect to safety issues relevant to the work and to take immediate corrective action when your employees violate safety rules or procedures.

It is the responsibility of Contractors' construction managers, superintendents, safety representatives and foremen/supervisors to ensure workers under their supervision maintain safe work areas and perform their tasks in a safe manner. It is also the responsibility of each worker to follow every precaution and LG&E and KU Services Company safety rule and Policy to protect them and their fellow workers.

Contractors are responsible for ensuring that any subcontractors working under their purview are held to the same performance expectations, and therefore this Policy, as the contractor themselves.

2. Scope

General

This Policy applies to all construction activities performed for LG&E and KU Services Company by Contractor's employees or employees of the Contractor's subcontractors. Construction activities may originate from construction contracts, service contracts, purchase orders, or in-house work orders. This Policy is in addition to the requirements of the General Services Agreement or other contract under which the Contractor is performing construction activities.

3. General Safety Requirements

1. Contractors will comply with all applicable federal and state regulations and the LG&E and KU Services Company safety rules and programs relevant to the work performed.

2. Contractors will ensure that any and all subcontractors working under their purview comply with all applicable federal and state regulations and the LG&E and KU Services Company safety rules and programs relevant to the work performed.
3. Contractors are responsible for their employees and any and all subcontractors working for them. Contractors are responsible for ensuring that the subcontractors follow all provisions of this document. Contractors are responsible for providing their employees, and subcontractors with all information provided by LG&E and KU Services Company regarding:
 - * Occupational health and safety;
 - * Federal, state and local environmental regulations including LG&E and KU Services Company environmental compliance policies and procedures;
 - * Exposure to atmospheric health, serious physical or chemical hazards; and
 - * Precautionary measures and procedures for performing the work.
4. All Contractors' employees, and any subcontractor employees, shall receive training under the LG&E and KU Services Company Contractor Health and Safety Passport Program.
5. The LG&E and KU Services Company Policy prohibits the Contractor's employees, agents or representatives from:
 - * Consuming or possessing alcohol while on the LG&E and KU Services Company job sites, including the parking lots;
 - * Reporting to perform work on the LG&E and KU Services Company job sites with unauthorized drugs on his/her person or while under the influence of drugs or alcohol;
 - * Intentionally dumping unauthorized chemicals/materials into a sewer, waterway or on the ground;
 - * Mishandling LG&E and KU Services Company waste;
 - * Allowing employees to perform work that involves operating heavy equipment or working at elevations when using prescribed medication that can cause drowsiness or otherwise impair the employee's ability to perform the work in a safe manner.
6. The following conduct is prohibited by the Contractor at and about LG&E and KU Services Company property:
 - * Theft, horseplay, gambling, sabotage or attempted sabotage.
 - * Threatening, intimidating or abusing employees, customers, vendors or guests of LG&E and KU Services Company.
 - * Fighting, creating, or inciting a disturbance.
7. LG&E and KU Services Company have a smoke-free policy in all buildings and vehicles.
8. Attendance at job site safety meetings is required of the Contractor at the discretion of the LG&E and KU Services Company authorized representative. At least one representative of the Contractor will attend such job safety meetings.
9. Any Contractor's employee, who appears sick, extremely tired, or otherwise unable to perform his/her job in a safe manner will be reported to the Contractor's supervision for evaluation and possible removal from the job site.
10. Contractors are responsible for establishing control measures to protect their employees, subcontractors or workers under their control, from exposure to hazards (chemical, atmospheric health and physical) present at the job site.
11. The Contractor must provide electrical ground fault protection for employees using construction power (temporary branch circuits to include extension cords) through the use of approved ground fault circuit interrupters (GFCI). Additionally, Contractors must provide ground fault protection when using permanent facility power and using cord and plug equipment in wet or damp locations. Applies to 120-volt single phase 15 and 20-ampere receptacle outlets.
12. Contractor employees will work in full pants and shirts appropriate for the task being performed and in compliance with appropriate regulations. Shorts and tank tops are not allowed unless otherwise specified. (Some jobs will require wearing long sleeve shirts.)

13. Contractors shall not transport employees in the cargo bed of a truck or trailer.
14. All Contractors must receive authorization from the LG&E and KU Services Company authorized representative, before performing work in areas posted as “DANGEROUS OR HAZARDOUS.”
15. Employees of Resident Contractors, defined as those Contractors with an annual contract and who provide day-to-day services for LG&E and KU Services Company, shall be required to have a negative drug pre-test when hired and before reporting to work at an LG&E and KU Services Company site. They shall also be required by the Contractor to participate in a drug and alcohol testing program that randomly tests 50% of their employees annually, while working on an LG&E and KU Services Company site.
16. If a Contractor brings “transient” workers on site for “plant outages”, “project work” or “major construction”, the transient workers shall be required to have a negative drug pre-test when hired and within 7 days before reporting to work at an LG&E and KU Services Company site. The transient contractors are added to testing pool with 100% annual random testing for the duration of the assignment. If a contractor sends one of their workers to another LG&E and KU Services Company site with no interruption of service, no pre-work drug test is required. The worker remains in the 100% annual random testing pool. If a worker reports to another LG&E and KU Services Company site with an interruption in service of thirty days or more, the worker shall be required to have a negative drug test before reporting to work at that site. The worker remains in the 100% annual random testing pool.

4. Specific Safety Requirements

Contractor Safety Qualification

Contractor selection and ultimate certification shall include an evaluation of the Contractor's prior safety performance, current written safety programs, safety training, and qualifications of key Health & Safety (H&S) personnel to assure LG&E and KU Services Company that the Contractor is capable of meeting its safety performance goals. Employees of certified Contractors and any subcontractor employees shall undergo “Passport Training” for those designated as Industrial Workers prior to performing work at an LG&E and KU Services Company facility. This by no means will replace regulated compliance training for the work the contractor employee will be performing.

Subcontractor Safety Qualifications

Subject only to the specific exception stated below, any and all subcontractors used by a Contractor to perform work for LG&E and KU Services Company shall meet or exceed the following criteria:

- a) The subcontractor’s incident rates for the three (3) most recent calendar years do not exceed, in any one (1) year, the industry average, based on NAISC (or SIC), as published by the Bureau of Labor Statistics;
- b) The subcontractor has not experienced any employee fatality identified within any of the three (3) most recent calendar years’ statistics.
- c) The subcontractor has not received any citation, from OSHA, the Kentucky Public Service Commission or any other state agency regulating utilities in the most recent three (3) calendar years; and
- d) The subcontractor has a current Workers Compensation Insurance Experience Modification Rate (EMR) less than or equal to 1.0.

LG&E and KU Services Company may, at the sole option of such company, provided written authorization for the use of a subcontractor not meeting the above criteria; provided that such authorization must specifically identify how the subcontractor fails to meet the criteria and state additional protective measures the Contractor shall put in place in order to use such subcontractor. Such authorization may be withdrawn at any time for any reason.

The criteria stated above are minimum standards and Contractors using subcontractors shall seek out subcontractors with the highest safety performance available.

Contractor On-site Health and Safety Representative

The Contractor shall appoint a qualified on-site Health and Safety Representative, accepted by the LG&E and KU Services Company authorized representative, with the authority to enforce all of the safety requirements of this Policy, including implementation of the Contractor's Injury and Illness Prevention Program.

LG&E and KU Services Company authorized representative and H&S will make a risk-based decision as to the qualification level of the Contractor H&S representative. Requirements may range from a full-time on-site safety professional (Certified Safety Professional) to a craft supervisor or "person in charge" with competency as measured by experience training.

Whenever the Contractor has any employees or subcontractors on the job site, the Contractor must have a designated representative on the construction worksite that is knowledgeable of the project's hazards and has full authority to act on behalf of the Contractor. The Contractor's designated representative must make periodic observations of the construction worksite to identify and correct any instances of noncompliance with the project health and safety requirements.

Qualification Evaluation

Based on the level of H&S qualification determined necessary by LG&E and KU Services Company, the Contractor shall submit documentation, for review and acceptance by LG&E and KU Services Company in support of the proposed designated representative. Suggested qualifications may include, but are not limited to:

- Professional certifications (CSP, CIH, ASP, etc.).
- Curriculum detailing work experience and EH&S responsibilities on projects of similar scope for the previous five years, at a minimum.
- Evidence of construction safety training such as the 10-hour or 30-hour OSHA training.
- Proof of "Competent Person" (as defined below) or "Qualified Person" (as defined below) status attained by the proposed on-site H&S representative.

Contractor Health and Safety Representative Responsibilities

The Contractor H&S Representative shall:

- ❖ **Assist in the development of the contractor's safety plan and job site management system.**
- ❖ **Support training of contractor personnel.**
- ❖ **Evaluate the Contractor's safety process continuously.**
- ❖ **Attend any pre-job meetings to discuss their site-specific safety plan.**
- ❖ **Conduct and formally document job briefings.**
- ❖ **Assist in the identification of jobs requiring a hazard analysis.**
- ❖ **Assist in evaluating potential subcontractors in accordance with this Policy.**

Competent Person

Each Contractor shall provide to LG&E and KU Services Company a written list of those persons designated as a Competent Person, who shall be available at the work site and capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to workers, and who has authorization to take prompt corrective measures to eliminate them. Persons shall be responsible for conducting periodic observations of the job sites, materials and equipment, and shall maintain the accident prevention program. Contractor shall ensure that each Competent Person listed has been trained in the following areas as applicable:

- Asbestos
- Cranes
- Confined Space
- Demolition
- Excavations
- Fall Protection
- Industrial Trucks
- Ladders
- Scaffold
- Steel Erection
- Tower Climbing

5. Health and Safety Management Plan

Prior to commencement of contract work, the Contractor shall develop and submit to the LG&E and KU Services Company authorized representative a written Health & Safety (H&S) Management Plan on how the contract work will be completed without endangering the health and safety of those performing the work or anyone else working in the general area. The H&S Management Plan will be developed for the following higher risk contracts, including projects:

- ❖ All construction projects (new site and refurbishment)
- ❖ Contracts with an estimated value of \$250,000 and over
- ❖ Long term contracts (12 months and over)

- ❖ Contracts for which the Contractor will use subcontractors.
- ❖ Contracts that provide a service by performing **high risk*** activities.
- ❖ Any other contracts at the discretion of the contract manager.

**High risk activities include but are not limited to:*

- ❖ *Electrical work requiring an Electrical Work Permit*
- ❖ *Asbestos removal*
- ❖ *Cooling tower maintenance*
- ❖ *Demolition*
- ❖ *Hot work in hazardous area*
- ❖ *Permit Required Confined Spaces*
- ❖ *Scaffolding*
- ❖ *Tank cleaning or testing*
- ❖ *Welding in hazardous areas*
- ❖ *Working at heights*
- ❖ *Work on telecommunications towers*
- ❖ *Work involving excavations to a depth of more than 4 feet*
- ❖ *Work involving the use of explosives*
- ❖ *Work on or near pressurized gas pipes*
- ❖ *Work over or adjacent to water*
- ❖ *Work involving diving*

The Health and Safety Management Plan shall contain at a minimum:

- ❖ The name of the On-site Health and Safety representative who is responsible for the implementation of their safety plan.
- ❖ LG&E and KU Services Company policy on environment, safety and health.
- ❖ LG&E and KU Services Company policy on substance abuse and testing policies if applicable.
- ❖ How and when each Contractor will conduct their job briefings.
- ❖ Provisions for conducting and documenting weekly job site safety audit/inspections by manager/supervisor level personnel.
- ❖ Training methods used to meet OSHA training requirements, and to ensure that safety program requirements are communicated to all Contractor personnel.
- ❖ Incident reporting, first aid, and emergency procedures.
- ❖ List of all Competent Persons overseeing those tasks in which OSHA requires such person(s), such as excavation, asbestos abatement and scaffolding.

Subcontractors shall be held to the same level of performance as the Contractor's written H&S Management Plan. The Contractor shall submit written documentation for its subcontractors that demonstrates how their subcontractors shall meet compliance with the site safety plan.

6. Hazard Analysis

Contractor shall complete a “Contractor Safety Management / Project Specific Hazard Analysis” * and a “Contractor Hazard Mitigation Plan”*. These documents shall be submitted to the LG&E and KU Services Company authorized representative prior to the initiation of any work. In addition, a “Quality Assurance Closure Form for Contractors”* shall be completed and submitted to the LG&E and KU Services Company authorized representative at the completion of the project.

** The Hazard Analysis, Mitigation Plan and Closure Form is presented during the Contractor Passport Train-the-Trainer session.*

All Contractor and subcontractor personnel scheduled to work in the activities identified, shall receive safety training in those activities prior to working on them. (A safety toolbox meeting would be an acceptable forum to meet this requirement). The Contractor shall maintain proof of employee training, and shall make available such proof upon request. Note: This by no means shall replace their regulatory compliance training.

Hazard Analysis Requirements

A hazard analysis shall be written based on the following conditions:

- ❖ All major outage work
- ❖ Special Projects
- ❖ Jobs with the highest injury or illness rates
- ❖ Jobs with the potential to cause severe or disabling injuries or illness, even if there is no history of previous accidents
- ❖ Jobs complex enough to require written instructions
- ❖ At the discretion of the LG&E and KU Services Company authorized representative

7. Engineered Protective Systems

The Contractor shall submit for review to the LG&E and KU Services Company authorized representative such safety system that is required by regulation to be designed by a registered professional engineer. This review is solely to verify that the Contractor has had the required protective systems prepared and stamped by a registered professional engineer.

LG&E and KU Services Company review of any documents showing the design or construction of protective systems for worker and property protections shall not relieve the Contractor of its obligations to comply with applicable laws and standards for the design and construction of such protective work. Contractor shall indemnify and hold harmless LG&E and KU Services Company and their engineering personnel from any and all claims, liability, costs, actions and causes of action arising out of or related to the failure of such protective systems. The Contractor shall defend LG&E and KU Services Company, its officers, employees and agents including without limitation engineer personnel, in any litigation or proceeding brought with respect to the failure of such protective systems.

The cost of required safety engineering services required for safety and protective systems shall be borne solely by the Contractor and shall be deemed to have been included in the amount bid for the work as stated in the contract.

8. Safety Training and Education

Contractor shall ensure that its workforce is compliant trained and qualified to perform the work. Contractor shall ensure that all subcontractor employees demonstrate the same level of competence.

Site Orientation

All Contractors / subcontractors shall undergo an LG&E and KU Services Company "site specific" training/orientation prior to engaging in work activities at a generating station. In addition, Contractors that conduct work at LG&E and KU Services Company generation facilities that process ammonia shall also undergo an ammonia awareness training/orientation prior to conducting work.

Contractor employees conducting work in a substation must first complete a Substation Entry training program.

Contractors Pre-job Orientation

Contractor shall require and administer a pre-job orientation to its employees and all subcontractor employees prior to engaging in work activities. Contractor shall maintain on the work site a detailed outline of the orientation and a signed and dated roster of all employees who have completed the orientation. The orientation shall address the following elements at a minimum:

- ❖ Employee rights and responsibilities
- ❖ Authority and responsibility to issue Stop Work Order
- ❖ Alcohol and drug abuse policy
- ❖ Contractor's disciplinary procedures
- ❖ First aid and medical facilities
- ❖ Hazard recognition and procedures for reporting or correcting unsafe conditions or practices
- ❖ Procedures for reporting accidents and incidents
- ❖ Hazard Communication Program
- ❖ Access to employee exposure monitoring data and medical records
- ❖ Protection of the environment, including air, water, and storm drains from construction pollutants
- ❖ Location of and access to reviewed Health & Safety Management Plan, Project Specific Hazard Analysis, and Hazard Mitigation Plan.
- ❖ Location and contents of required postings

Daily Job Briefings

Contractors shall ensure that all of their personnel (employees and sub-contractors) on the job site receive the daily Job Briefing before they start each job. Job Briefings shall discuss, at a minimum, the hazards associated with the job; work procedures involved; special precautions; energy source controls; and personal protection equipment requirements. This job briefing shall be conducted by the contractor's person in charge. Should the scope of the work change, than another job briefing shall be conducted.

9. Emergency Procedures

An emergency is any situation that poses an immediate threat to life or property. Each Contractor shall maintain one person currently qualified in CPR and First Aid on site at all times. Refer to the site orientation, or the LG&E and KU Services Company authorized representative for specific information for handling of a life threatening or other serious injury, fire, etc. Following the occurrence of an emergency, the contractor shall ensure that all proper incident reports are completed and distributed, and that the LG&E and KU Services Company authorized representative is notified immediately.

Incident Reporting

In the event a job site accident occurs, the Contractor shall immediately implement controls and restrictions on the accident site to ensure the site remains undisturbed until released by the LG&E and KU Services Company authorized representative. All accidents shall be reported to the LG&E and KU Services Company authorized representative immediately after the site is secured. A written incident report shall be furnished within the same day of the incident. A job site accident would include, but not be limited to a fire, explosion, equipment failure, release or exposure to toxic liquids, fumes or vapors, etc.

Near Miss / Injury-free Event

It is the responsibility of the Contractor, to complete all near miss investigations, and to report these occurrences with recommendations / implementation of corrective actions. The report is to be submitted to the LG&E and KU Services Company authorized representative within 24 hours.

Medical Treatment Event

The Contractor shall report all accidents (either occupational injury or illness) requiring medical treatment, as soon as possible, but no later than the end of the work shift, to the LG&E and KU Services Company authorized representative along with a copy of the first report of the injury. Serious injuries (defined as an injury that would require off site medical attention) shall be reported within 15 minutes, even during off shifts. (Review project specific emergency notification procedures.)

Fatality

It is the responsibility of the Contractor to immediately notify LG&E and KU Services Company should a fatality occur. It is the responsibility of the Contractor to notify the Kentucky Occupational Safety & Health, Division of Compliance within the appropriate Kentucky notification periods.

Stop Work Order

A stop work order must be given when imminent danger is identified or where significant damage to equipment or property or environmental degradation could occur if the operation continued. Any employee of a Contractor that observes an imminent-danger situation is responsible for stopping the work and reporting it to their supervisor. When a stop work order is issued, only those areas of a construction project immediately involved in the identified hazardous situation are to be included in the order.

Immediately after stopping work, the person issuing the order, or their supervisor, must report to the LG&E and KU Services Company authorized representative of their action. Work shall not resume until the LG&E and KU Services Company authorized representative has agreed that the imminent danger has been eliminated.

10. Hazard Specific Requirements

The Contractor will ensure that their employees (and all subcontractor employees) are properly equipped and trained to comply with the LG&E and KU Services Company standards and federal and state regulations; including but not limited to the following:

Asbestos

Blasting and the use of explosives

Chemical Safety/Hazard Communication

Commercial Diving Operations

Confined Space Entry

Control of Energy Sources (Lockout/Tagout)

Crane Operations, including rigging

Electrical

Fall Management (personal fall arrest systems, scaffolding, walking & work surfaces, ladders and floor & wall openings)

Hazardous Waste and Chemical Spills

Hot Work

Personal Protective Equipment (PPE)

Powered Industrial Trucks

Trenching

11. Enforcement

The Contractor is responsible for the health and safety of its employees and any subcontractor employees under their control. Enforcement of this Policy, as well as other recognized safety requirements, is the responsibility of the Contractor. The evaluation does not constitute acceptance of the Contractor's safety programs or work practices nor, in any way relieve a Contractor of full responsibility for meeting all appropriate OSHA regulations to ensure the safety of its employees.

Whenever there is a jurisdictional question of which standard will apply, the most stringent safety practice will take precedence. The Contractor must document exceptions and attach them to this form. Contractors and their employees who do not follow this Policy are subject to removal from the worksite as well as being banned from future LG&E and KU Services Company projects/contracts.

LG&E and KU Services Company reserve the right to evaluate the safety of Contractor's work practices to determine if they meet LG&E and KU Services Company standards and state/ federal regulations. In addition to the audit rights under the applicable contract LG&E and KU Services Company reserve the right to audit any and all documents (job briefings, audits, etc.) at anytime during the course of the work.

12. LG&E and KU Services Company Safety and Health Issues

Contract work may involve use, handling, storage, or work in vicinity of *hazardous chemicals or materials*. (Concerns are Hazard Communication...spill prevention/response).

Contractor may perform work (operation, maintenance or emergency response function) as necessary.

Contractor may perform *hot work* (e.g. welding, torch cutting, brazing, etc.)

Contract may require Contractor to work in or near *confined spaces*.

Contract work may require using/working under clearance procedures for the control of hazardous energy (*lockout/tagout*).

Contract may involve work on an uncontrolled hazardous substance site, Superfund site, or other contaminated site that could trigger Hazardous Waste Operations and Emergency Response (*HAZWOPER*) planning and training requirements. (Ref: CERCLIS List)

Contract work may involve application, handling or disturbance of *lead, cadmium and/or zinc chromate containing materials*. An example would be the removal of *toxic surface coatings* (i.e. paint).

Contract work may involve handling, disturbance, abatement or work around *asbestos containing materials* (ACM).

Contract work may involve application of *pesticides, herbicides, etc.*

13. Hazardous Chemical Communication

The following is a list of Hazardous Chemicals and atmospheric contamination that may be encountered at LG&E and KU Services Company sites. It should in no way be deemed as the only contamination that could be encountered at LG&E and KU Services Company sites. Always be aware of the contamination that could be encountered and become familiar with their Material Safety Data Sheets.

<u>Chemical Name</u>	<u>Formula</u>	<u>Trade Name</u>	<u>Description/ Target Organ</u>
Anhydrous Ammonia	NH3 (99-100%)	Liquid	colorless gas or compressed liquid with extremely pungent odor. Targets eyes, skin and respiratory system.
Arsenic	AS	Organic Arsenic	Targets skin, kidneys, liver and resp. system.
Asbestos		Hydrated Mineral	Fibers found in insulation, gaskets, packing, vinyl asbestos flooring, roofing, and other

Carbon Dioxide	CO ₂	Carbonic Acid Gas Dry ice	materials. Targets respiratory system. Can cause lung cancer. Targets respiratory system and cardiovascular system
Carbon Monoxide	CO	Flue gas/Monoxide	Colorless, odorless gas. Targets lungs, blood, can be immediately fatal.
Chromium Hexavalent	Cr(VI)	Hexavalent Chromium	Metal that targets the respiratory tract, skin and eyes. Irritant.
Hydrogen Sulfide	H ₂ S	Sewer gas Hydrosulfuric Acid	Colorless gas with strong rotten egg odor, quick loss of sense of smell, can be immediately fatal.
Hydrogen	H ₂	Liquid Gas	Colorless, odorless, targets eyes, skin respiratory system
Lead	Pb	Lead metal	Heavy soft gray metal. Targets eyes, kidneys and blood.
Ozone	O ₃	Triatomic Oxygen	Colorless, targets eyes and respiratory sys.
Sulfur Dioxide	SO ₂	Sulfuric Acid	Targets eyes, skin, and respiratory sys.

14. Definitions

Competent Person: means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to workers, and who has authorization to take prompt corrective measures to eliminate them.

Qualified Person: is one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated their ability to solve or resolve problems relating to subject matter, the work, or the project.

I have read the LG&E and KU Services Company Contractor Safety Policy as outlined above and I understand and agree to abide by the requirements set forth therein; and confirm this by signing below.

CONTRACTOR SENIOR MANAGER: _____

TITLE: _____

DATE: _____

CONTRACTOR/SUBCONTRACTOR SAFETY AND HEALTH QUESTIONNAIRE AND CHECKLIST

THIS QUESTIONNAIRE IS REQUIRED FOR ALL CONTRACTORS AND SUBCONTRACTORS PRIOR TO STARTING WORK

The Company is committed to providing a safe and healthy workplace for employees and Contractors/Subcontractors. To qualify to perform work the Contractor/Subcontractor shall provide the following information and agree to obtain the following information from all subcontractors utilized.

Contractor/Subcontractor Name: _____ (Insert) Date: _____

Contracted Activity (please describe) : _____

Contractor/Subcontractor Representative: _____ (Insert) Phone: _____
(Insert)

Please provide a brief description of the work activities and Location(s) undertaken by your company:

The following information must be from the facilities providing labor. We are not interested in overall statistics at a national or international level. Describe the area this questionnaire applies. _____.

In the table below provide the three most recent full years of history for the area or region this questionnaire applies. **In addition, attach copies of applicable OSHA 300 Logs (showing the actual injuries, etc. – not the summaries) and verification of your EMR/discount rate information.**

ITEM	DESCRIPTION	20__	20__	20__
A	Interstate Experience Modification Rate (EMR)			
	Using the OSHA 300 Logs from the facilities providing labor, please document the following:			
B	Recordable Incident Rate (RIR)	_____	_____	_____
C	Lost Time Incident Case Rate (LTICR)(only incidents that resulted in days away from work)	_____	_____	_____
D	Lost Workday Injury and Illness Case Rate (LWDCR)(includes days away from work, job transfers and job restrictions)	_____	_____	_____
E	Number of Injuries and Illnesses (Total Line Entries of 300 Log)	_____	_____	_____
F	Number of Lost Work Day Cases (Column H of 300 Log)	_____	_____	_____
G	Number of Job Transfer or Restriction Cases (Column I of 300 Log)	_____	_____	_____
H	Number of Injury Related Fatalities (Column G of 300 Log)	_____	_____	_____

I	Employee Hours Worked/Year (If unknown use # of employees x 2080)			
J	Total Number of Employees			
K	NAISC or Standard Industrial Classification (SIC)			

(B) Rate = $E \times 200,000 \div \text{Hours}$ (C) Rate = $F \times 200,000 \div \text{Hours}$ (D) Rate = $(F + G) \times 200,000 \div \text{Hours}$

	Question	Y / N	Comments
1.	Does your company have a written safety and health program? Please attach a copy with this submission.		
2.	Does your company have a written Hazard Communication Program?		
3.	Does your company have a written environmental compliance assurance program? Does your company have a written DOT Operator Qualification Plan? Please attach a copy with this submission for review. Note: Plan must meet or exceed LG&E AND KU SERVICES COMPANY Gas Distribution Operator Qualification Plan.		
4.	Does your company use subcontractors? (This Questionnaire is required for all Subcontractors) If you do use sub-contractors, do you qualify subcontractors based on their ability to address safety, health and environmental requirements? Do you verify that subcontractors meet regulatory requirements? Does your subcontractor have a DOT Operator Qualification Plan or are they qualified under your plan. If they have their own plan then please submit a copy for review		
5.	Are all documents, pertaining to this questionnaire, available for auditing? If no, please explain		
6.	Who in your company is responsible for coordinating your safety and health program? Name/Job Title: _____ Phone # () _____ Is safety and health a full time responsibility for this position?		
7.	Has your company received any citations from a regulatory agency during the last three years? If yes, describe citation(s)		
8.	Does your company perform safety audits/review? If yes, are safety audits documented?		
9.	Who reviews the safety audit/review and how often? Job Title: _____		

10.	<p>Does your company provide/require the following?</p> <p>Eye Protection (ANSI-Z41.1)(29 CFR 1910.133)</p> <p>Fall Protection (ANSI-Z41.1)(29 CFR 1926.501 or 1910.66)</p> <p>Foot Protection (ANSI-Z41.1)(29 CFR 1910.136)</p> <p>Hand Protection (ANSI-Z41.1)(29 CFR 1910.138)</p> <p>Hard Hats (ANSI-Z89.1)(29 CFR 1910.135)</p> <p>Hearing Protection (ANSI-Z41.1)(29 CFR 1910.95)</p> <p>Respiratory Protection (ANSI-Z41.1)(29 CFR 1910.134)</p>		
11.	<p>In addition to regulatory required Personal Protective Equipment, what other PPE is required or supplied?</p> <p>If any, please describe or list: _____</p>		
12.	<p>Describe how you will meet the requirements for first aid and medical provision under this contract.</p>		
13.	<p>Does your company have scheduled, documented employee safety meetings?</p> <p>If yes, how often? _____</p>		
14.	<p>Who conducts the safety meetings?</p> <p>Job Titles: _____</p>		
15.	<p>What managers/supervisors participate in the safety meetings?</p> <p>Job Titles: _____</p>		
16.	<p>Are meetings reviewed and critiqued by managers/supervisors?</p>		
17.	<p>Does your company hold on-site (tailgate/toolbox) safety meetings?</p> <p>If yes, how often? _____</p> <p>Who conducts these safety meetings?</p> <p>Job Titles: _____</p> <p>Is documentation available?</p>		
18.	<p>Does your company have a written policy regarding drug screening or testing of your employees?</p> <p>If Yes Please provide a copy of your plan to The Company representative.</p>		

19.	<p>Does your drug testing program conform to DOT requirements?</p> <p>Comments: _____</p> <p>If yes, which set of DOT regulations is your drug testing program designed to satisfy?</p> <p>Pipeline and Hazardous Material Safety Administration PAHMSA Federal Motor Carrier Safety Administration FMCSA</p>		
20.	<p>Does your company have policy requiring written accident/incident reports (spills, injuries, property damage, etc.)?</p>		
21.	<p>Does your company conduct accident/incident investigating?</p> <p>If yes, please attach a brief outline of procedures</p>		
22.	<p>Does your company document, investigate and discuss near miss accidents?</p> <p>If yes, is documentation available?</p>		
23.	<p>Are accident/incident reports reviewed by managers/supervisors?</p>		
24.	<p>Indicate the circumstances in which your company's employees may be subject to drug screening.</p> <p>Employment Random Probable Cause Post Accident Periodic Other</p>		

PLEASE RESPOND TO ALL ITEMS WITH "YES, NO, OR NA." (ESTIMATED PERCENTAGE OF EMPLOYEES SHOULD REFLECT THE PERCENTAGE OF EMPLOYEES PROVIDING LABOR WHO HAVE RECEIVED TRAINING).

PROGRAMS/TRAINING	REFERENCE SOURCE	PROGRAM DOCUMENTED AND WRITTEN Y/N/NA	EST. %	FREQUENCY OF TRAINING FOR INDIVIDUAL EMPLOYEES
Asbestos Class IV (Awareness)	OSHA 29 CFR 1926.1101			
Asbestos Class III	OSHA 29 CFR 1926.1101			
Asbestos Class I and II	OSHA 29 CFR 1926.1101			
Confined Space Entry	OSHA 29 CFR 1910.146(g)			
Cranes	OSHA 29 CFR 1926.550			
Natural Gas Operations	DOT 49 CFR 192, Subpart N			
DOT HM-126f Hazmat Employee	DOT 49 CFR 172.704			

Generation, Transmission, and Distribution Standard	OSHA 29 CFR 1910.269			
Electrical Safety	OSHA 29 CFR 1910.332			
Emergency Evacuation	OSHA 29 CFR 1910.38(a)			
Excavations	OSHA 29 CFR 1926.651			
Fall Protection	OSHA 29 CFR 1926.500			
First Aid/CPR	OSHA 29 CFR 1910.151(b)			
Forklifts	OSHA 29 CFR 1910.178(l)			
Hazard Communications	OSHA 29 CFR 1910.1200(h)			
Hazwoper - Awareness Level	OSHA 29 CFR 1910.120			
Hazwoper 8 Hour	OSHA 29 CFR 1910.120			
Hazwoper 24 Hour	OSHA 29 CFR 1910.120			
Hazwoper 40 Hour	OSHA 29 CFR 1910.120			
Hazwoper Supervisor 8 Hour	OSHA 29 CFR 1910.120			
Hearing Conservation	OSHA 29 CFR 1910.95			
Incipient Fire Fighting	OSHA 29 CFR 1910.157(g)			
Lead Worker	OSHA 29 CFR 1926.62(l)			
Lead Supervisor	See Above			
Lockout/Tagout Authorized Person	OSHA 29 CFR 1910.147(c)(7)			
Lockout/Tagout Affected Person	See Above			
New Employee Orientation	OSHA 29 CFR 1910.119(g)			
Personal Protective Equipment	OSHA 29 CFR 1910.132(f)			
Process Safety Management	OSHA 29 CFR 1910.119			
Respiratory Protection	OSHA 29 CFR 1910.134			
Scaffolding	OSHA 29 CFR 1926.454			
Substance Abuse	DOT 46 CFR 16.401 & 391.119			

Signature _____ (Signature Required)

Name (Print): _____

Title _____

Date: _____

REVISED DRUG TESTING REQUIREMENTS

Effective January 31, 2008, random drug and alcohol testing of all day-to-day and major construction contractors is required as follows:

- "Day to Day" contractors must randomly test 5% of employees working on LG&E AND KU SERVICES COMPANY sites each month.
- All major construction project contractors must randomly test 10% of all workers each month while working at LG&E AND KU SERVICES COMPANY locations.
- All (100%) of all construction/transient contractors working at generating plants will be drug tested within 7 days prior to starting work for LG&E AND KU SERVICES COMPANY. After that, the contracting company must randomly test 10% of those employees each month while working at LG&E AND KU SERVICES COMPANY sites.
 - If contractor employees are moving from site to site with no more than a 30 day break in LG&E AND KU SERVICES COMPANY work assignments, another pre-work drug test is not required. However, these employees should remain in the 10% per month random testing pool while working at LG&E AND KU SERVICES COMPANY.
- "Day to Day" means contractors who have a daily working relationship with LG&E AND KU SERVICES COMPANY and are not used solely on an intermittent basis.
- "Major Construction Projects" apply to large initiatives in Energy Services as well as the Downtown Arena and Simpsonville Data Center initiatives.
- Pre-employment or reasonable suspicion / probable cause testing should NOT be included in calculating the testing rate.
- The contractor is responsible for all testing and administrative costs associated with the random drug and alcohol testing requirements, but any employee's time away from the job for testing will occur during regularly scheduled work hours and paid by LG&E AND KU SERVICES COMPANY.
- LG&E AND KU SERVICES COMPANY Corporate Health and Safety will randomly audit contractor testing programs to ensure requirements are met.
- An LG&E AND KU SERVICES COMPANY Sourcing Representative will be in touch with each contractor to discuss these requirements.
- Contractors who have additional questions can contact LG&E AND KU SERVICES COMPANY Corporate Health and Safety by leaving a message on the Contractor Health and Safety Hotline at (502) 627-4841 or by sending an e-mail to CHS.Hotline@lge-ku.com.

Contractor Code of Business Conduct

This LG&E and KU Services Company (a Kentucky corporation) Contractor Code of Business Conduct (“Code”) is incorporated by reference into the *General Service Agreement or other agreement between you as the contractor (“Contractor”) and LG&E and KU Services Company and/or one of its affiliates Kentucky Utilities Company, and Louisville Gas and Electric Company (collectively the “Company”)*. This Code sets minimum standards for Contractor’s conduct in the areas addressed. Contracts between Company and Contractor may provide for standards exceeding the standards of this code.

Observance of Laws

Contractor shall fully comply with the provisions of all federal, state and local laws, regulations and ordinances applicable to its activities performed for the Company or any goods or services provided to or on behalf of the Company, including without limitation, all applicable laws, regulations and ordinances pertaining to occupational health and safety and environmental protection.

Bribes and Kickbacks

Contractor may not under any circumstances accept or pay bribes, kickbacks or other similar compensation or consideration in any way relating to the Company or any activity for or on behalf of the Company.

Dishonest and Fraudulent Activity

Contractor shall not engage in or allow its employees to engage in dishonest acts or fraudulent activity in connection with or in association with the Company’s business. For purposes of this policy, the definition of a dishonest act or fraudulent activity includes but is not limited to:

1. An intentional or deliberate act to deprive the Company or any person of something of value, or to gain an unfair benefit using deception, false suggestions, suppression of truth, or other unfair means which are believed and relied upon.
2. A dishonest act or fraudulent activity may be, but is not limited to, an intentional act or activity that is unethical, improper, or illegal such as:
 - a. Embezzlement;
 - b. Misappropriation, misapplication, destruction, removal, or concealment of property;
 - c. Alteration or falsification of paper or electronic documents, including the inappropriate destruction of paper or electronic documents;
 - d. False claims and/or misrepresentation of facts;
 - e. Theft of an asset, including, but not limited to, money, tangible property, trade secrets or intellectual property;

Harassment

Contractor shall not permit sexual advances, actions, comments, or any other conduct that creates an intimidating or otherwise offensive work environment on Company property or any site where Contractor is performing activity for or on behalf of Company. Further, Contractor shall not permit the use of racial and religious slurs, or any other conduct that breeds an offensive work environment, on Company property or any site where Contractor is performing activity for or on behalf of Company.

Drugs and Alcohol

Contractor shall not allow any employee to perform services for or on behalf of Company while under the influence of drugs or alcohol. Contractor shall maintain a drug and alcohol testing program meeting all applicable federal, state and local laws, regulations and ordinances and meeting or exceeding any and all standards stated in any contract with Company or any document incorporated in such a contract.

Misuse of Company Assets

No funds or assets of the Company may be used or paid for any unlawful or improper purpose. A Contractor’s employees shall not have access to any Company computers unless the contract between such Contractor and the Company expressly provides for such access in writing.

Reporting of Violations

In the event Contractor learns of any violation of this Code, Contractor shall immediately report such violation to Company’s Director, Compliance and Ethics at (502) 627-2648.

LG&E AND KU SERVICES COMPANY
OVERVIEW OF PASSPORT PROGRAM

Purpose

Safety is a core value at LG&E and KU Services Company. To enhance the welfare of all who work in and around LG&E and KU Services Company facilities, an enhanced contractor safety program has been developed. Building on internal and external best practices, a cross functional team has developed improvements to the existing "Passport Program." The Passport Program is designed to cover industrial workers. For purposes of this overview, "LG&E and KU Services Company" refers to LG&E and KU. The key components of the program are outlined below.

Process Steps

STEP 1 – CERTIFICATION

All contractors working for LG&E and KU Services Company must be certified prior to entering company work sites or performing any work for the company. This process is administered by Supply Chain Support or as part of the specific project competitive bid process.

As part of the certification process, prime contractors (contractors entering into contracts directly with the company must identify any and all sub-contractors they plan on utilizing in work for the company. Each prime contractor is responsible for ensuring that those identified sub-contractors complete the same information and meet the same performance criteria as the prime contractor is expected to meet. In the event not all subcontractors have been identified prior to certification, the contractor shall notify LG&E and KU Services Company before engaging any subcontractor.

STEP 2 – PASSPORT TRAINING

All industrial workers employed by a certified contractor must complete a training program designed to inform them of the importance of safety and the hazards associated with working in an industrial environment. This training will also identify additional specific OSHA, EPA and DOT compliance training that may be needed in certain situations. Passport training, however, does not take the place of any of the compliance training required by the above listed agencies. **It is the responsibility of the contractor to provide any compliance training required for their employees.**

There are two options available to contractors with regard to the Passport Training:

Option 1 – Train-the-Trainer

LG&E and KU Services Company will provide a curriculum and conduct train-the-trainer sessions at appropriate intervals for the contractor's key safety/training personnel. For those contractors choosing this option, a resume for each prospective trainer must be submitted and must include the following information:

- Training delivery and development experience
- Knowledge of OSHA, DOT, and EPA Standards applicable to the work for which Contractor will be performing
- Health and safety knowledge and experience in managing a health and safety program

By virtue of their attendance and ability to pass a written examination, these key personnel would then be approved to provide training to the contractor's employees to meet the requirements of a "Passport."

NOTE: LG&E and KU Services Company reserves the right to reject any contractor employee as a potential trainer if:

- The above referenced information regarding experience and qualifications is not submitted
- The information submitted does not adequately indicate the prospective trainer's ability to perform the duties of a trainer for the Passport program.
- The prospective trainer does not complete the required train-the-trainer session, including successfully passing the final examination.

Option 2 – External Provider

External providers of the LG&E and KU Services Company Passport safety training program will also be assessed and certified by a representative from the Business Unit Training group in accordance with Option 1. This will allow certified contractors to seek Passport training for their employees from an external provider at their expense. A list of currently approved external providers is included in your certification packet.

STEP 3 – ATTESTATION FORM

Contractors will be required to attest to the fact that each employee, including subcontractors working on any LG&E and KU Services Company job site or performing any work on LG&E AND KU Services Company project, has received the required Passport training before starting work. The contractor will also attest that all employees are current on all required compliance training for the work that employee will be performing. Although LG&E and KU Services Company will be looking for confirmation that compliance training has been completed, it is not a requirement that the contractor provide training records for all individuals, and LG&E and KU Services Company will not monitor compliance training delivered by contractors to their employees. However, site compliance audits will be routinely performed to ensure the adequacy of the training provided. If an incident occurs, LG&E and KU Services Company will require the contractor involved to provide individual training records as part of the incident investigation process.

Upon successful completion of the required Passport safety training by a contractor's employee, the contractor will enter that employee's name, date of birth and training information into the LG&E and KU Services Company Contractor Health & Safety Data Base @ www.lge-ku.com. An electronic notification will be sent to the appropriate LG&E and KU Services Company representative for Passport authorization. Upon approval (on-line), the contractor will be notified electronically that the Passport has been approved and that the contractor can print and issue a Passport card to the newly entered worker. The card will have an identification number that will associate the worker with his or her records in the database. The contractor's employee must carry this card and valid government issued photo ID at all times while on LG&E and KU Services Company property or job sites.

The Passport does not serve as security clearance for an employee. The Passport merely attests to the fact that the contractor employee has completed all required training. Site access will be handled in accordance with local site access procedures. For long-term contractors, a photo ID with a magnetic strip may also be issued to a contractor's employee for security purposes. For all other employees of contractors, a sign-in sheet may be utilized to track individuals on site.

STEP 4 – SITE SPECIFIC ORIENTATION

Each employee of a contractor working on LG&E and KU Services Company property or job sites must attend a site specific orientation training identifying parking directions, security procedures, site map, emergency evacuation procedures, emergency contact names, medical facility locations, specific alarms, and site-specific hazardous materials. A separate orientation will be required for each generation site at which a contractor's employee works. This orientation will normally occur on the first day of work on the job site.

STEP 5 - HIRING SUBCONTRACTORS

Prime contractors are responsible for ensuring that any subcontractors working for them in any capacity directly or indirectly are held to the same safety performance expectations as the prime contractor itself. The primary contractor shall request and review safety data prior to hiring any subcontractors to assure they meet the standards for favorable under the following safety criteria (LG&E and KU Services Company emphasizes that these criteria are minimum standards):

Safety Criteria – INCIDENT RATES*

Favorable: The three most recent years recordable Incident Rates will be compared to the related industry average in such years for the subcontractors' NAISC (or SIC) classification (as published by the Bureau of Labor Statistics). Subcontractors' Incident Rate shall not exceed the industry average in any related year.

Unfavorable: A single fatality identified within any of the three most recent year's statistics.

Safety Criteria – EMR**

Favorable: Workers Compensation Insurance Experience Modification Rate at or better than the average EMR rating for their industry.

Unfavorable: EMR greater than the industry average for their industry.

Note: Contact the LG&E and KU Services Company safety representative for direction in situations where a particular subcontractor does not meet the criteria due to extremely unique circumstances.

STEP 6 – CONTRACTOR REPORTING REQUIREMENTS

All accidents, injuries, dangerous occurrences and near misses shall be reported as soon as possible to the LG&E and KU Services Company Safety contact for the work site. A soon as possible means as soon as communications can be made without jeopardizing the life or health of any person. LG&E and KU Services Company is subject to various regulatory requirements requiring prompt investigation and reporting of certain events making it essential for all contractors to provide information without delay.

Contractors shall also report statistical information to LG&E and KU Services Company on a monthly basis.

The information required is:

- Number of hours worked at each LG&E and KU Services Company job site
- Number of fatalities, Lost Workday Cases and OSHA Recordable Injuries for each job site.

The preceding month's statistical information shall be entered into the LG&E and KU Services Company Contractor Health & Safety Database by the Contractor by Noon on the 5th working day of the month.

All reporting requirements will include any subcontractors working for the prime contractor.

Administration

- **All personnel working for contractors and subcontractors on LG&E and KU Services Company property or job sites must have a Passport.**
- The passport is valid for 12 months or until revoked by LG&E and KU Services Company, whichever is earlier. Refresher training options will be developed and provided annually
- The expenses of training will be the responsibility of the contractor.
- The contractor is responsible for ensuring that all of the above requirements are met for every individual worker utilized in work on LG&E and KU Services Company property or job sites. This includes all subcontractors utilized directly or indirectly by a prime contractor. The prime contractor will be responsible for ensuring that each subcontractor has met all of the requirements regarding issuance of a Passport and for ensuring that all reporting requirements outlined in Step 5, above, are fulfilled.
- LG&E and KU Services Company reserves the right to revoke any individual's Passport. See Passport Revocation and Reinstatement Guidelines below.
- Site audits will be routinely performed to assess effectiveness of and compliance with the information communicated during the Passport Program. These audits will be conducted by Site Safety, Site Contract Proponents, and Managers.
- Corporate Health & Safety will audit contractors for appropriate drug & alcohol, compliance and Passport training documents.

Passport Revocation and Reinstatement Guidelines

LG&E and KU Services Company reserves the right to revoke any individual's Passport. Passports can be revoked for:

- Failure to comply with safety rules, procedures or programs;
- Failure to comply with drug and alcohol rules or testing requirements;
- Creation of an unsafe condition that has potential to result in death or serious injury; or
- Any reason not violating applicable Federal, state or local law deemed appropriate by the responsible site manager.

If a contractor wishes to request that LG&E and KU Services Company reconsider a revocation decision, the request may in writing to the responsible site manager. LG&E and KU Services Company is not obligated to consider such requests.

A Passport may be reinstated in the sole discretion of LG&E and KU Services Company if the contractor has satisfied the responsible manager that the reason for revocation has been corrected.

If an individual's Passport is revoked for a second time, the individual will not be allowed to reapply for an LG&E and KU Services Company passport.

*** Incident Rates**

*Incident rates can be used to show the relative level of injuries and illnesses among different industries, firms, or operations within a single firm. Rates are computed from the following formula:
of injuries or illnesses X 200,000 / employee hours worked.*

****Experience Modification Rates for Workers' Compensation Insurance**

The Experience Modification Rate is a widely used indicator of past safety performance. The insurance industry has developed experience rating systems as an equitable means of determining premiums for workers' compensation insurance. These rating systems consider the average workers' compensation losses for a given firm's type of work and amount of payroll and predict the dollar amount of expected losses to be paid by that employer in a designated rating period, usually three years. Rating is based on comparison of firms doing similar types of work, and the employer is rated against the average expected performance in each work classification. Losses incurred by the employer for the rating period are then compared to the expected losses to develop an experience rating.

Workers' compensation insurance premiums for a contractor are adjusted by this rate, which is called the experience modification rate (EMR). Lower rates, meaning that fewer or less severe accidents had occurred than were expected, result in lower insurance costs. The EMR is adjusted annually by using the rate for the first three of the last four years.

**LG&E AND KU SERVICES COMPANY
Contractor Safety Management
Project Specific Hazard Analysis**

This Hazard Analysis form and the required subsequent Hazard Mitigation Plan shall be completed by the contractor's designee and shall be submitted to The Company's authorized representative and forwarded to the facility's Health and Safety Specialist prior to the initiation of any work.

Work description and location:

LG&E AND KU SERVICES COMPANY Proponent:

Estimated Total Work Days:

Estimated Work Force #:

Equipment Related Compliance and Safety

Will the contractor use any of the following or be exposed to its use by another group:

	Will use it? /May be exposed to its use?		Will work directly with it?	
	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Abrasive Wheel Machinery	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Aerial Work Platform Operation	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Barricades	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Excavation Equipment	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Cranes: overhead <input type="checkbox"/> mobile <input type="checkbox"/>	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>
Forklift Operation	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Ground Fault Protection (GFI's/GFCI's)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>		
Grounding devices and processes (static)	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Hand Tools / Power Tools	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Specific Hazardous Substances Compliance and Safety

Anhydrous Ammonia	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Arsenic	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Asbestos	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Bloodborne Pathogens (Applies to all)	Yes <input type="checkbox"/>			
DOT Hazardous Materials	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
EPA Hazardous Waste	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Explosive Gasses, Vapors, or dusts	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Hazard Communication (Applies to all)	Yes <input type="checkbox"/>			
Hexavalent Chromium (Hot Work)	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
MSDS's supplied on all materials	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Ionizing Radiation	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Lead or other toxic metal concerns	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Other / Specify	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

(Mandatory contact with station H&SS)

Personal Protective Hazard

Which of the following PPE will be required?

Electrical protective equipment	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Low voltage gloves (Class 0, 50-600 volts)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Boundary Distances Established and Enforced	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Arc Flash PPE	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Class 2 600 -15kv gloves/sleeves	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Rubber insulated blankets/hoses	Yes <input type="checkbox"/>	No <input type="checkbox"/>
What will the exposed voltage level be?		
Eye Protection with side shields (at all times)	Yes <input type="checkbox"/>	
Goggles: directly vented <input type="checkbox"/> indirectly vented <input type="checkbox"/>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Face Shield	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Fall Protection or Prevention	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Gloves (Appropriate to the specific task)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Life lines (horizontal or vertical)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Foot Wear: steel toes <input type="checkbox"/> electrical hazard rated <input type="checkbox"/>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hard Hats (Applies to all)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hearing Protection (Reduction to <85db. required)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
PFD (personal flotation device)	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Respiratory Protection	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Portable ventilation equipment	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Identify the respiratory hazard

Will the contractor have exposure to:

Total dust	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Silica	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Arsenic / Flyash	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Asbestos	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Hexavalent Chromium	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Lead	Yes <input type="checkbox"/>	No <input type="checkbox"/>
SO ₂	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Others / specify	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Has air monitoring been arranged? Yes No

Has air monitoring been discussed with the facility's Health & Safety Specialist? Yes No

Work/Safety Procedural Requirements

Work directly with it:

May be exposed to its use by others:

Bulk Chemical Unloading	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Compressed Gas Cylinders	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Confined Space Entry	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Specify:				
CPR & First Aid (under 1910.269, > 50 volts)	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Mobile Crane Operator Physicals (3 yr req)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>		
DOT Commercial Driver's License	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Excavation / Trenching and Shoring	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Explosion Hazard (Deslagging / Blasting)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Fire Protection (Hot work, welding & alike)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

**Work/Safety Procedural Requirements
(continued)**

**Work directly with it? May be exposed to
its use by others?**

Lifting and Rigging	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Lockout/Tagout	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Grounding Procedures	Yes <input type="checkbox"/>	No <input type="checkbox"/>		

Equipment required to be isolated (list):

Marine Standard	Yes <input type="checkbox"/>	No <input type="checkbox"/>		
Scaffold Competent Builder	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Scaffold Competent User	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Suspended Scaffolding	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>
Work Zone Traffic Safety	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Yes <input type="checkbox"/>	No <input type="checkbox"/>

Permits

Are there any permits indicated with outside agencies?
(Asbestos removal, building permits, work zones, RR crossing, environmental impact, etc.)
Detail:

Yes No

Are there any OSHA related permits?
(Permit Required Confined Space Entry, Dig permits and alike)
Detail:

Yes No

Work Area Lighting

Additional lighting devices will be needed

Yes No

Further instructions:

For each Yes box checked, a Hazard Mitigation Plan must be submitted along with this Hazard Analysis prior to the initiation of any work.

Name of the contracted firm:

Name of the contractor's Health & Safety designee completing this Hazard Analysis:

Date

Phone number

*LG&E and KU SERVICES COMPANY
 Contractor Safety Management
 Hazard Mitigation Plan*

This Hazard Mitigation Plan shall be filled in by the contractor's designee and must be submitted to The Company's authorized representative or their designee and forwarded to the facility's Health and Safety Specialist prior to the initiation of any work.

Description of the general job activity (e.g.: replacing duct work, building SCR):

Contractor's site supervisor:

Contractor's site Health and Safety Representative:

Date:

What is the work, what are the hazards, and how will we specifically protect our employees?		
Work Task Sequence Identify the principal steps and the sequence of work activities. (e.g.: Entry into an excavation)	Identify and Analyze the Hazards Analyze each step for hazards. (e.g.: cave in, falls, confined space entry)	Hazard Controls Develop <u>specific</u> controls for each hazard identified. (e.g.: bench or slope or shore, air monitor, barrier, PPE. Be specific)

Work Task Sequence	Identify and Analyze the Hazards	Hazard Controls

Identify the principal steps and the sequence of work activities.	Analyze each step for hazards.	Develop specific controls for each hazard identified.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 29

Witness: John N. Voyles, Jr.

- Q-29. Refer to Voyles Testimony at page 22, lines 17-21. The testimony states that KU does not plan to enter into any contracts for equipment or construction until a final order is issued in this proceeding "unless entering into one or more such contracts would be necessary to ensure timely environmental compliance or to avoid significant market price or equipment availability risks".
- a. Has KU enter into any contracts for Projects 29, 34 and/or 35 to date?
 - b. How will KU assess the market price or equipment availability risks associated with the related equipment or construction?
- A-29. a. Please see the response to Question No. 26.
- b. As the Companies have been actively engaged in environmental control equipment and major construction projects during the recent 10 years, LG&E and KU maintain good relationships with engineering and construction firms that monitor market impacts to commodities as well as labor and equipment availability. Along with our own experience, these firms have been willing to discuss their market research with the company in the past which has been invaluable to our engineering, project management and construction efforts. Additionally, KU actively participates in industry conferences where market volatility, equipment availability and construction issues are discussed.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 30

Witness: John N. Voyles, Jr.

- Q-30. Refer to Voyles Testimony at page 23. Has KU issued any Requests for Quotations ("RFQs") for the equipment related to these projects? If so, provide the issue date of the RFQ, the equipment for which quotations are sought, and the due date for responses.
- A-30. No Requests for Quotations for the equipment related to the projects have been issued as of the date of this filing.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 31

Witness: John N. Voyles, Jr.

- Q-31. Refer to Voyles Testimony, Exhibit JNV-2, page 6, Environmental Air Compliance Strategy Summary. The discussion at the end of Section 3.0 indicates that the plans should not be considered final at this time. What is the expected range of actual expenditures that KU may incur for each of the three projects - 29, 34 and 35?
- A-31. The discussion at the end of Section 3.0 relates to equipment specifications and design. The estimates contained in the Compliance Plan are reasonable for the purposes of evaluating and selecting technology for the Compliance Plan in this proceeding. Actual expenditures are monitored in the normal course through monthly ECR filings and further reviewed by the Commission in 6-month and 2-year review cases.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 32

Witness: John N. Voyles, Jr.

- Q-32. Refer to Voyles Testimony, Exhibit JNV-2. Provide the following information for each unit proposed for the addition of air quality control ("AQC") equipment:
- a. Year placed in service;
 - b. The number of normal cycles (stops and starts);
 - c. The number of emergency trips and starts;
 - d. Heat rate;
 - e. Capacity Factor;
 - f. Provide for the last 10 years of major internal and minor outages including the major projects completed during each outage;
 - g. Provide an outline of the major availability and performance detractors;
 - h. Provide a condition assessment that includes;
 - (1) Condition of turbine.
 - (2) Condition of generator.
 - (3) Condition of boiler.
 - (4) Condition of balance of plant equipment.
 - i. Provide any formal life assessment or extension reports.

A-32. a. The requested information is contained in the table below.

Unit	In-Service Date
Brown 1	05/01/57
Brown 2	06/01/63
Brown 3	07/19/71
Ghent 1	02/19/74
Ghent 2	04/20/77
Ghent 3	05/31/81
Ghent 4	08/18/84

b. The requested information is contained in the table below.

Actual Unit Starts

Unit	2010
Brown 1	18
Brown 2	14
Brown 3	7
Ghent 1	7
Ghent 2	7
Ghent 3	14
Ghent 4	20

Source: Micro GADS NERC data.

c. The requested information is contained in the table below. Please note that emergency starts are not applicable to these coal units.

Actual NERC "U1" (Immediate) Forced Outages

Unit	2010
Brown 1	10
Brown 2	4
Brown 3	4
Ghent 1	3
Ghent 2	5
Ghent 3	10
Ghent 4	17

Source: Micro GADS NERC data.

- d. The requested information is contained in the table below.

Actual NERC Net Heat Rate

Unit	2010
Brown 1	11,064
Brown 2	10,293
Brown 3	10,815
Ghent 1	10,342
Ghent 2	10,406
Ghent 3	10,849
Ghent 4	10,911

Source: Micro GADS NERC data and station reports.

- e. The requested information is contained in the table below.

Actual NERC Net Capacity Factor

Unit	2010
Brown 1	46.26
Brown 2	51.86
Brown 3	49.93
Ghent 1	79.99
Ghent 2	77.16
Ghent 3	81.68
Ghent 4	63.63

Source: Micro GADS NERC data.

- f. In response, please find attached a list of major capital projects performed during an outage in the last ten years. The Company is providing the requested information under a Petition for Confidential Protection being filed with the Commission.
- g. The requested information is contained in the table below.

2010 Events > 20,000 MWh by Unit:

<u>Unit Name</u>	<u>Event Type</u>	<u>Event Start</u>	<u>Event End</u>	<u>Event Hours</u>	<u>MWH Lost</u>	<u>Event Cause</u>
BR2	U2	9/19/10 5:58	9/27/2010 1:40	187.70	31,721	TURBINE MAIN STOP VALVES
BR3	MO	6/30/10 21:41	7/4/10 2:40	76.98	32,025	FIRST REHEATER LEAKS
BR3	MO	10/14/10 20:32	10/17/10 16:20	67.80	29,357	FLUE GAS EXPANSION JOINTS
GH1	U3	5/22/10 22:22	5/26/10 6:55	80.55	38,261	BOILER TUBE WATERWALL (FURNACE WALL) LEAK
GH3	U1	10/5/10 4:25	10/10/10 14:30	130.08	64,391	INDUCED DRAFT FANS
GH3	U2	3/23/10 16:40	3/27/10 22:17	101.62	50,300	CIRCULATING WATER PIPING
GH3	D1	1/7/10 7:36	1/17/10 3:52	236.27	34,529	OTHER FEEDWATER PUMP PROBLEMS
GH3	U3	10/3/10 6:11	10/5/10 4:25	46.23	22,886	BOILER TUBE WATERWALL (FURNACE WALL) LEAK
GH3	U1	12/28/10 21:30	12/30/10 19:30	46.00	22,770	CIRCULATING WATER PIPING
GH3	MO	4/9/10 22:23	4/11/10 21:10	46.78	22,456	FIRST REHEATER LEAKS

- h. Please see the attached CD in folder titled Question 32(h).
- i. Please see the attached CD in folder titled Question 32(i). Certain redacted information is being filed with the Commission under seal pursuant to a Petition for Confidential Protection.

Attachment to Response to KU KPSC-1 Question No. 32(f)

CONFIDENTIAL INFORMATION REDACTED

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 33

Witness: John N. Voyles, Jr.

Q-33. Refer to Voyles Testimony. Indicate whether any risk assessment was performed to determine probability of units meeting a 30 year projected life extension.

A-33. Please see response to Question No. 32(h).

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 34

Witness: Charles R. Schram

Q-34. Refer to Voyles Testimony. Are there any capital costs included in individual unit budgets for replacement of major plant components such as turbine shells, rotors, generator components, steam leads, heaters, transformers. Have these costs been included in the economic assessment?

A-34. Yes, capital costs are included in the economic assessment for projects related to the ongoing reliability and integrity of the individual units. Examples of these projects include stator rewinds, air heater basket replacements, and controls upgrades.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 35

Witness: Charles R. Schram

Q-35. Refer to Voyles Testimony. Provide any analysis on replacement power costs for the 2015-2017 time period. Include potential long term purchases, bi-lateral contracts or other sources that may be available should there be delays in completing construction. What is the impact on heat rate of the selected option?

A-35. The 2011 Environmental Compliance Plan was developed based on a construction schedule for facilities necessary to comply with environmental regulations in the time specified by the environmental statutes in the CAAA and the EPA regulations. Relying on purchased power as a compliance measure would create market risk that could have a detrimental impact on customers. As in the past during large construction projects, if delays in construction occur, the Companies have taken various prudent measures to manage the cost impact to customers. Such measures have included the operation of combustion turbines, short-term purchases from the market, consent decrees with regulatory agencies (if permitted) or other changes to operations.

Long term purchases, bi-lateral contracts or other sources as well as delays in completing construction do not have an impact on heat rate.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 36

Witness: John N. Voyles, Jr.

Q-36. Refer to Voyles Testimony at page 11, line 17.

- a. Was there any analysis that considered a long term outage to replace the existing FGD in its present location?
- b. What is the incremental cost in performance and ancillary services required for a FGD located further from the unit?

A-36. Mr. Voyles's testimony at the referenced location for KU does not discuss FGDs. KU assumes that this question only relates to the LG&E testimony.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 37

Witness: Charles R. Schram

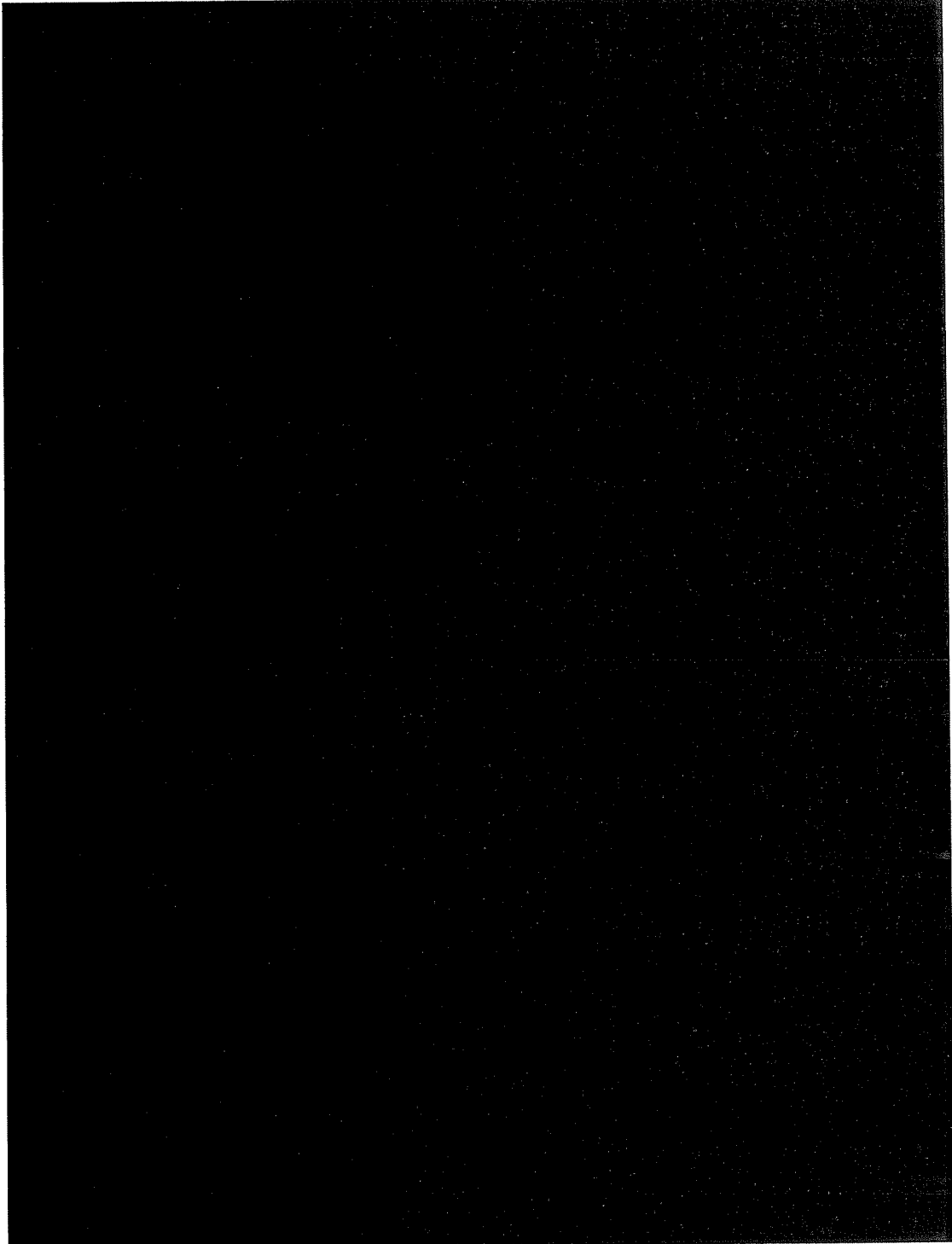
- Q-37. Refer to Voyles Testimony at page 24, line 10. Provide any analysis to support the conclusion that purchased power would be more expensive, given all factors.
- A-37. The Companies believe it is reasonable to expect that the coal units for which controls are proposed will continue to produce power at a lower cost than market power prices, based on current and forward market prices. Please see the average dispatch cost for the coal units for which controls are proposed in the attachment being provided pursuant to a Petition for Confidential Protection. These costs are below the around-the-clock electricity prices contained in the attachment to the response to Question No. 46.

CONFIDENTIAL INFORMATION REDACTED

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

Total Fuel Cost (\$000)

BROWN 1
BROWN 2
BROWN 3
BROWN 5
BROWN 6
BROWN 7
BROWN 8
BROWN 9
BROWN 10
BROWN 11
CANE RUN 4
CANE RUN 5
CANE RUN 6
CANE RUN 11
GHENT 1
GHENT 2
GHENT 3
GHENT 4
GRRIVER 3
GRRIVER 4
HAEFLING11
MILL CRK 1
MILL CRK 2
MILL CRK 3
MILL CRK 4
OVEC 1
PADDYS 11
PADDYS 12
PADDYS 13
TCCT 5
TCCT 6
TCCT 7
TCCT 8
TCCT 9
TCCT 10
TC175% 1
TC275% 2
TYRONE 3
ZORN 1

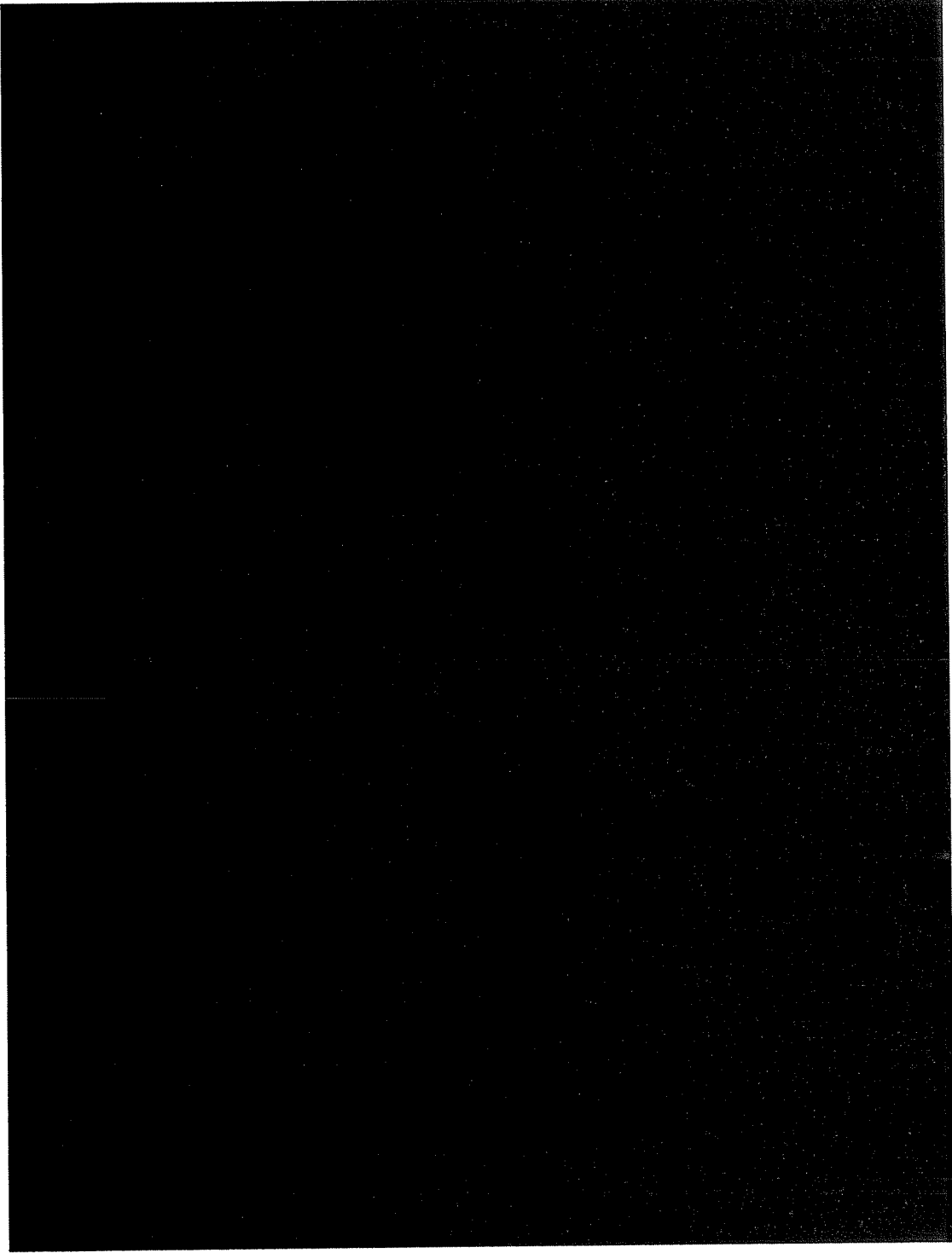


CONFIDENTIAL INFORMATION REDACTED

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

O&M Costs (\$000)

BROWN 1
BROWN 2
BROWN 3
BROWN 5
BROWN 6
BROWN 7
BROWN 8
BROWN 9
BROWN 10
BROWN 11
CANE RUN 4
CANE RUN 5
CANE RUN 6
CANE RUN 11
GHENT 1
GHENT 2
GHENT 3
GHENT 4
GRRIVER 3
GRRIVER 4
HAEFLING1 1
MILL CRK1
MILL CRK 2
MILL CRK 3
MILL CRK 4
OVEC 1
PADDYS 11
PADDYS 12
PADDYS 13
TCCT 5
TCCT 6
TCCT 7
TCCT 8
TCCT 9
TCCT 10
TC1 75% 1
TC2 75% 2
TYRONE 3
ZORN 1

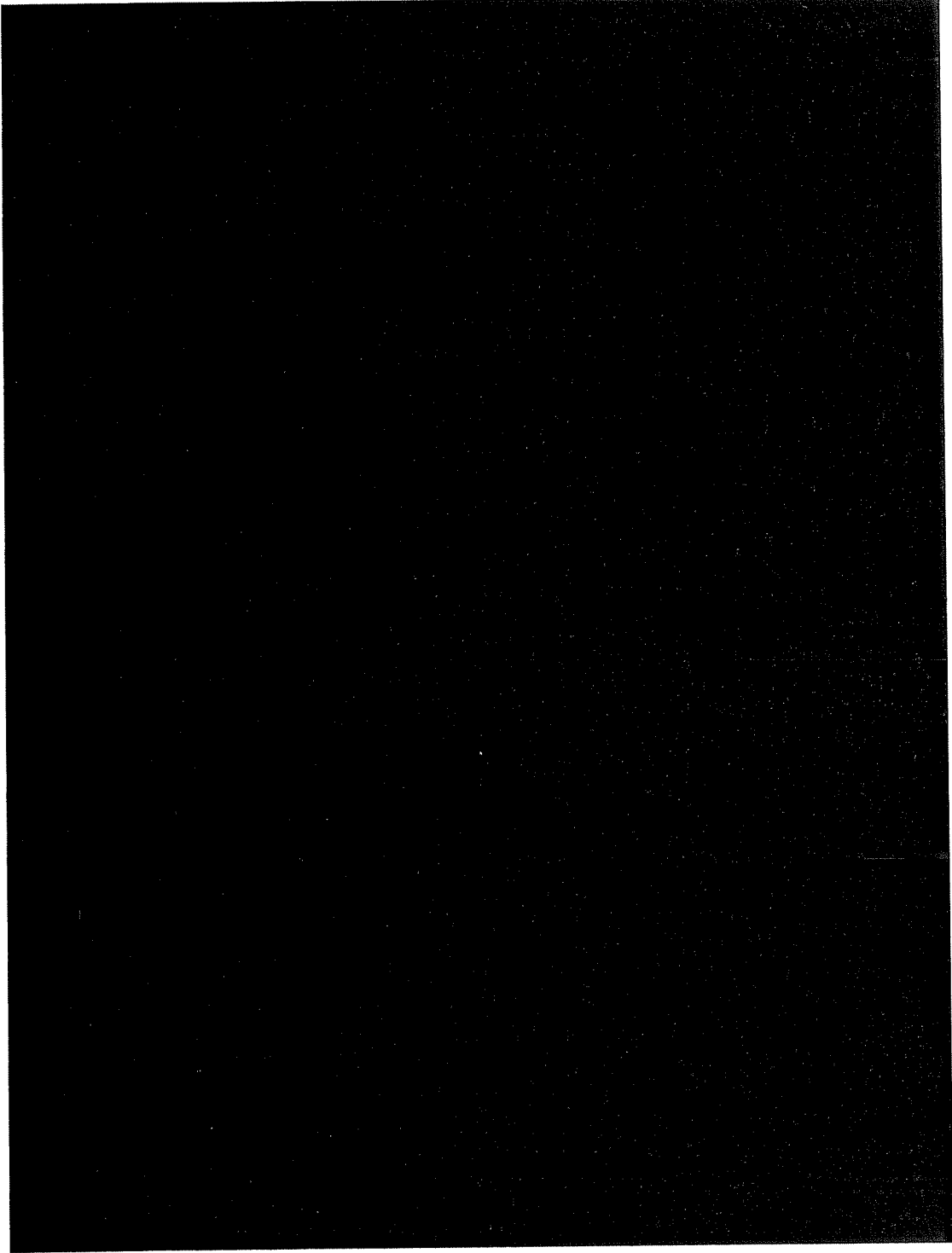


CONFIDENTIAL INFORMATION REDACTED

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

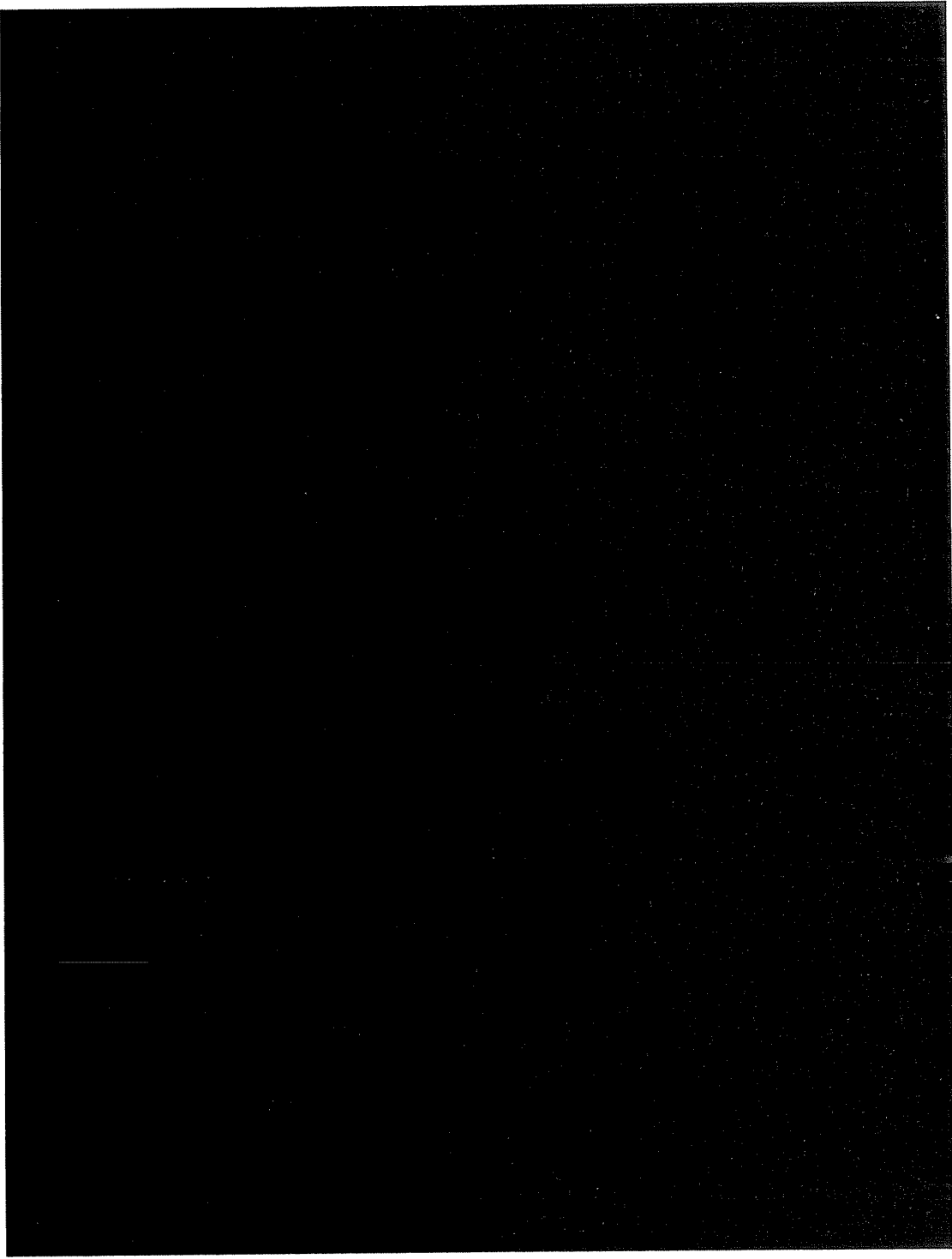
Generation (GWh)

BROWN 1
BROWN 2
BROWN 3
BROWN 5
BROWN 6
BROWN 7
BROWN 8
BROWN 9
BROWN 10
BROWN 11
CANE RUN 4
CANE RUN 5
CANE RUN 6
CANE RUN 11
GHENT 1
GHENT 2
GHENT 3
GHENT 4
GRIVER 3
GRIVER 4
HAEFLING1
MILL CRK 1
MILL CRK 2
MILL CRK 3
MILL CRK 4
OVEC 1
PADDYS 11
PADDYS 12
PADDYS 13
TCCT 5
TCCT 6
TCCT 7
TCCT 8
TCCT 9
TCCT 10
TC1 75% 1
TC2 75% 2
TYRONE 3
ZORN 1



CONFIDENTIAL INFORMATION REDACTED

2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040



Total Fuel Cost (\$000)

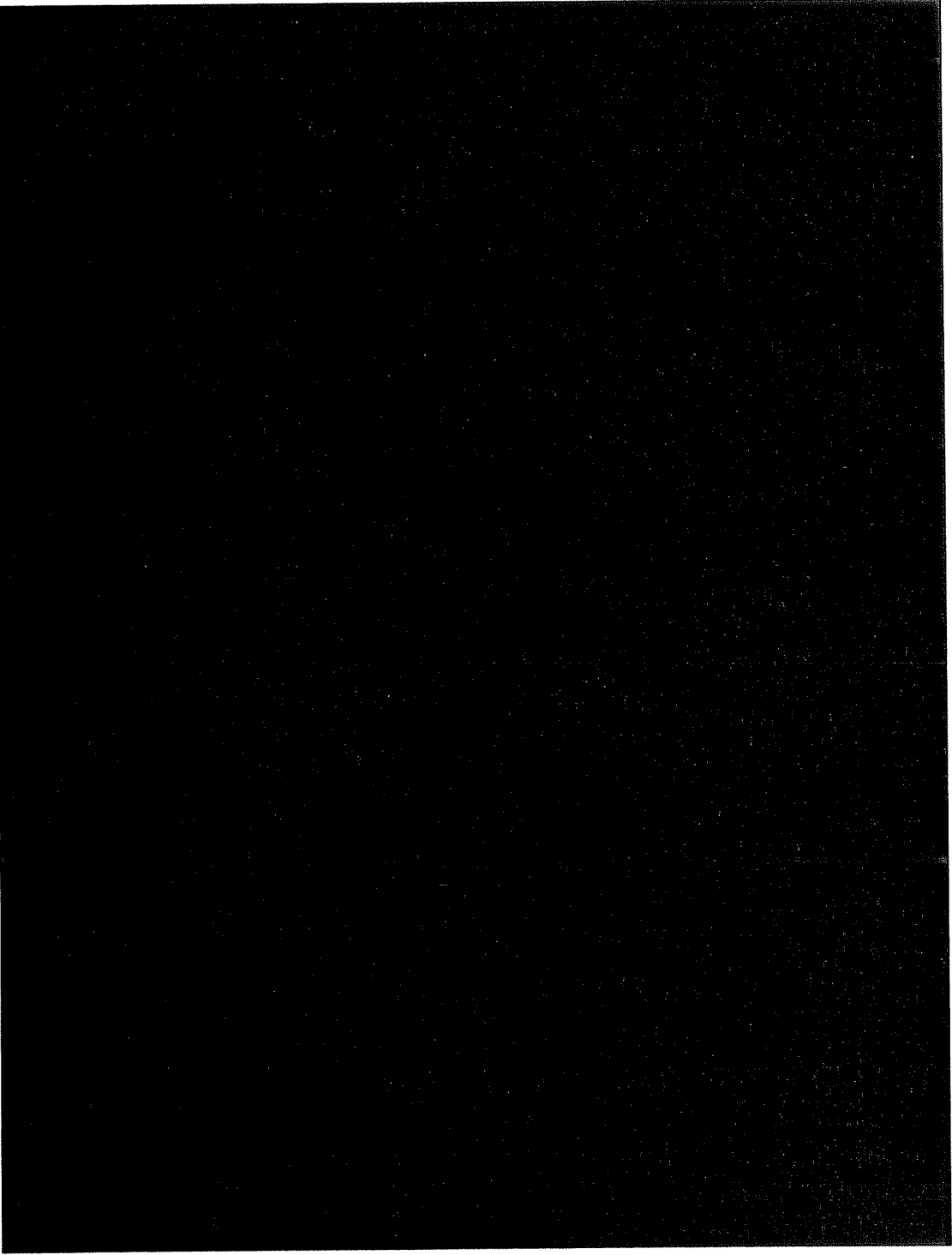
- BROWN 1
- BROWN 2
- BROWN 3
- BROWN 5
- BROWN 6
- BROWN 7
- BROWN 8
- BROWN 9
- BROWN 10
- BROWN 11
- CANE RUN 4
- CANE RUN 5
- CANE RUN 6
- CANE RUN 11
- GHENT 1
- GHENT 2
- GHENT 3
- GHENT 4
- GRRIVER 3
- GRRIVER 4
- HAFLING1 1
- MILL CRK 1
- MILL CRK 2
- MILL CRK 3
- MILL CRK 4
- OVEC 1
- PADDYS 11
- PADDYS 12
- PADDYS 13
- TC CT 5
- TC CT 6
- TC CT 7
- TC CT 8
- TC CT 9
- TC CT 10
- TC1 75% 1
- TC2 75% 2
- TYRONE 3
- ZORN 1

CONFIDENTIAL INFORMATION REDACTED

2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040

O&M Costs (\$000)

BROWN 1
 BROWN 2
 BROWN 3
 BROWN 5
 BROWN 6
 BROWN 7
 BROWN 8
 BROWN 9
 BROWN 10
 BROWN 11
 CANE RUN 4
 CANE RUN 5
 CANE RUN 6
 CANE RUN 11
 GHENT 1
 GHENT 2
 GHENT 3
 GHENT 4
 GRIVER 3
 GRIVER 4
 HAEFLNGI 1
 MILL CRK 1
 MILL CRK 2
 MILL CRK 3
 MILL CRK 4
 OVEC 1
 PADDYS 11
 PADDYS 12
 PADDYS 13
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 TCCT 8
 TCCT 9
 TCCT 10
 TC175% 1
 TC275% 2
 TYRONE 3
 ZORN 1

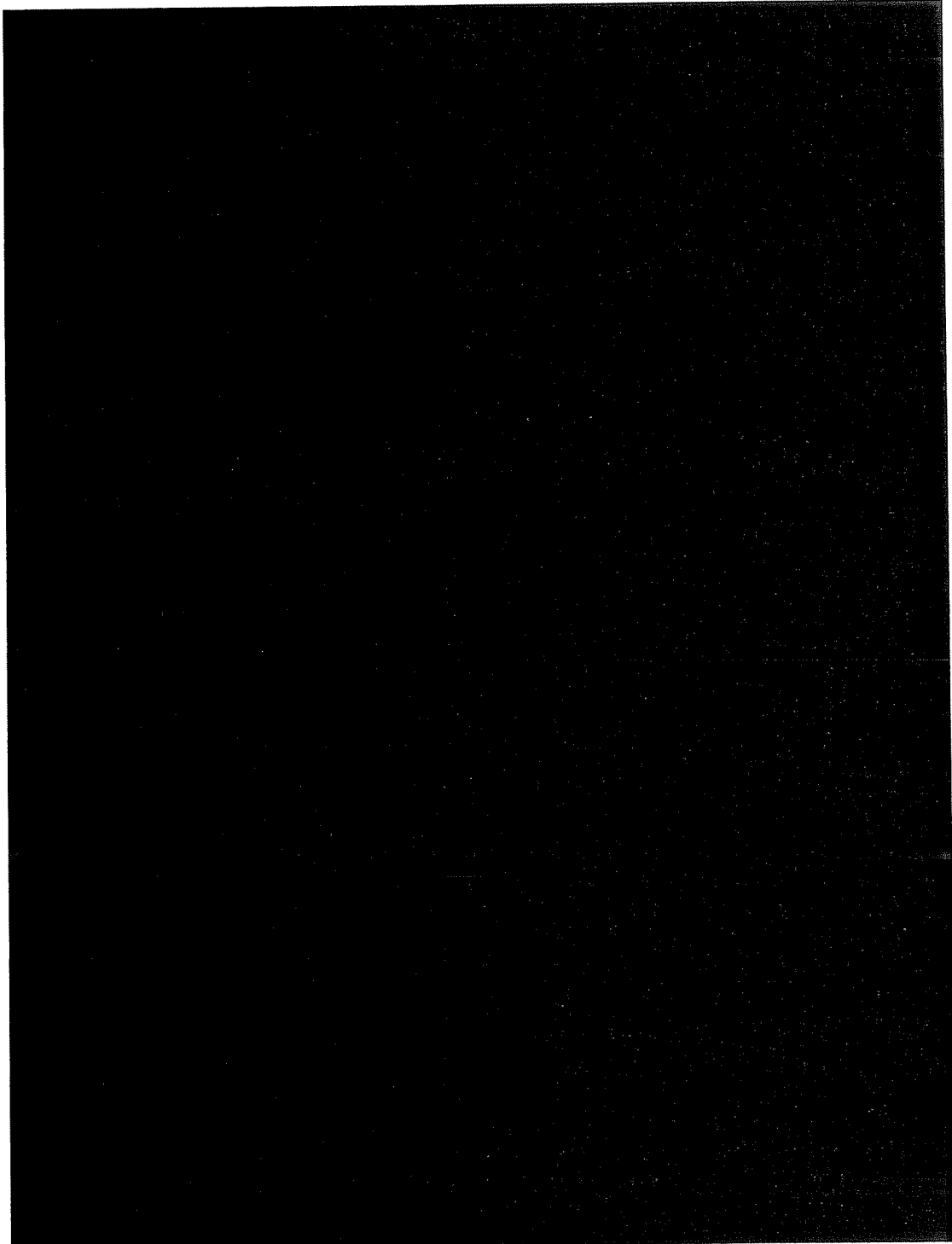


CONFIDENTIAL INFORMATION REDACTED

2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040

Generation (GWh)

BROWN 1
BROWN 2
BROWN 3
BROWN 5
BROWN 6
BROWN 7
BROWN 8
BROWN 9
BROWN 10
BROWN 11
CANE RUN 4
CANE RUN 5
CANE RUN 6
CANE RUN 11
GHENT 1
GHENT 2
GHENT 3
GHENT 4
GRRIVER 3
GRRIVER 4
HAFLING1 1
MILL CRK 1
MILL CRK 2
MILL CRK 3
MILL CRK 4
OVEC 1
PADDYS 11
PADDYS 12
PADDYS 13
TCCT 5
TCCT 6
TCCT 7
TCCT 8
TCCT 9
TCCT 10
TC1 75% 1
TC2 75% 2
TYRONE 3
ZORN 1

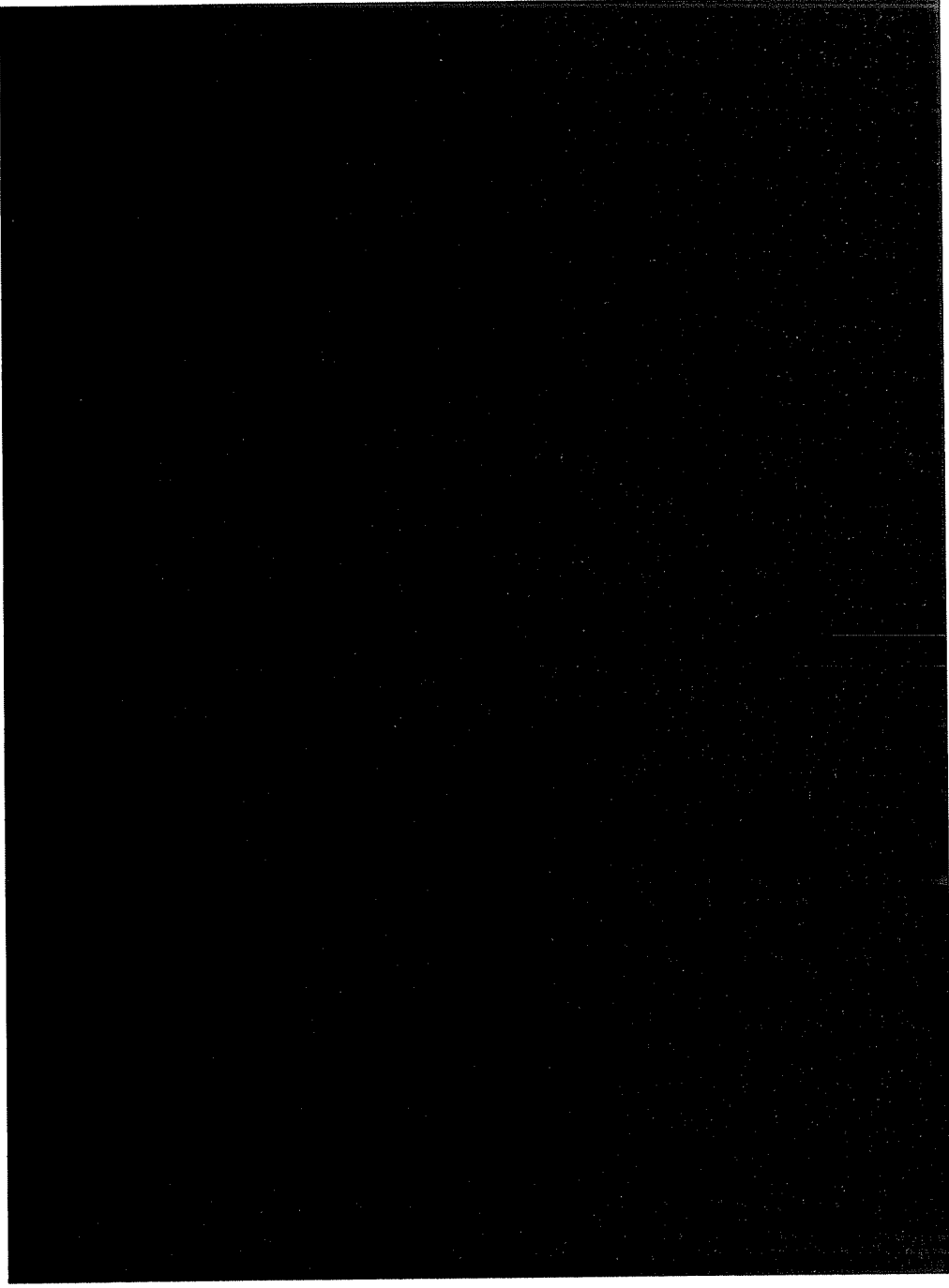


CONFIDENTIAL INFORMATION REDACTED

Average Dispatch Cost (\$/MWh)

2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

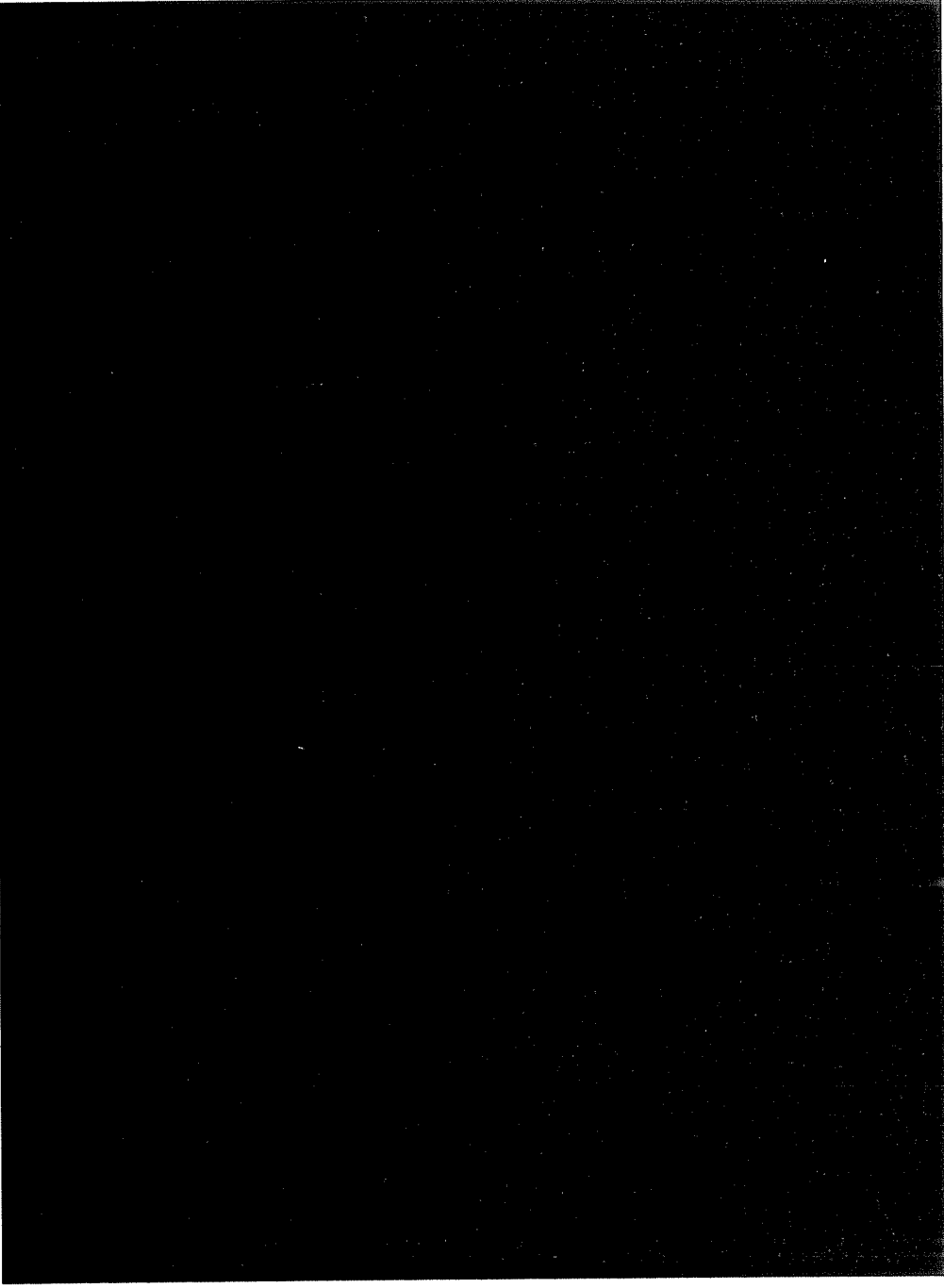
BROWN 1
BROWN 2
BROWN 3
BROWN 5
BROWN 6
BROWN 7
BROWN 8
BROWN 9
BROWN 10
BROWN 11
CANE RUN 4
CANE RUN 5
CANE RUN 6
CANE RUN 11
GHENT 1
GHENT 2
GHENT 3
GHENT 4
GRRIVER 3
GRRIVER 4
HAFFLING 1
MILL CRK 1
MILL CRK 2
MILL CRK 3
MILL CRK 4
OVEC 1
PADDYS 11
PADDYS 12
PADDYS 13
TC CT 5
TC CT 6
TC CT 7
TC CT 8
TC CT 9
TC CT 10
TC1 75% 1
TC2 75% 2
TYRONE 3
ZORN 1



CONFIDENTIAL INFORMATION REDACTED

Average Dispatch Cost (\$/MWh)

2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040



BROWN 1
BROWN 2
BROWN 3
BROWN 5
BROWN 6
BROWN 7
BROWN 8
BROWN 9
BROWN 10
BROWN 11
CANE RUN 4
CANE RUN 5
CANE RUN 6
CANE RUN 11
GHENT 1
GHENT 2
GHENT 3
GHENT 4
GRRIVER 3
GRRIVER 4
HAEFLNG1 1
MILL CRK 1
MILL CRK 2
MILL CRK 3
MILL CRK 4
OVEC 1
PADDYS 11
PADDYS 12
PADDYS 13
TC CT 5
TC CT 6
TC CT 7
TC CT 8
TC CT 9
TC CT 10
TC1 75% 1
TC2 75% 2
TYRONE 3
ZORN 1

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 38

Witness: John N. Voyles, Jr.

- Q-38. Refer to Voyles Testimony. Provide a color copy of the May 2011 presentation titled "Existing and Preliminary Air Quality Control Process flow Diagrams."
- A-38. A color copy of the May 2011 presentation was included in the Application as Exhibit JNV-3. A color copy is attached to this response.

Existing & Preliminary Future Air Quality Control Process Flow Diagrams

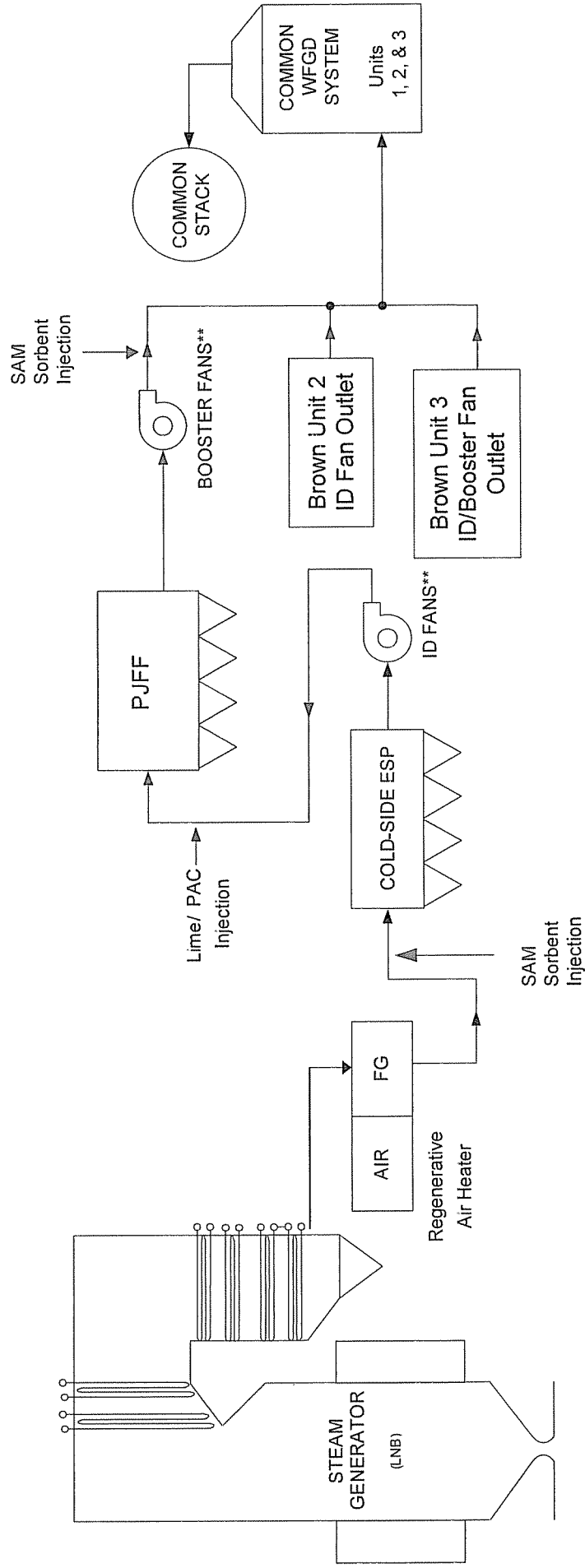
For E.W. Brown and Ghent Generating Stations



PPL companies

May 2011

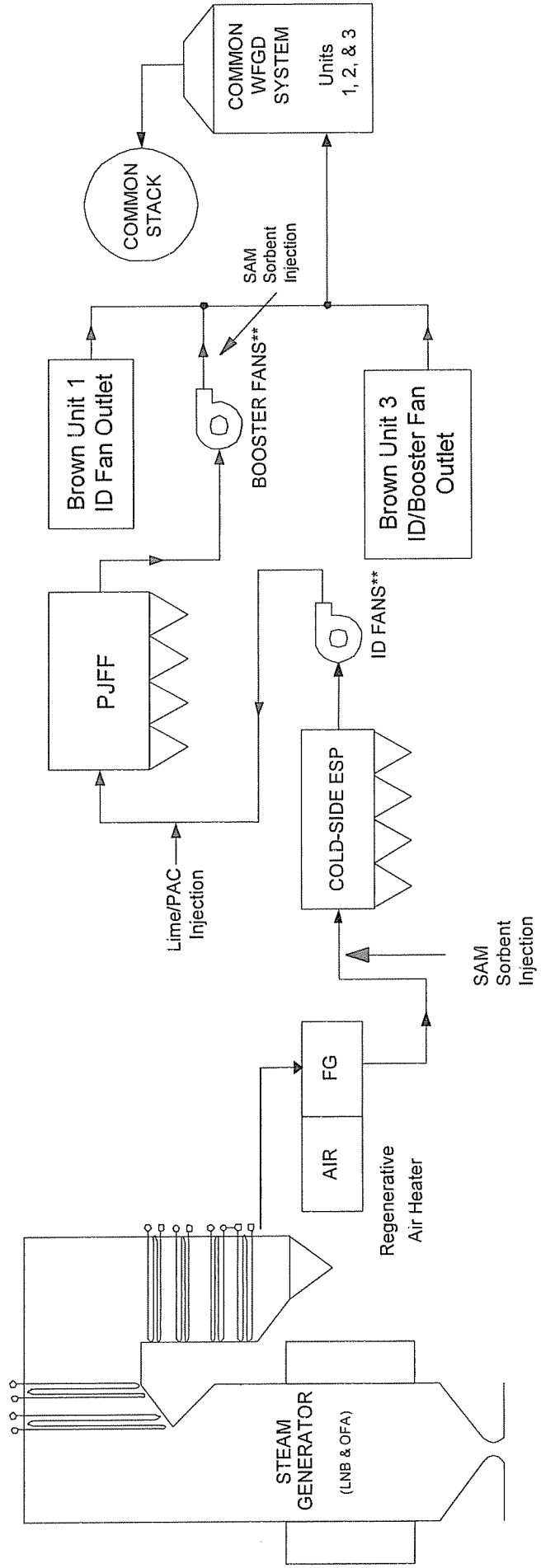
EW Brown Unit 1 AQC Process Flow Diagram



****Replacement to new Booster Fans or larger ID Fans is yet to be determined**

Black = Existing
Red = Preliminary Additions

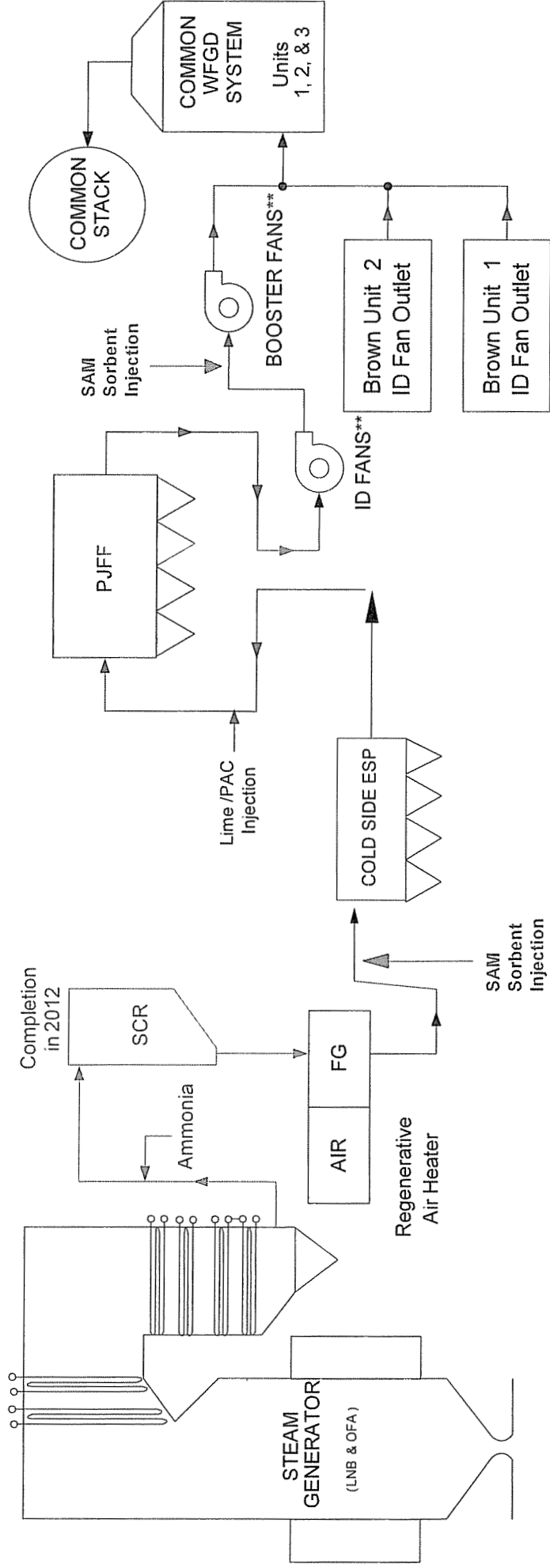
EW Brown Unit 2 AQC Process Flow Diagram



***Replacement to new Booster Fans or larger ID Fans is yet to be determined*

Black = Existing
Red = Preliminary Additions

EW Brown Unit 3 Process Flow Diagram



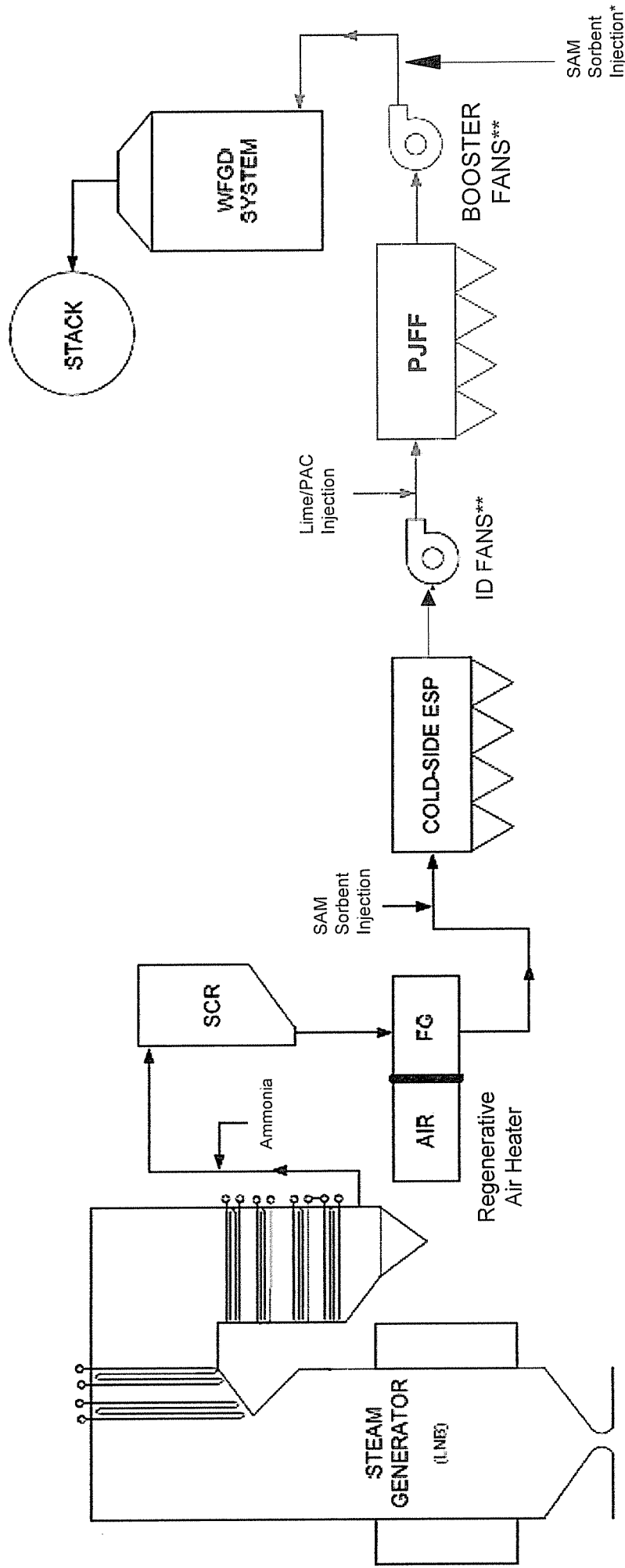
**Replacement to new Booster Fans or larger ID Fans is yet to be determined

Black = Existing

Red = Preliminary Additions

Green = Precisiously approved. Not yet installed.

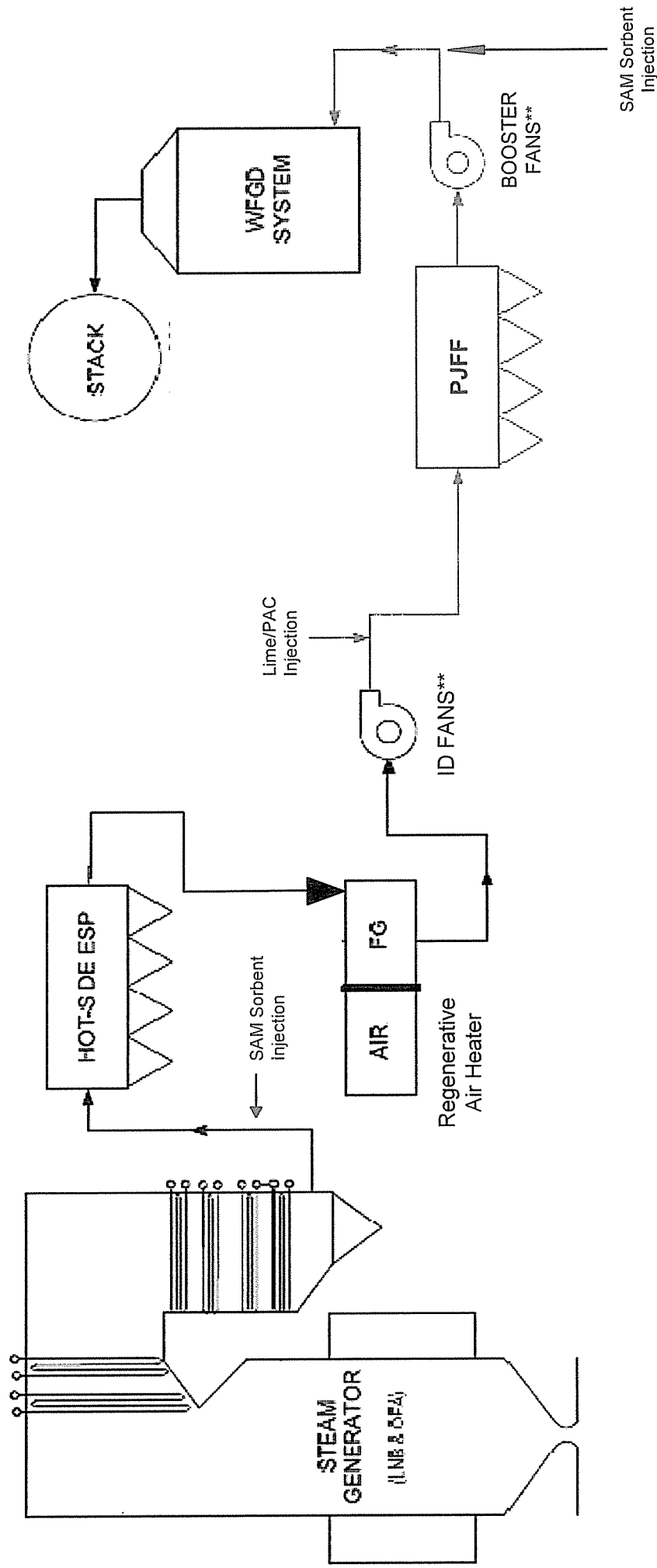
Ghent Unit 1 AQC Process Flow Diagram



*Relocation of existing Injection Nozzles
 **Replacement to new Booster Fans or larger ID Fans is yet to be determined

Black = Existing
 Red = Preliminary Additions

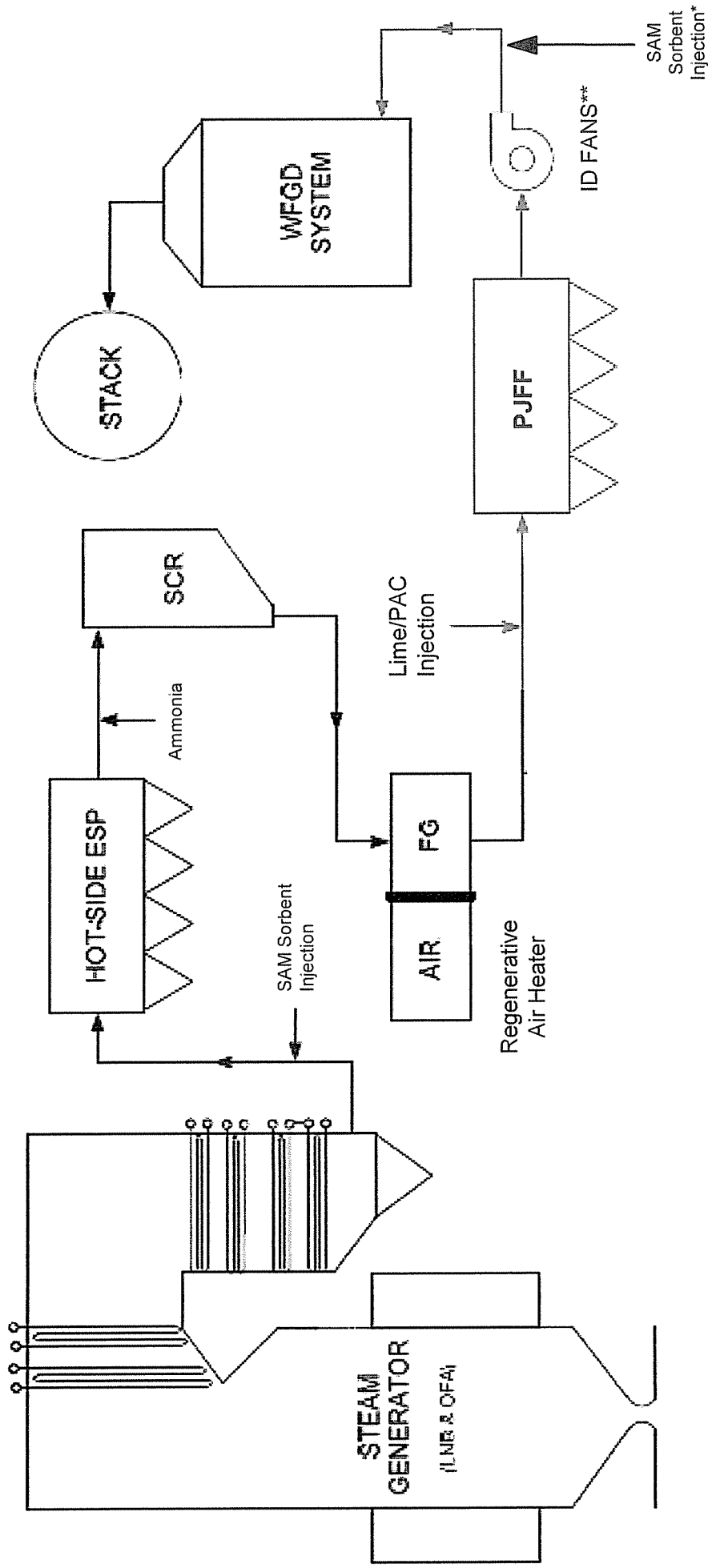
Ghent Unit 2 AQC Process Flow Diagram



***Replacement to new Booster Fans or larger ID Fans is yet to be determined*

Black = Existing
Red = Preliminary Additions

Ghent Unit 3 and Unit 4 AQC Process Flow Diagram



*Relocation of existing Injection Nozzles

**Replacement to new Booster Fans or larger ID Fans is yet to be determined

Black = Existing

Red = Preliminary Additions

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 39

Witness: Gary H. Revlett

- Q-39. Refer to Direct Testimony of Gary H. Revlett ("Revlett Testimony"). Did KU or any of the PPL affiliated entities file comments on the May 3, 2011 version of EPA's HAPs proposed rule? If so, provide a copy of the comments.
- A-39. While the due date for the comment period for EPA's proposed HAPs rule was extended to August 4, 2011, the date at which they will issue the final rule remains November 16, 2011. Comments for this rulemaking will be provided under a joint effort among all PPL entities to EPA by the August 4, 2011 due date. Upon completion and submittal, a copy will be provided to the KPSC.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 40

Witness: Gary H. Revlett

- Q-40. Refer to Revlett Testimony at page 8, lines 3-8. Mr. Revlett notes that EPA expects to issue proposed rules for CATR II in the near future. It appears that the proposed regulation will likely result in further NO_x and SO₂ restrictions.
- a. Although the specifics of CATR II are not known, does KU believe that the modifications that it is proposing in this proceeding are likely to meet the more stringent compliance requirements of CATR II?
 - b. Was the impact of carbon regulation considered as part of KU's analysis to determine the modifications proposed in this proceeding?
 - c. Was the impact of NAAQS revisions considered as part of KU's analysis to determine the modifications proposed in this proceeding?
- A-40.
- a. The initial compliance year under the new Cross-State Air Pollution Rule (CSAPR) is 2012; therefore, it is necessary to continue with the modifications proposed in this proceeding to be in compliance with CSAPR. The effective date and reduction requirements of CATR II remain unknown. However, any additional requirements from CATR II will likely require the installation of additional controls for NO_x on units that currently do not have SCRs. The addition of SCRs on units that do not currently have SCRs will not have an impact on the projects in this Compliance Plan.
 - b. Yes. Please see the response to Question No. 2.
 - c. Yes, the impact of NAAQS revisions was considered. Computer modeling of the new 1-hour SO₂ NAAQS standard indicated excursions near the Green River and Tyrone facilities and that high efficiency FGD systems would be required to demonstrate compliance with new NAAQS.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 41

Witness: Gary H. Revlett

- Q-41. Refer to Revlett Testimony at page 17, lines 13-21. Mr. Revlett discusses the preference of KYDWM for landfills for the disposal of CCRs. Provide support for this assertion.
- A-41. KYDWM's preference for landfill disposal of CCR is indicated in the attached e-mail from Ron Gruzesky, Manager, Solid Waste Branch, KYDWM. Mr. Revlett's beliefs are also based on numerous conversations with KYDWM personnel on this subject.

Attachment to KPSC Question No. 41 – KYDWM – Ron Gruzsky email dated March 1, 2011
Witness: Revlett

From: Gruzesky, Ron (EEC) [ron.gruzesky@ky.gov]
Sent: Tuesday, March 01, 2011 4:17 PM
Puckett, Paul
Cc: Winkler, Michael
Subject: RE: Public Service Commission Update for EW Brown CCR Handling

Paul,

I agree that you have captured the essence of our conversations. Perhaps most importantly, while there is no current regulation to force construction of a landfill as the primary means of handling/storage/disposal of CCRs over a wet pond, it is the preferred option by KY-DWM. This is due to the inherent stability of dry landfills. Additionally, based on my current knowledge of the situation and site conditions, permitting a landfill at the EW Brown site is definitely an achievable goal.

Also, while the EPA has not finalized a CCR rule, it is clear from their two proposals that wet handling of CCRs in ponds will likely see additional regulatory requirements in the future. I appreciate that the uncertainty of these potential requirements makes it very difficult to adequately plan long-range projects. However, it also appears that EPA's desired landfill requirements are consistent between proposed approaches, and generally in line with current industry practice. From my prospective, this makes landfill permitting possible throughout the EPA regulatory evaluation.

Ron Gruzesky, P.E.
Manager, Solid Waste Branch
Kentucky Dept. for Environmental Protection
'564-6716 ext. 4664

From: Puckett, Paul [mailto:Paul.Puckett@lge-ku.com]
Sent: Wednesday, February 16, 2011 5:26 PM
To: Gruzesky, Ron (EEC)
Cc: Winkler, Michael
Subject: Public Service Commission Update for EW Brown CCR Handling

Ron,

Thanks again for the time you and your staff have recently provided us to discuss various permitting issues related to our EW Brown (1/27/11) & Trimble County (2/8/11) Stations.

During our most recent meeting, I explained my company's need to provide information to the Public Service Commission (PSC) regarding filings submitted to them for Environmental Cost Recovery (ECR). ECR is the ratemaking mechanism that allows public utilities to recover from their customers costs associated with pollution control equipment or facilities. When there are significant changes to the information that was presented to the PSC in ECR testimony which impact projects approved by the PSC, it is incumbent on LG&E/KU to update the PSC on these changes. As has been discussed, LG&E/KU's plans are to change the method of CCR handling and long-term storage/disposal from a wet impoundment (aka a pond) to a dry structure (aka landfill). The company's recent change in plans for handling coal combustion residuals (CCRs) at the EW Brown Station will require such an update.

The company would like to inform the PSC on the public record of conversations/communications with regulatory agencies concerning the company's proposed change in plans which indicate that the agency's preliminary view that the new path is valid. As a result, I have attempted to capture the essence of previous discussions with you regarding the EW Brown project, in the paragraphs below.

In the past, you have indicated that dry methods of long-term storage (landfilling) of CCRs are generally preferable to wet storage, like that which would occur in ponds. You and I agreed that dry handling can greatly limit potential leaching and generally provides other environmental benefits. Additionally, both you and I recognize that construction of a landfill with a liner atop the former CCR pond could function as a cap for the closed pond, assuming that the necessary design considerations were properly incorporated.

In all, the plans that KU recently presented to KY-DWM for conversion of the planned long-term handling of CCRs at our EW Brown Station from a wet, pond-type facility to a dry, landfill structure seemed to be well received by your Division. As I understand it, KY-DWM prefers the dry, landfill-type approach to long-term CCR storage and believes that the potential environmental benefits are numerous. Additionally, I believe from those previous discussions and a recent meeting about the EW Brown landfill project that the landfill approach was permissible from KY-DWM's perspective, provided LG&E/KU could adequately address the concerns that might arise during the application review process. Although each site subject to KY-DWM review will have unique considerations, it does not appear that the scope of potential concerns goes beyond anything KY-DWM had evaluated for previous permitting endeavors.

Given the events and specific details of site-specific discussions regarding the EW Brown site, this note does not presume to capture all aspects of conversations you and I have had about the site or its particular permitting process, but I believe this is an accurate summary of our past discussions. I would ask that you respond with a note expressing your agreement that construction of a landfill as the primary means of handling/storage/disposal of CCRs is preferred by KY-DWM and that permitting a landfill at the EW Brown site is an achievable goal, based on your current knowledge of the situation and site conditions.

If you have any questions, please feel free to give me a call. As always, thanks for your assistance.

Paul Puckett

Engineer - Environmental Affairs Department
LG&E and KU Energy (Louisville Gas & Electric, Kentucky Utilities, and Old Dominion Power)
220 West Main Street
P.O. Box 32010
Louisville, KY 40232
(502) 627-4659
(502) 217-4836 (facsimile)
(502) 648-7842 (mobile)

Please note the recent change in e-mail address: paul.puckett@lge-ku.com

NOTE: The extension for all E.ON U.S. e-mail addresses has changed from @eon-us.com to @lge-ku.com. Please update your address book accordingly.

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KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 42

Witness: Charles R. Schram

Q-42. Refer to Schram Testimony at page 4, lines 9-12. There it states that it was "assumed that the proposed suite of environmental facilities for each unit was the most cost-effective suite of facilities for the unit". However, it appears that with the assistance of Black and Veatch the most compliance-effective suite of facilities was selected. Explain how this assumption translates to most cost-effective suite of facilities.

A-42. Please see the response to Question No. 6.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 43

Witness: Charles R. Schram

- Q-43. Refer to Schram Testimony. For the evaluation of the Brown and Ghent air compliance projects, the construction of the environmental controls was compared to the retirement of the generation unit to determine the least cost method of compliance. At page 5, lines 5 - 6 Mr. Schram states that the replacement generation technology for the purposes of this analysis was a natural gas fired combined cycle combustion turbine. Was any consideration given to constructing a coal-fired generating unit? Explain why a coal-fired unit was not included in the analysis.
- A-43. Yes, a coal-fired unit was considered as a supply side resource. The Companies' 2011 IRP, which included coal units as a resource choice, indicated that natural gas fired combined cycle combustion turbines are the least cost resource to meet requirements for the intermediate load capacity needed in 2016. As noted in the attached page from the Companies' 2011 IRP, Volume 3, the next three units in the base expansion plan are 3x1 combined cycle combustion turbines (denoted as "3x1C"). The historical capacity factors of the units planned for retirement are well below the baseload levels which would support the selection of a coal unit with high capital costs and lower fuel costs compared to natural gas. Furthermore, based on historical experience, it would not be possible to permit and construct a coal unit by January 1, 2016.

- and installing the necessary emissions controls on existing units to meet the proposed environmental regulations.

For reference, this least cost base plan will be referred to as Plan “A” and it represents the 30-year expansion strategy that minimizes the present value of revenue requirements criterion under the base assumptions. As seen in Table 3, optimization results using the base assumptions indicate that the optimal plan is the installation of three 3x1 combined cycle units: one in 2016, one in 2018, and one in 2025.

**Table 3
Base Expansion Plan**

Plan:	<u>“A”</u>
2011	
2012	
2013	
2014	
2015	
2016	3x1C
2017	
2018	3x1C
2019	
2020	
2021	
2022	
2023	
2024	
2025	3x1C

With this plan, there is a 40 MW reserve margin shortfall in 2015 when the summer reserve margin was allowed to drop to approximately 15.4%, as shown in Table 8.(4)(a)-1 in Section 8 of Volume I. In 2015 and in other years with relatively small reserve margin deficits immediately

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 44

Witness: Charles R. Schram

- Q-44. Refer to Schram Testimony. Provide the fuel forecasts for coal and natural gas as well as the source of the forecasts that were used to perform the analyses in Exhibit CRS-1, 2011 Air Compliance Plan.
- A-44. Please see the attachment being provided pursuant to a Petition for Confidential Protection.

CONFIDENTIAL INFORMATION REDACTED

Fuel Costs (\$/MBtu)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown Coal															
Cane Run Coal															
Ghent Coal															
Green River Coal															
Mill Creek Coal															
Trimble County Coal															
Trimble County PRB Coal															
Tyrone Coal															
KU Gas															
LGE Gas															
Haefling Gas															

*Beyond 2025, fuel prices were held constant to maintain a consistent relationship between coal and gas prices.

**The 2011 portion of the coal forecasts is based on responses to the Companies' RFQ for coal in early 2010. The 2012-2014 portion of the coal forecasts is computed as a weighted average of the same RFQ prices and prices from a 2010 Wood-Mackenzie forecast (the weighting of RFQ prices to Wood-Mackenzie prices in 2012, 2013, and 2014 is 75/25, 50/50, and 25/75, respectively). Beyond 2014, the coal forecasts are based entirely on the 2010 Wood-Mackenzie forecast.

***The 2011-2013 portion of the gas forecasts are based on Henry Hub market forwards as of June 2010. Beyond 2015, the forecast is based on PIRA's Spring 2010 natural gas forecast. The 2014-2015 portion of the forecast is interpolated.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 45

Witness: Charles R. Schram

Q-45. Refer to Schram Testimony, Exhibit CRS-1, Appendix 6.1. The Exhibit provides the analysis assumptions. For each of the Financial Assumptions provide all documentation and calculations relied on to support those assumptions.

A-45. Please see the response to Question No. 21.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 46

Witness: Charles R. Schram

- Q-46. Refer to Schram Testimony. Provide details that describe both Strategist and PROSYM, including:
- a. Details on license, operation and any modifications developed for KU/LG&E;
 - b. Inputs for all KU units, including, size, heat rate, outage projections, O&M costs, and other parameters used in the model;
 - c. Provide all inputs from outside the KU/LG&E system that are used in the models; and
 - d. When were model inputs updated? Do they consider projected changes in regional capacity and pricing due to the very AQC changes being proposed by KU/LG&E? Are retirements of units by utilities in other regions included in the models?
- A-46. a. The Companies own software version 4.4.1 of Strategist and version 5.2.21 of PROSYM, both of which are Ventyx products. Generally, the Companies compile information for the cost of generation for each unit, a description of the generation capabilities of each unit, a load forecast, the market price of electricity, and the volumetric ability to access the market to make economical power purchases. All of this information is brought together to model the economic operation of the Companies' generating system. Strategist does not include any modifications developed for the Companies. The attachments to parts (b) and (c) below contain the documentation of the assumptions for the units' capacities, heat rates, maintenance schedules, forced outage rates and variable O&M. PROSYM includes a customized feature that allows the Companies to approximate the results of the Companies' After-the-Fact Billing ("AFB") process. AFB is used to identify and determine the cost of actual intercompany transactions and for assigning actual off-system sales and purchases to the two utilities. PROSYM's AFB feature is a stand-alone process that does not affect PROSYM's normal operation and was not used in the 2011 Compliance Plan.

- b. Please see the attachment being provided pursuant to a Petition for Confidential Protection.
- c. Please see the attachment.
- d. The model inputs are updated annually. The inputs for the 2011 Compliance Plan analysis are consistent with the 2011 IRP filed with the Commission on April 21, 2011. The Companies use the EPIS Aurora model for regional power market modeling. The resulting power prices from this model are inputs into Strategist and PROSYM. The Companies used screening criteria for eastern interconnect generating units to estimate the retirement of 21 GW of coal-fired generation capacity in the eastern interconnect. The modeled prices reflect these estimated retirements.

Summer Maximum Capacity (MW)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	106	106	106	105	105	105	105	105	105	105	105	105	105	105	105
Brown 2	166	166	166	164	164	164	164	164	164	164	164	164	164	164	164
Brown 3	411	406	406	406	401	401	401	401	401	401	401	401	401	401	401
Brown 5	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
Brown 6	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146
Brown 7	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146
Brown 8	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Brown 9	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Brown 10	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Brown 11	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Cane Run 4	155	155	155	153	153	153	153	153	153	153	153	153	153	153	153
Cane Run 5	168	168	168	166	166	166	166	166	166	166	166	166	166	166	166
Cane Run 6	240	240	240	237	237	237	237	237	237	237	237	237	237	237	237
Cane Run 11	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Ghent 1	493	493	493	487	487	487	487	487	487	487	487	487	487	487	487
Ghent 2	490	490	490	490	481	481	481	481	481	481	481	481	481	481	481
Ghent 3	454	454	454	454	454	448	448	448	448	448	448	448	448	448	448
Ghent 4	487	487	487	487	487	481	481	481	481	481	481	481	481	481	481
Green River 3	68	68	68	66	66	66	66	66	66	66	66	66	66	66	66
Green River 4	95	95	95	92	92	92	92	92	92	92	92	92	92	92	92
Haefling 1-3	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Mill Creek 1	303	303	303	303	300	300	300	300	300	300	300	300	300	300	300
Mill Creek 2	301	301	301	301	297	297	297	297	297	297	297	297	297	297	297
Mill Creek 3	391	391	391	391	390	385	385	385	385	385	385	385	385	385	385
Mill Creek 4	477	477	477	477	467	467	467	467	467	467	467	467	467	467	467
OVEC	156	155	154	152	152	152	152	152	152	152	152	152	152	152	152
Paddy's Run 11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Paddy's Run 12	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Paddy's Run 13	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158
Trimble County 5	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 6	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 7	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 8	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 9	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 10	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 1 (75%)	383	383	383	383	383	379	379	379	379	379	379	379	379	379	379
Trimble County 2 (75%)	549	549	549	549	549	549	549	549	549	549	549	549	549	549	549
Tyrone 3	71	71	71	69	69	69	69	69	69	69	69	69	69	69	69
Zorn 1	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Ohio Falls 1-8	52	56	58	62	64	64	64	64	64	64	64	64	64	64	64
Dix Dam 1-3	26	28	30	30	30	30	30	30	30	30	30	30	30	30	30

Summer Maximum Capacity (MW)

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Brown 1	105	105	105	105	105	105	105	105	105	105	105	105	105	105	105
Brown 2	164	164	164	164	164	164	164	164	164	164	164	164	164	164	164
Brown 3	401	401	401	401	401	401	401	401	401	401	401	401	401	401	401
Brown 5	122	122	122	122	122	122	122	122	122	122	122	122	122	122	122
Brown 6	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146
Brown 7	146	146	146	146	146	146	146	146	146	146	146	146	146	146	146
Brown 8	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Brown 9	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Brown 10	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Brown 11	121	121	121	121	121	121	121	121	121	121	121	121	121	121	121
Cane Run 4	153	153	153	153	153	153	153	153	153	153	153	153	153	153	153
Cane Run 5	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166
Cane Run 6	237	237	237	237	237	237	237	237	237	237	237	237	237	237	237
Cane Run 11	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Ghent 1	487	487	487	487	487	487	487	487	487	487	487	487	487	487	487
Ghent 2	481	481	481	481	481	481	481	481	481	481	481	481	481	481	481
Ghent 3	448	448	448	448	448	448	448	448	448	448	448	448	448	448	448
Ghent 4	481	481	481	481	481	481	481	481	481	481	481	481	481	481	481
Green River 3	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
Green River 4	92	92	92	92	92	92	92	92	92	92	92	92	92	92	92
Haefling 1-3	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Mill Creek 1	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300
Mill Creek 2	297	297	297	297	297	297	297	297	297	297	297	297	297	297	297
Mill Creek 3	385	385	385	385	385	385	385	385	385	385	385	385	385	385	385
Mill Creek 4	467	467	467	467	467	467	467	467	467	467	467	467	467	467	467
OVEC	152	152	152	152	152	152	152	152	152	152	152	152	152	152	152
Paddy's Run 11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Paddy's Run 12	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Paddy's Run 13	158	158	158	158	158	158	158	158	158	158	158	158	158	158	158
Trimble County 5	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 6	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 7	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 8	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 9	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 10	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
Trimble County 1 (75%)	379	379	379	379	379	379	379	379	379	379	379	379	379	379	379
Trimble County 2 (75%)	549	549	549	549	549	549	549	549	549	549	549	549	549	549	549
Tyrone 3	69	69	69	69	69	69	69	69	69	69	69	69	69	69	69
Zorn 1	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Ohio Falls 1-8	64	64	64	64	64	64	64	64	64	64	64	64	64	64	64
Dix Dam 1-3	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30

Average Heat Rate at Maximum (MBtu/MWh)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17
Brown 2	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24
Brown 3	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38
Brown 5	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59
Brown 6	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43
Brown 7	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43
Brown 8	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26
Brown 9	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26
Brown 10	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26
Brown 11	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26
Cane Run 4	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89
Cane Run 5	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Cane Run 6	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28
Cane Run 11	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12
Ghent 1	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72
Ghent 2	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01
Ghent 3	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09
Ghent 4	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Green River 3	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36
Green River 4	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52
Haefling 1-3	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Mill Creek 1	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58
Mill Creek 2	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90
Mill Creek 3	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64
Mill Creek 4	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82
OVEC	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Paddy's Run 11	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48
Paddy's Run 12	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01
Paddy's Run 13	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31
Trimble County 5	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Trimble County 6	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Trimble County 7	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Trimble County 8	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Trimble County 9	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Trimble County 10	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Trimble County 1 (75%)	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27
Trimble County 2 (75%)	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87
Tyrone 3	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12
Zorn 1	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68

Average Heat Rate at Maximum (MBtu/MWh)

Brown 1	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Brown 2	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.17	11.85
Brown 3	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.24	10.45
Brown 5	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.38	10.99
Brown 6	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59	12.59
Brown 7	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	12.04
Brown 8	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	13.43	12.04
Brown 9	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	12.11
Brown 10	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	12.11
Brown 11	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	13.26	12.11
Cane Run 4	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.89	10.48
Cane Run 5	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.60
Cane Run 6	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28	10.28
Cane Run 11	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12	16.12
Ghent 1	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.72	10.44
Ghent 2	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	10.01	9.98
Ghent 3	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	11.09	10.97
Ghent 4	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67
Green River 3	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	13.36	12.66
Green River 4	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	11.52	10.89
Haefling 1-3	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00	18.00
Mill Creek 1	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.58	10.50
Mill Creek 2	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.90	10.61
Mill Creek 3	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.64	10.45
Mill Creek 4	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.82	10.30
OVEC	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Paddy's Run 11	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48	15.48
Paddy's Run 12	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01	17.01
Paddy's Run 13	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31	10.31
Trimble County 5	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.07
Trimble County 6	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.07
Trimble County 7	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.07
Trimble County 8	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.07
Trimble County 9	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.07
Trimble County 10	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.67	10.07
Trimble County 1 (75%)	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.27	10.20
Trimble County 2 (75%)	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87	8.87
Tyrone 3	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	13.12	12.56
Zorn 1	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68	18.68

Planned Maintenance (Weeks/Year)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	2	3	1	8	1	3	1	3	1	3	8	3	1	3	1
Brown 2	5	1	3	4	1	8	1	3	1	3	1	3	8	1	3
Brown 3	3	8	1	3	4	3	1	3	8	3	1	3	1	3	1
Brown 5	0	2	0	2	0	0	0	0	0	8	0	0	0	0	0
Brown 6	1	1	1	2	1	1	8	1	1	2	0	0	0	0	0
Brown 7	2	1	1	2	1	2	1	8	1	1	0	0	0	0	0
Brown 8	0	1	2	0	2	0	0	0	2	0	0	0	0	0	0
Brown 9	2	1	8	0	2	0	0	0	0	0	0	0	0	0	0
Brown 10	0	2	0	8	0	2	0	0	2	0	0	0	0	0	0
Brown 11	0	2	0	0	0	8	0	0	0	0	0	0	0	0	0
Cane Run 4	1	8	0	3	0	0	0	0	0	0	0	0	0	0	0
Cane Run 5	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
Cane Run 6	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0
Cane Run 11															
Ghent 1	2	3	1	9	1	4	1	4	1	3	8	1	3	1	3
Ghent 2	2	9	1	4	2	4	2	1	9	1	3	1	3	1	3
Ghent 3	9	3	6	1	5	1	3	8	4	1	3	1	3	1	8
Ghent 4	1	3	1	6	8	3	1	4	1	3	1	8	1	3	1
Green River 3	1	3	1	3	1	0	0	0	0	0	0	0	0	0	0
Green River 4	4	1	3	1	3	0	0	0	0	0	0	0	0	0	0
Haefling 1-3															
Mill Creek 1	2	2	8	1	6	1	4	1	4	1	8	1	4	1	4
Mill Creek 2	1	8	1	4	6	4	1	4	1	8	1	4	1	4	1
Mill Creek 3	14	2	6	1	6	1	4	1	8	1	4	1	4	1	4
Mill Creek 4	2	4	2	8	1	4	1	4	1	4	1	8	1	4	1
OVEC															
Paddy's Run 11															
Paddy's Run 12															
Paddy's Run 13	15	1	1	1	1	1	1	16	1	1	1	0	0	0	0
Trimble County 5	9	0	0	0	0	0	8	0	0	0	0	0	0	0	0
Trimble County 6	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0
Trimble County 7	0	8	0	0	0	0	0	8	0	0	0	0	0	0	0
Trimble County 8	8	0	0	0	0	0	8	0	0	0	0	0	0	0	0
Trimble County 9	0	8	0	0	0	0	0	8	0	0	0	0	0	0	0
Trimble County 10	0	0	8	0	0	0	0	0	8	0	0	0	0	0	0
Trimble County 1 (75%)	6	0	4	0	4	0	8	0	4	0	4	0	4	0	8
Trimble County 2 (75%)	4	4	0	4	0	4	0	8	0	4	0	4	0	4	0
Tyrone 3															
Zorn 1															

Planned Maintenance (Weeks/Year)

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Brown 1	3	1	8	1	3	1	3	1	3	8	3	1	3	1	3
Brown 2	1	3	1	3	8	1	3	1	3	1	3	8	1	3	1
Brown 3	8	1	3	1	3	1	3	8	3	1	3	1	3	1	8
Brown 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Brown 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cane Run 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cane Run 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cane Run 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cane Run 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ghent 1	1	3	8	1	3	1	3	1	3	8	1	3	1	3	1
Ghent 2	8	1	3	1	3	1	3	8	1	3	1	3	1	3	8
Ghent 3	3	1	3	1	3	1	8	3	1	3	1	3	1	8	3
Ghent 4	3	1	3	8	1	3	1	3	1	3	8	1	3	1	3
Green River 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Green River 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Haefling 1-3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mill Creek 1	1	4	1	8	1	4	1	4	1	4	1	8	1	4	1
Mill Creek 2	4	1	8	1	4	1	4	1	4	1	8	1	4	1	4
Mill Creek 3	1	8	1	4	1	4	1	4	1	8	1	4	1	4	1
Mill Creek 4	4	1	4	1	8	1	4	1	4	1	4	1	8	1	4
OVEC															
Paddy's Run 11															
Paddy's Run 12															
Paddy's Run 13															
Trimble County 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trimble County 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trimble County 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trimble County 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trimble County 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trimble County 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Trimble County 1 (75%)	0	4	0	4	0	4	0	8	0	4	0	4	0	4	0
Trimble County 2 (75%)	8	0	4	0	4	0	4	0	8	0	4	0	4	0	4
Tyrone 3															
Zorn 1															

Forced Outage Rate (%)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
Brown 2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
Brown 3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
Brown 5	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
Brown 6	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Brown 7	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Brown 8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Brown 9	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Brown 10	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Brown 11	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Cane Run 4	8.2	8.5	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Cane Run 5	8.2	8.5	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Cane Run 6	7.3	7.6	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
Cane Run 11	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ghent 1	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Ghent 2	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Ghent 3	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Ghent 4	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Green River 3	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Green River 4	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Haefling 1-3	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Mill Creek 1	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Mill Creek 2	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Mill Creek 3	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Mill Creek 4	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
OVEC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paddy's Run 11	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Paddy's Run 12	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Paddy's Run 13	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Trimble County 5	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 7	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 8	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 9	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 10	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 1 (75%)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Trimble County 2 (75%)	9.0	7.5	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Tyrone 3	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Zorn 1	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0

Forced Outage Rate (%)

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Brown 1	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
Brown 2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2	8.2
Brown 3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
Brown 5	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
Brown 6	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Brown 7	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Brown 8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Brown 9	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Brown 10	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Brown 11	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Cane Run 4	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Cane Run 5	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
Cane Run 6	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9
Cane Run 11	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Ghent 1	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Ghent 2	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Ghent 3	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Ghent 4	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Green River 3	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Green River 4	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Haefling 1-3	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Mill Creek 1	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Mill Creek 2	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Mill Creek 3	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Mill Creek 4	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
OVEC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Paddy's Run 11	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Paddy's Run 12	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
Paddy's Run 13	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Trimble County 5	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 7	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 8	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 9	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 10	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Trimble County 1 (75%)	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
Trimble County 2 (75%)	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
Tyrone 3	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Zorn 1	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0

CONFIDENTIAL INFORMATION REDACTED

Consumable Variable O&M for Existing and Potential Controls (\$/MWh)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Brown 1															
Brown 2															
Brown 3															
Brown 5															
Brown 6															
Brown 7															
Brown 8															
Brown 9															
Brown 10															
Brown 11															
Cane Run 4															
Cane Run 5															
Cane Run 6															
Cane Run 11															
Ghent 1															
Ghent 2															
Ghent 3															
Ghent 4															
Green River 3															
Green River 4															
Haefling 1-3															
Mill Creek 1															
Mill Creek 2															
Mill Creek 3															
Mill Creek 4															
OVEC															
Paddy's Run 11															
Paddy's Run 12															
Paddy's Run 13															
Trimble County 5															
Trimble County 6															
Trimble County 7															
Trimble County 8															
Trimble County 9															
Trimble County 10															
Trimble County 1 (75%)															
Trimble County 2 (75%)															
Tyrone 3															
Zorn 1															

CONFIDENTIAL INFORMATION REDACTED

Consumable Variable O&M for Existing and Potential Controls (\$/MWh)

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Brown 1															
Brown 2															
Brown 3															
Brown 5															
Brown 6															
Brown 7															
Brown 8															
Brown 9															
Brown 10															
Brown 11															
Cane Run 4															
Cane Run 5															
Cane Run 6															
Cane Run 11															
Ghent 1															
Ghent 2															
Ghent 3															
Ghent 4															
Green River 3															
Green River 4															
Haefling 1-3															
Mill Creek 1															
Mill Creek 2															
Mill Creek 3															
Mill Creek 4															
OVEC															
Paddy's Run 11															
Paddy's Run 12															
Paddy's Run 13															
Trimble County 5															
Trimble County 6															
Trimble County 7															
Trimble County 8															
Trimble County 9															
Trimble County 10															
Trimble County 1 (75%)															
Trimble County 2 (75%)															
Tyrone 3															
Zorn 1															

Emissions Allowances (\$/ton emitted)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
NOx, Annual	340	100	50	0	0	0	0	0	0	0	0	0	0	0	0
NOx, Seasonal	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SO2	30	10	10	0	0	0	0	0	0	0	0	0	0	0	0

Emissions Allowances (\$/ton emitted)

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
NOx, Annual	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NOx, Seasonal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SO2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Electricity Prices (\$/MWh)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Peak (5x16)	43.88	45.20	47.09	50.34	54.14	58.04	69.70	75.69	80.62	87.17	81.89	81.37	81.85	84.59	87.65
Off-Peak (7x8)	28.25	29.19	30.94	29.82	30.45	31.08	47.97	49.04	48.87	50.22	50.99	50.40	52.61	55.49	56.71
Weekend (2x16)	38.58	40.08	43.22	40.94	39.57	38.40	57.47	60.66	62.37	63.68	63.73	62.87	65.31	67.50	70.21
Around the Clock	37.65	38.89	40.97	41.71	43.48	45.30	60.11	63.95	66.57	68.02	68.14	67.50	68.93	71.66	74.02

1.74% Annual escalation rate beyond 2035

Electricity Prices (\$/MWh)

	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Peak (5x16)	87.00	85.59	84.22	84.60	86.50	93.83	98.84	98.23	96.60	94.98	96.63	98.32	100.03	101.77	103.54
Off-Peak (7x8)	57.70	58.70	59.81	60.77	61.83	62.90	64.03	65.12	66.26	67.41	68.58	69.77	70.99	72.22	73.48
Weekend (2x16)	76.89	85.58	94.01	98.60	99.24	86.35	79.20	86.71	96.50	106.45	108.31	110.19	112.11	114.06	116.04
Around the Clock	75.31	76.62	77.97	79.32	80.70	82.10	83.51	84.99	86.47	87.97	89.50	91.06	92.64	94.25	95.89

1.74% Annual escalation r

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 47

Witness: Robert M. Conroy / Shannon L. Charnas

Q-47. Refer to Charnas Testimony. At this time, have any costs been incurred for Projects 29, 34 and/or 35? If so, what are those amounts by project and have any of those expenditures been previously recovered through base rates?

A-47. As of June 30, 2011, the company has incurred \$1,355,626 in expenditures for the proposed landfill for Project 29 related to the current compliance plan request.

Also as of June 30, 2011, the company has incurred \$1,480,571 in expenditures for the proposed Project 35.

None of the aforementioned capital expenditures have been recovered through base rates and no costs have been incurred at this time related to the proposed Project 34.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 48

Witness: Robert M. Conroy

- Q-48. Refer to Conroy Testimony at page 7. Mr. Conroy provides a table titled Environmental Cost Recovery Surcharge Summary. Provide copies of all documents and data inputs used to make the computations included in this table. Also provide these computations in an electronic spreadsheet with formulas included.
- A-48. The table contained on page 7 of Conroy Testimony is a summary of the information contained in Exhibit RMC-5. Please see the attached. An electronic version of the computations for the requested table and Exhibit RMC-5 is being provided on the attached CD in folder titled Question 48.

Louisville Gas and Electric Company
Environmental Cost Recovery Surcharge Summary

	2012	2013	2014	2015	2016
Total E(m) - (\$000)	\$25,243	\$76,600	\$127,031	\$218,209	\$248,966
12 Month Average Jurisdictional Ratio	87.20%	87.20%	87.20%	87.20%	87.20%
Jurisdictional E(m) - (\$000)	\$22,012	\$66,797	\$110,774	\$190,284	\$217,105
Forecasted Jurisdictional R(m) - (million)	\$956	\$1,013	\$1,038	\$1,077	\$1,131
Incremental Billing Factor	2.30%	6.60%	10.67%	17.67%	19.20%
Residential Customer Impact					
Monthly bill (1,000 kWh per month)	\$1.96	\$5.61	\$9.08	\$15.03	\$16.33

Kentucky Utilities Company
Environmental Cost Recovery Surcharge Summary

	2012	2013	2014	2015	2016
Total E(m) - (\$000)	\$22,998	\$69,805	\$143,788	\$199,867	\$232,668
12 Month Average Jurisdictional Ratio	86.99%	86.99%	86.99%	86.99%	86.99%
Jurisdictional E(m) - (\$000)	\$20,005	\$60,722	\$125,079	\$173,861	\$202,394
Forecasted Jurisdictional R(m) - (million)	\$1,365	\$1,442	\$1,505	\$1,560	\$1,655
Incremental Billing Factor	1.47%	4.21%	8.31%	11.15%	12.23%
Residential Customer Impact					
Monthly bill (1,000 kWh per month)	\$1.13	\$3.26	\$6.43	\$8.63	\$9.46

State	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Tax Rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
LG&E	KU									
Tax Rate-Retirements	35.7100%	35.7100%								
Property Tax Rate	0.15%	0.15%								

LG&E Rate of Return Calculation
August 31, 2010

(Source: capital structure used in most recent ECR review case 2010-00479)

Total Company	2011 Weighted Cost of Capital	2012 Weighted Cost of Capital	2013 Weighted Cost of Capital	2014 Weighted Cost of Capital	2015 Weighted Cost of Capital	2016 Weighted Cost of Capital	2017 Weighted Cost of Capital	2018 Weighted Cost of Capital	2019 Weighted Cost of Capital	2020 Weighted Cost of Capital
Long-Term Debt	38.65%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
Short-Term Debt	5.10%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Preferred Stock	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Common Equity	56.25%	5.98%	5.98%	5.98%	5.98%	5.98%	5.98%	5.98%	5.98%	5.98%
Total	1,072,009,491	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%
Composite Debt Rate	2.01%	2.01%	2.01%	2.01%	2.01%	2.01%	2.01%	2.01%	2.01%	2.01%
Composite Tax Rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Overall Rate of Return Grossed Up	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%

KU Rate of Return Calculation
August 31, 2010

(Source: capital structure used in most recent ECR review case 2010-00479)

Total Company	2011 Weighted Cost of Capital	2012 Weighted Cost of Capital	2013 Weighted Cost of Capital	2014 Weighted Cost of Capital	2015 Weighted Cost of Capital	2016 Weighted Cost of Capital	2017 Weighted Cost of Capital	2018 Weighted Cost of Capital	2019 Weighted Cost of Capital	2020 Weighted Cost of Capital
Long-Term Debt	44.25%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%
Short-Term Debt	1.59%	0.20%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Preferred Stock	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Common Equity	54.17%	7.84%	7.84%	7.84%	7.84%	7.84%	7.84%	7.84%	7.84%	7.84%
Total	3,146,333,044	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%	7.99%
Composite Debt Rate	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%	2.08%
Composite Tax Rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Overall Rate of Return Grossed Up	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%

Jurisdictional Ratios from ECR Filings

portional Share TC Facilities Ash Pond & Lar

Billing Factors as of 12/31/2010 Expense Month

Billing Month	LO&E	KU	Customer Charge	LO&E	KU	Utility
Mar-10	86.20%	84.35%	Energy	0.07098	8.50	75%
Apr-10	80.32%	81.71%	FAC	0.00241	0.00160	52%
May-10	88.50%	83.23%	DSM	0.00350	0.00243	48%
Jun-10	84.15%	87.37%	ECR Factor	0.01290	0.02590	39.000%
Jul-10	85.35%	86.68%				36.000%
Aug-10	93.53%	86.14%				
Sep-10	92.20%	86.06%		46513.00		
Oct-10	92.55%	87.69%				
Nov-10	90.63%	88.85%				
Dec-10	85.51%	90.77%				
Jan-11	83.47%	86.01%				
Feb-11	83.46%	86.29%				
Average	87.20%	86.39%				

12/31/2010 Expense Month Avg Mth Juris Rev

654,528,356

1,251,944,164

Revenue Calculations Percentage Change

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Non-Fuel Base Revenues	612,299,201	616,463,124	661,886,864	674,166,088	706,662,084	731,555,039	793,375,938	810,638,275	848,085,746	871,350,246
Base Fuel Revenues	252,871,140	254,605,555	256,654,116	258,061,715	260,515,941	263,215,132	265,505,098	268,936,102	273,316,507	277,896,218
FAC Revenues	6,569,387	52,094,215	65,106,460	72,573,861	76,833,645	89,476,590	101,719,476	119,191,391	136,745,475	144,811,542
Environmental Cost Recovery	8,489,276	24,911,926	67,205,066	162,489,410	373,508,372	314,131,086	319,850,631	314,016,635	303,107,692	290,548,494
Energy Efficient Operations Cost Recovery	25,020,225	32,753,925	29,101,484	33,669,359	33,435,195	36,696,749	34,810,766	37,017,622	34,610,250	36,819,727
Total (Base ECR)	806,259,653	855,816,819	1,012,748,964	1,038,491,023	1,076,546,565	1,130,845,501	1,195,411,298	1,235,773,390	1,292,678,978	1,331,079,773
% Change		0.06537	0.02945	0.02542	0.03703	0.05014	0.05790	0.03376	0.04695	0.02971
		0.1283	0.1590	0.2069	0.2611	0.3330	0.3780	0.4415	0.4874	0.4640
Non-Fuel Base Revenues	772,207,890	783,897,444	847,674,177	864,767,856	904,788,293	931,637,590	986,720,335	1,024,534,800	1,117,837,165	1,144,830,904
Base Fuel Revenues	508,150,039	517,236,870	526,269,091	532,138,408	541,521,192	549,035,330	555,266,141	563,396,145	573,613,393	583,751,041
FAC Revenues	16,174,164	31,016,696	38,186,813	73,393,620	78,267,633	135,900,479	142,827,427	184,587,422	206,117,586	261,130,956
Environmental Cost Recovery	64,444,127	88,800,705	126,833,711	177,716,999	238,127,622	292,469,292	297,641,363	286,104,421	273,917,972	257,829,664
Energy Efficient Operations Cost Recovery	33,709,208	31,443,879	30,165,967	34,916,610	35,013,260	38,155,163	36,390,806	36,652,987	36,197,617	36,503,651
Total (Base ECR)	1,320,241,691	1,364,734,689	1,442,296,068	1,505,216,494	1,559,590,278	1,654,718,522	1,721,201,709	1,811,131,354	1,962,765,781	2,028,210,792
% Change		0.03370	0.05663	0.04363	0.03612	0.06100	0.04018	0.05235	0.08428	0.03282
		0.0924	0.1401	0.1613	0.2553	0.3037	0.3718	0.4874	0.5362	0.5362

Input

Incremental O&M										
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
LOGE										
Project 1Z										
MC Air Compliance (FCD/Bayhouse) - All Units	0	0	1,893,407	7,079,485	31,875,726	47,403,071	48,328,330	49,675,892	50,846,507	52,040,535
Project 3Z										
TCI Air Compliance (Bayhouse)	0	0	0	0	3,732,365	7,614,024	7,766,305	7,821,931	8,090,064	8,241,665
Total LOGE	0	0	1,893,407	7,079,485	35,608,091	55,017,095	56,094,635	57,507,823	58,936,571	60,282,200
KU										
Project 2A/Amoco/										
BR Landfill (Phase 0)	0	0	0	2,813,772	2,898,185	2,985,131	3,074,645	3,166,925	3,261,933	3,359,791
Project 3A										
BR Air Compliance (Bayhouse) - All Units	0	0	0	7,536,179	16,398,110	19,085,903	19,467,821	19,656,973	20,254,113	20,659,195
Project 3B										
GH Air Compliance (Bayhouse) - All Units	0	8,692	8,239,481	25,981,619	41,503,865	64,898,127	68,102,250	67,424,295	68,772,781	70,148,237
Total KU	0	8,692	8,239,481	35,411,561	60,700,160	86,877,161	89,644,655	89,488,193	92,088,978	94,167,222

Incremental O&M Estimates for Projects in the 2011 ECR Plan

Area below used as inputs into Project tabs

# Beneficial Reuse	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Proposed Project 26	\$ -	\$ -	\$ 1,693,407	\$ 7,079,485	\$ 31,875,726	\$ 47,403,071	\$ 48,528,230	\$ 49,675,892	\$ 50,846,507	\$ 52,040,535
Louisville Gas and Electric Company										
MC Air Compliance - FGDs & Baghouses										
Mill Creek 1 - Combined 1 & 2 FGD	\$ 0	\$ 0	\$ 0	\$ 0	\$ (254,057)	\$ (349,068)	\$ (316,411)	\$ (283,100)	\$ (249,123)	\$ (214,467)
Mill Creek 1 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,288,902	\$ 9,156,028	\$ 9,339,149	\$ 9,525,932	\$ 9,716,451	\$ 9,910,780
Total Mill Creek 1	\$ 0	\$ 0	\$ 0	\$ 0	\$ 5,044,845	\$ 8,806,961	\$ 9,022,738	\$ 9,242,832	\$ 9,467,327	\$ 9,696,312
Mill Creek 2 - Combined 1& 2 FGD	\$ 0	\$ 0	\$ 0	\$ 0	\$ 17,233	\$ 54,994	\$ 87,651	\$ 120,962	\$ 154,939	\$ 189,595
Mill Creek 2 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 0	\$ 6,437,015	\$ 9,640,391	\$ 9,833,189	\$ 10,029,863	\$ 10,230,460	\$ 10,435,069
Total Mill Creek 2	\$ 0	\$ 0	\$ 0	\$ 0	\$ 6,454,247	\$ 9,695,385	\$ 9,920,850	\$ 10,150,825	\$ 10,385,398	\$ 10,624,664
Mill Creek 3 - FGD (U4 update and tie in)	\$ 0	\$ 0	\$ 0	\$ (66,803)	\$ 211,745	\$ 329,192	\$ 329,808	\$ 390,615	\$ 452,639	\$ 515,904
Mill Creek 3 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,121,941	\$ 1,155,038	\$ 9,338,139	\$ 9,524,902	\$ 9,715,400	\$ 9,909,708
Mill Creek 3 - SAM Mitigation	\$ 0	\$ 0	\$ 1,693,407	\$ 3,454,550	\$ 3,523,641	\$ 3,594,114	\$ 3,665,997	\$ 3,739,316	\$ 3,814,103	\$ 3,890,385
Mill Creek 3 - SCR Turn-Down	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Mill Creek 3	\$ 0	\$ 0	\$ 1,693,407	\$ 3,447,748	\$ 4,857,328	\$ 13,019,344	\$ 13,333,943	\$ 13,654,833	\$ 13,982,142	\$ 14,315,996
Mill Creek 4 - FGD	\$ 0	\$ 0	\$ 0	\$ 20,421	\$ 359,055	\$ 417,926	\$ 477,974	\$ 539,223	\$ 601,697	\$ 665,421
Mill Creek 4 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 3,552,924	\$ 10,871,949	\$ 11,069,388	\$ 11,311,175	\$ 11,537,399	\$ 11,768,147	\$ 12,003,510
Mill Creek 4 - SAM Mitigation	\$ 0	\$ 0	\$ 0	\$ 58,392	\$ 4,288,302	\$ 4,374,068	\$ 4,461,549	\$ 4,550,780	\$ 4,641,796	\$ 4,734,632
Mill Creek 4 - SCR Turn-Down	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Mill Creek 4	\$ 0	\$ 0	\$ 0	\$ 3,631,737	\$ 15,519,305	\$ 15,881,381	\$ 16,250,699	\$ 16,627,402	\$ 17,011,640	\$ 17,403,563
Proposed Project 27	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,732,365	\$ 7,614,024	\$ 7,766,305	\$ 7,921,631	\$ 8,080,064	\$ 8,241,665
TC1 Air Compliance - Baghouse										

Incremental O&M Estimates for Projects in the 2011 ECR Plan

Area below used as inputs into Project tabs

## Beneficial Reuse	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Kentucky Utilities Company										
Amended Project 29 <u>BR Landfill (Phase I)</u>	\$ -	\$ -	\$ -	\$ 2,813,772	\$ 2,898,185	\$ 2,985,131	\$ 3,074,885	\$ 3,166,925	\$ 3,261,933	\$ 3,359,791
Proposed Project 34 <u>BR Air Compliance - Baghouses</u>	\$ -	\$ -	\$ -	\$ 7,536,179	\$ 16,368,110	\$ 19,065,903	\$ 19,467,621	\$ 19,856,973	\$ 20,254,113	\$ 20,659,195
Brown 1 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 1,559,509	\$ 2,386,049	\$ 2,433,769	\$ 2,482,445	\$ 2,532,094	\$ 2,582,736	\$ 2,634,390
Brown 1 - SAM Mitigation	\$ 0	\$ 0	\$ 0	\$ 923,835	\$ 2,423,086	\$ 2,471,548	\$ 2,520,979	\$ 2,571,398	\$ 2,622,826	\$ 2,675,283
Total Brown 1	\$ 0	\$ 0	\$ 0	\$ 2,483,343	\$ 4,809,135	\$ 4,905,317	\$ 5,003,424	\$ 5,103,492	\$ 5,205,562	\$ 5,309,673
Brown 2 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 3,271,155	\$ 4,448,770	\$ 4,537,746	\$ 4,628,501	\$ 4,721,071	\$ 4,815,492	\$ 4,911,802
Brown 2 - SAM Mitigation	\$ 0	\$ 0	\$ 0	\$ 1,781,681	\$ 2,423,086	\$ 2,471,548	\$ 2,520,979	\$ 2,571,398	\$ 2,622,826	\$ 2,675,283
Total Brown 2	\$ 0	\$ 0	\$ 0	\$ 5,052,836	\$ 6,871,856	\$ 7,009,293	\$ 7,149,479	\$ 7,292,469	\$ 7,438,318	\$ 7,587,085
Brown 3 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,687,119	\$ 7,171,292	\$ 7,314,718	\$ 7,461,012	\$ 7,610,232	\$ 7,762,437
Total Brown 3	\$ 0	\$ 0	\$ 0	\$ 0	\$ 4,687,119	\$ 7,171,292	\$ 7,314,718	\$ 7,461,012	\$ 7,610,232	\$ 7,762,437
Proposed Project 35 <u>GH Air Compliance - Baghouses</u>	\$ -	\$ 8,692	\$ 8,229,481	\$ 25,061,610	\$ 41,503,865	\$ 64,806,127	\$ 66,102,250	\$ 67,424,295	\$ 68,772,781	\$ 70,148,237
Ghent 1 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 7,885,637	\$ 12,065,330	\$ 12,306,637	\$ 12,552,769	\$ 12,803,825	\$ 13,059,901	\$ 13,321,089
Ghent 1 - SCR Turn-Down	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Ghent 1 - SAM Mitigation	\$ 0	\$ 0	\$ 2,730,914	\$ 5,013,957	\$ 5,114,237	\$ 5,216,521	\$ 5,320,852	\$ 5,427,269	\$ 5,535,814	\$ 5,646,530
Total Ghent 1	\$ 0	\$ 0	\$ 2,730,914	\$ 12,899,594	\$ 17,179,567	\$ 17,523,158	\$ 17,873,621	\$ 18,231,093	\$ 18,595,715	\$ 18,967,630
Ghent 2 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 881,024	\$ 10,783,730	\$ 10,999,405	\$ 11,219,393	\$ 11,443,781	\$ 11,672,657	\$ 11,906,110
Ghent 2 - SAM Mitigation	\$ 8,692	\$ 1,276,696	\$ 1,276,696	\$ 1,302,230	\$ 1,328,274	\$ 1,354,840	\$ 1,381,937	\$ 1,409,575	\$ 1,437,767	\$ 1,466,522
Total Ghent 2	\$ 8,692	\$ 1,276,696	\$ 1,276,696	\$ 2,183,254	\$ 12,112,005	\$ 12,354,245	\$ 12,601,330	\$ 12,853,356	\$ 13,110,424	\$ 13,372,632
Ghent 3 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 0	\$ 1,547,134	\$ 12,624,612	\$ 12,877,104	\$ 13,134,646	\$ 13,397,339	\$ 13,665,286
Ghent 3 - SCR Turn-Down	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Ghent 3 - SAM Mitigation	\$ 0	\$ 0	\$ 642,953	\$ 4,721,847	\$ 4,816,284	\$ 4,912,610	\$ 5,010,862	\$ 5,111,079	\$ 5,213,301	\$ 5,317,567
Total Ghent 3	\$ 0	\$ 0	\$ 642,953	\$ 4,721,847	\$ 5,363,418	\$ 17,537,222	\$ 17,887,966	\$ 18,245,725	\$ 18,610,640	\$ 18,982,853
Ghent 4 - Baghouse	\$ 0	\$ 0	\$ 0	\$ 0	\$ 487,027	\$ 11,922,417	\$ 12,160,865	\$ 12,404,082	\$ 12,652,164	\$ 12,905,207
Ghent 4 - SCR Turn-Down	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Ghent 4 - SAM Mitigation	\$ 0	\$ 0	\$ 3,578,918	\$ 5,256,715	\$ 5,361,849	\$ 5,469,086	\$ 5,578,468	\$ 5,690,037	\$ 5,803,838	\$ 5,919,915
Total Ghent 4	\$ 0	\$ 0	\$ 3,578,918	\$ 5,256,715	\$ 5,848,876	\$ 17,391,503	\$ 17,739,333	\$ 18,094,120	\$ 18,456,002	\$ 18,825,122

Revenue Requirements Summary 2011 Amended Plan - LG&E

Project 26	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
MC Air Compliance - All Units - FGDs & PM Control Systems										
Revenue Requirement										
Eligible Plant	9,618,429	223,007,642	635,707,764	1,006,220,362	1,260,668,843	1,268,214,657	1,268,214,657	1,268,214,657	1,268,214,657	1,268,214,657
Less: Retired Plant	-	-	-	(66,093,145)	(171,243,250)	(171,243,250)	(171,243,250)	(171,243,250)	(171,243,250)	(171,243,250)
Less: Accumulated Depreciation	-	-	-	(2,051,239)	(40,402,159)	(92,361,100)	(144,320,041)	(196,278,982)	(248,237,922)	(300,196,863)
Plus: Accumulated Depreciation on retired plant	-	-	-	33,754,526	107,305,608	107,305,608	107,305,608	107,305,608	107,305,608	107,305,608
Less: Deferred Tax Balance	-	-	-	(5,075,817)	(13,943,352)	(27,194,621)	(38,060,062)	(46,720,057)	(53,337,644)	(58,067,671)
Plus: Deferred Tax Balance on retired plant	-	-	-	3,536,499	5,341,429	5,341,429	5,341,429	5,341,429	5,341,429	5,341,429
Environmental Compliance Rate Base	9,618,429	223,007,642	635,707,764	970,291,187	1,147,727,118	1,090,062,723	1,027,238,342	966,619,405	908,042,877	851,353,909
Rate of return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
	\$ 1,088,109	\$ 25,228,303	\$ 71,916,049	\$ 109,766,644	\$ 129,839,533	\$ 123,316,102	\$ 116,208,935	\$ 109,351,265	\$ 102,724,647	\$ 96,311,564
Operating expenses	-	-	1,693,407	7,079,485	31,875,726	47,403,071	48,528,230	49,675,892	50,846,507	52,040,535
Annual Depreciation expense	-	-	-	2,051,239	38,350,920	51,958,941	51,958,941	51,958,941	51,958,941	51,958,941
Less depreciation on retired plant	-	-	-	206,498	(907,630)	(907,630)	(907,630)	(907,630)	(907,630)	(907,630)
Annual Property Tax expense	-	14,428	334,511	953,562	1,506,254	1,830,400	1,763,780	1,685,842	1,607,904	1,529,965
Total OE	\$ -	\$ 14,428	\$ 2,027,919	\$ 10,290,783	\$ 70,825,269	\$ 100,284,782	\$ 101,343,321	\$ 102,413,045	\$ 103,505,721	\$ 104,621,811
Total E(m)	1,088,109	25,242,731	73,943,967	120,057,427	200,664,802	223,600,884	217,552,256	211,764,309	206,230,368	200,933,375

**Revenue Requirements Summary
2011 Amended Plan - LG&E**

Project 27	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
TC1 Air Compliance - PM Control Systems										
Revenue Requirement										
Eligible Plant	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	-	(536,077)	(5,015,912)	(9,495,748)	(13,375,563)	(18,455,418)	(22,935,254)
Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	-	(1,395,029)	(2,985,498)	(4,336,446)	(5,466,435)	(6,391,372)	(7,127,169)
Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	-	-	23,479,869	61,329,417	116,538,920	115,750,947	109,920,164	104,310,340	98,905,567	93,689,935
Rate of return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
\$	\$ -	\$ -	\$ 2,656,220	\$ 6,838,045	\$ 13,183,760	\$ 13,094,619	\$ 12,434,997	\$ 11,800,371	\$ 11,188,942	\$ 10,598,911
Operating expenses	-	-	-	-	3,732,365	7,614,024	7,766,305	7,921,631	8,080,064	8,241,665
Annual Depreciation expense	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835
Less depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
Annual Property Tax expense	-	-	-	35,220	91,994	176,901	178,105	171,385	164,665	157,945
Total OE	\$ -	\$ -	\$ -	\$ 35,220	\$ 4,360,436	\$ 12,270,761	\$ 12,424,245	\$ 12,572,851	\$ 12,724,564	\$ 12,879,446
Total E(m)	-	-	2,656,220	6,973,265	17,544,196	25,365,379	24,859,241	24,373,222	23,913,506	23,478,356

**Revenue Requirements Summary
2011 Amended Plan - LG&E**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total E(m) - All LG&E Projects	1,088,109	25,242,731	76,600,187	127,030,692	218,208,998	248,966,263	242,411,497	236,137,532	230,143,875	224,411,731
Total Revenue Requirements	1,088,109	25,242,731	76,600,187	127,030,692	218,208,998	248,966,263	242,411,497	236,137,532	230,143,875	224,411,731
Project 26	-	-	2,656,220	6,973,265	17,544,196	25,365,379	24,859,241	24,373,222	23,913,506	23,478,356
Project 27	1,088,109	25,242,731	73,943,967	120,057,427	200,664,802	223,600,884	217,552,256	211,764,309	206,230,368	200,933,375
Total	1,088,109	25,242,731	76,600,187	127,030,692	218,208,998	248,966,263	242,411,497	236,137,532	230,143,875	224,411,731
12 Month Average Jurisdictional Ratio	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%	87.20%
Jurisdictional Allocation	948,858	22,012,293	66,797,278	110,773,939	190,283,702	217,104,806	211,388,886	205,917,831	200,691,212	195,692,640
Forecasted 12-Month Retail Revenue	896,759,953	955,916,819	1,012,748,964	1,038,491,023	1,076,945,865	1,130,945,501	1,195,411,298	1,235,773,390	1,292,678,978	1,331,079,773
Billing Factor	0.11%	2.30%	6.60%	10.67%	17.67%	19.20%	17.68%	16.66%	15.53%	14.70%
LGE Residential Bill Impact										
Customer Charge	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50
Energy - 1,000 Kwh @ \$0.07068	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68	\$70.68
FAC billings (Dec 10 factor - \$0.00241/KWh)	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41	\$2.41
DSM billings (Dec 10 factor - \$0.0035/KWh)	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50	\$3.50
ECR billings (Dec 10 factor: 1.25%)	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	\$1.10
Additional ECR factor	\$0.09	\$1.96	\$5.61	\$9.08	\$15.03	\$16.33	\$15.05	\$14.18	\$13.21	\$12.51

**Summary Cash Flow
Cash Flow for 2011 thru 2020
2011 LG&E Amended ECR Plan**

Date	MC FGDs -		MC FGDs - MC3		MC FGDs - MC4		MC Air		MC Air		MC Air		MC Air		Total
	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 26)	(Project 27)	
2009	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2010	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2011	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2012	\$ 50,384,502	\$ 6,892,461	\$ 4,049,212	\$ 70,537,279	\$ 13,571,615	\$ 12,967,870	\$ 4,615,765	\$ 192,372	\$ 5,376,845	\$ 54,419,721	\$ 58,845,099	\$ 23,479,869	\$ 37,849,548	\$ 57,140,608	\$ 12,828,146
2013	\$ 104,799,763	\$ 32,256,716	\$ 87,592,561	\$ 42,786,743	\$ 49,569,616	\$ 41,386,870	\$ 45,032,370	\$ 49,061,558	\$ 39,657,052	\$ 9,115,060	\$ 7,545,814	\$ -	\$ -	\$ -	\$ -
2014	\$ 108,951,754	\$ 29,819,542	\$ 3,876,540	\$ 11,842,514	\$ 48,617,414	\$ 47,612,217	\$ 43,768,430	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 89,616,306	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2020	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 353,792,325	\$ 72,845,258	\$ 218,314,571	\$ 154,545,388	\$ 151,067,029	\$ 167,413,776	\$ 123,752,357	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

**Revenue Requirements
Project 26 - LG&E**

	April									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
					1	2	3	4	5	6
In-Service										
Mill Creek 2PC										
CapEx - Mill Creek FGDs - Combined MC1-MC2 new FGD	\$ -	\$ 50,384,502	\$ 104,799,763	\$ 108,991,754	\$ 89,616,306	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ -	\$ 50,384,502	\$ 155,184,265	\$ 264,176,019	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325	\$ 353,792,325
Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	4.280%	4.280%	4.280%	4.280%	4.280%	4.280%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	-	907,537	4,620,647	7,648,989	10,045,654	11,896,095	13,125,805
Book Accumulated Depreciation Balance	-	-	-	-	10,725,804	25,868,115	41,010,427	56,152,739	71,295,050	86,437,362
Unrecovered Investment - Book	-	50,384,502	155,184,265	264,176,019	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325
Book Depreciation	-	-	-	-	10,725,804	15,142,312	15,142,312	15,142,312	15,142,312	15,142,312
Unrecovered Investment - Tax total	-	50,384,502	155,184,265	264,176,019	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325
Tax Depreciation	-	-	-	-	13,267,212	25,540,268	23,622,714	21,853,752	20,212,156	18,697,924
Allowed Rate of Return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Book Depreciation expense total	-	-	-	-	10,725,804	15,142,312	15,142,312	15,142,312	15,142,312	15,142,312
Tax Depreciation expense total	-	-	-	-	13,267,212	25,540,268	23,622,714	21,853,752	20,212,156	18,697,924
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	-	907,537	3,713,110	3,028,352	2,396,655	1,810,441	1,269,709
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	-	50,384,502	155,184,265	264,176,019	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325	353,792,325
Less: Netted Plant	-	-	-	-	(91,533,054)	(91,533,054)	(91,533,054)	(91,533,054)	(91,533,054)	(91,533,054)
Less: Accumulated Depreciation	-	-	-	-	(10,725,804)	(25,868,115)	(41,010,427)	(56,152,739)	(71,295,050)	(86,437,362)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	67,043,393	67,043,393	67,043,393	67,043,393	67,043,393	67,043,393
Less: Deferred Tax Balance	-	-	-	-	(907,537)	(4,620,647)	(7,648,989)	(10,045,654)	(11,896,095)	(13,125,805)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	1,722,429	1,722,429	1,722,429	1,722,429	1,722,429	1,722,429
Environmental Compliance Rate Base	-	50,384,502	155,184,265	264,176,019	319,391,751	300,536,329	282,365,666	264,876,699	247,873,946	231,461,925
Rate of return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Return on Environmental Compliance Rate Base	\$ -	\$ 5,699,874	\$ 17,555,612	\$ 29,865,580	\$ 35,132,000	\$ 33,998,932	\$ 31,943,330	\$ 29,959,190	\$ 28,041,367	\$ 26,184,716
Operating Expenses										
Annual Depreciation expense	-	-	-	-	(236,824)	(294,074)	(228,759)	(162,138)	(94,185)	(24,872)
Less: Depreciation on Retired Plant	-	-	-	-	10,725,804	15,142,312	15,142,312	15,142,312	15,142,312	15,142,312
Annual Property Tax expense	-	-	-	-	(1,057,024)	(1,926,024)	(1,826,024)	(1,626,024)	(1,326,024)	(926,024)
Total OE	\$ -	\$ -	\$ 75,577	\$ 232,776	\$ 396,264	\$ 514,600	\$ 491,886	\$ 469,173	\$ 446,459	\$ 423,746
Total E(m) - Project	-	5,699,874	17,531,189	30,118,357	46,711,221	49,055,747	47,042,746	45,102,514	43,229,931	41,419,878

**Revenue Requirements
Project 26 - LG&E**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
In-Service				November						
Mill Creek 3PC				1						
CapEx - Mill Creek FGDA - MC3 FGD (Old MC4 FGD tied-in)	\$ -	\$ 6,892,461	\$ 32,256,716	\$ 29,819,542	\$ 3,876,540	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ -	\$ 6,892,461	\$ 39,149,176	\$ 68,968,718	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258	\$ 72,845,258
Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.850%	3.850%	3.850%	3.850%	3.850%	3.850%	3.850%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	805,052	1,681,431	2,416,820	3,022,143	3,506,766	3,880,053	4,150,069
Book Accumulated Depreciation Balance	-	-	-	331,912	3,136,454	5,940,997	8,745,539	11,550,082	14,354,624	17,159,167
Unrecovered Investment - Book	-	-	-	68,968,718	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258
Book Depreciation	-	-	-	331,912	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542
Unrecovered Investment - Tax total	-	6,892,461	39,149,176	68,968,718	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258
Tax Depreciation	-	-	-	2,566,327	4,863,878	4,863,878	4,863,878	4,161,650	3,849,872	3,560,676
Allowed Rate of Return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Book Depreciation expense total	-	-	-	331,912	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542
Tax Depreciation expense total	-	-	-	2,566,327	4,863,878	4,863,878	4,863,878	4,161,650	3,849,872	3,560,676
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	805,052	876,379	735,369	606,323	484,623	373,287	270,015
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	-	6,892,461	39,149,176	68,968,718	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258	72,845,258
Less: Retired Plant	-	-	-	(66,093,145)	(66,093,145)	(66,093,145)	(66,093,145)	(66,093,145)	(66,093,145)	(66,093,145)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	(331,912)	(3,136,454)	(5,940,997)	(8,745,539)	(11,550,082)	(14,354,624)	(17,159,167)
Less: Deferred Tax Balance	-	-	-	33,754,526	33,754,526	33,754,526	33,754,526	33,754,526	33,754,526	33,754,526
Plus: Deferred Tax Balance on Retired Plant	-	-	-	(805,052)	(1,681,431)	(2,416,820)	(3,022,143)	(3,506,766)	(3,880,053)	(4,150,069)
Environmental Compliance Rate Base	-	-	-	3,536,499	3,536,499	3,536,499	3,536,499	3,536,499	3,536,499	3,536,499
Rate of return	-	6,892,461	39,149,176	39,029,635	39,225,254	35,685,322	32,275,457	28,986,291	25,808,462	22,733,904
Return on Environmental Compliance Rate Base	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Operating Expenses										
Annual Depreciation expense	-	-	-	(6,803)	211,745	270,192	329,608	390,615	452,639	515,904
Less: Accumulated Depreciation on retired plant	-	-	-	331,912	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542	2,804,542
Annual Property Tax expense	-	-	-	58,724	102,965	104,563	100,556	96,150	91,943	87,736
Total OE	-	-	-	50,909	207,702	208,113	225,516	290,113	346,146	405,898
Total E(m) - Project	-	779,727	4,439,188	5,005,657	7,763,197	7,422,788	7,092,447	6,776,953	6,475,270	6,186,510

**Revenue Requirements
Project 26 - LG&E**

	November									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
In-Service				1	2	3	4	5	6	7
Mill Creek 4PC										
CapEx - Mill Creek FGDs - MC4 New FGD	\$ 4,049,212	\$ 70,337,279	\$ 87,592,561	\$ 44,293,005	\$ 11,842,514	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ 4,049,212	\$ 74,566,491	\$ 162,179,052	\$ 206,472,057	\$ 218,314,571	\$ 218,314,571	\$ 218,314,571	\$ 218,314,571	\$ 218,314,571	\$ 218,314,571
Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.710%	3.710%	3.710%	3.710%	3.710%	3.710%	3.710%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	2,422,991	5,159,612	7,471,689	9,394,965	10,956,507	12,184,379	13,102,749
Book Accumulated Depreciation Balance	-	-	-	957,514	9,056,985	17,156,455	25,255,926	33,355,397	41,454,867	49,554,338
Unrecovered Investment - Book	4,049,212	74,566,491	162,179,052	206,472,057	218,314,571	218,314,571	218,314,571	218,314,571	218,314,571	218,314,571
Book Depreciation	-	-	-	957,514	8,099,471	8,099,471	8,099,471	8,099,471	8,099,471	8,099,471
Unrecovered Investment - Tax total	4,049,212	74,566,491	162,179,052	206,472,057	218,314,571	218,314,571	218,314,571	218,314,571	218,314,571	218,314,571
Tax Depreciation	-	-	-	7,742,702	15,760,129	14,576,864	13,465,291	12,472,311	11,537,925	10,671,216
Allowed Rate of Return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Book Depreciation expense total	-	-	-	957,514	8,099,471	8,099,471	8,099,471	8,099,471	8,099,471	8,099,471
Tax Depreciation expense total	-	-	-	7,742,702	15,760,129	14,576,864	13,465,291	12,472,311	11,537,925	10,671,216
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	2,422,991	2,735,621	2,313,077	1,923,276	1,561,541	1,227,872	918,370
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	4,049,212	74,566,491	162,179,052	206,472,057	218,314,571	218,314,571	218,314,571	218,314,571	218,314,571	218,314,571
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	(957,514)	(9,056,985)	(17,156,455)	(25,255,926)	(33,355,397)	(41,454,867)	(49,554,338)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	(2,422,991)	(5,159,612)	(7,471,689)	(9,394,965)	(10,956,507)	(12,184,379)	(13,102,749)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	4,049,212	74,566,491	162,179,052	203,091,552	204,098,975	193,666,427	183,663,680	174,002,668	164,675,325	155,657,484
Rate of return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Return on Environmental Compliance Rate Base	\$ 459,077	\$ 8,437,785	\$ 18,458,795	\$ 22,975,245	\$ 23,089,213	\$ 21,911,267	\$ 20,777,418	\$ 19,684,492	\$ 18,629,313	\$ 17,605,147
Operating Expenses										
Annual Depreciation expense	-	-	-	20,421	359,055	417,926	477,974	539,223	601,697	665,421
Less: Depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
Annual Property Tax expense	-	-	-	957,514	8,099,471	8,099,471	8,099,471	8,099,471	8,099,471	8,099,471
Total OE	-	6,074	111,880	243,269	308,272	313,886	301,137	289,588	277,439	265,290
Total E(m) - Project	459,077	8,443,859	18,458,795	24,196,449	31,856,010	30,742,550	29,656,600	28,612,774	27,607,919	26,639,328

**Revenue Requirements
Project 26 - LG&E**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
In-Service					May					
Mill Creek 1NPC					1	2	3	4	5	6
CapEx - MC1 PM Control System - SAM Mitigation	\$ -	\$ 13,571,615	\$ 42,766,743	\$ 49,569,616	\$ 48,617,414	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ -	\$ 13,571,615	\$ 56,358,358	\$ 105,927,974	\$ 154,545,388	\$ 154,545,388	\$ 154,545,388	\$ 154,545,388	\$ 154,545,388	\$ 154,545,388
Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	4.240%	4.240%	4.240%	4.240%	4.240%	4.240%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.265%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	-	607,070	2,251,125	3,596,060	4,665,055	5,477,977	6,054,693
Book Accumulated Depreciation Balance	-	-	-	105,927,974	154,545,388	154,545,388	154,545,388	154,545,388	154,545,388	154,545,388
Unrecovered Investment - Book	-	-	-	-	4,095,453	10,648,177	17,200,902	23,753,626	30,306,351	36,859,075
Book Depreciation	-	-	-	-	4,095,453	6,552,724	6,552,724	6,552,724	6,552,724	6,552,724
Unrecovered Investment - Tax total	-	-	-	105,927,974	154,545,388	154,545,388	154,545,388	154,545,388	154,545,388	154,545,388
Tax Depreciation	-	-	-	-	5,795,452	11,156,632	10,318,996	9,546,269	8,829,178	8,167,724
Allowed Rate of Return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Book Depreciation expense total	-	-	-	-	4,095,453	6,552,724	6,552,724	6,552,724	6,552,724	6,552,724
Tax Depreciation expense total	-	-	-	-	5,795,452	11,156,632	10,318,996	9,546,269	8,829,178	8,167,724
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	-	607,070	1,944,055	1,344,935	1,068,995	812,922	576,716
Revenue Recovery on Capital Expenditure to date	-	-	-	-	-	-	-	-	-	-
Eligible Plant, cumulative capital expenditures	-	13,571,615	56,358,358	105,927,974	154,545,388	154,545,388	154,545,388	154,545,388	154,545,388	154,545,388
Less: Recovered Plant	-	-	-	-	(2,532,868)	(2,532,868)	(2,532,868)	(2,532,868)	(2,532,868)	(2,532,868)
Less: Accumulated Depreciation	-	-	-	-	(4,095,453)	(10,648,177)	(17,200,902)	(23,753,626)	(30,306,351)	(36,859,075)
Plus: Accumulated Depreciation on Replaced Plant	-	-	-	-	2,410,292	2,410,292	2,410,292	2,410,292	2,410,292	2,410,292
Less: Deferred Tax Balance	-	-	-	-	(607,070)	(2,251,125)	(3,596,060)	(4,665,055)	(5,477,977)	(6,054,693)
Plus: Deferred Tax Balance on Replaced Plant	-	-	-	-	19,604	19,604	19,604	19,604	19,604	19,604
Environmental Compliance Rate Base	-	13,571,615	56,358,358	105,927,974	149,739,893	141,543,114	133,646,454	126,023,735	118,658,089	111,528,648
Rate of return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Return on Environmental Compliance Rate Base	\$ -	\$ 1,535,323	\$ 6,375,682	\$ 11,983,370	\$ 16,939,704	\$ 16,012,423	\$ 15,116,980	\$ 14,256,754	\$ 13,423,486	\$ 12,616,960
Operating Expenses	-	-	-	-	5,298,902	9,156,028	9,339,148	9,525,832	9,716,451	9,910,780
Annual Depreciation expense	-	-	-	-	4,095,453	6,552,724	6,552,724	6,552,724	6,552,724	6,552,724
Less: Accumulated depreciation on replaced plant	-	-	-	-	(5,834,414)	(5,834,414)	(5,834,414)	(5,834,414)	(5,834,414)	(5,834,414)
Annual Property Tax expense	-	-	20,357	84,538	158,892	225,675	215,546	206,017	196,188	186,359
Total OE	\$ -	\$ -	\$ 20,357	\$ 84,538	\$ 9,544,297	\$ 15,925,478	\$ 16,099,770	\$ 16,275,724	\$ 16,456,413	\$ 16,640,913
Total E(m) - Project	-	1,535,323	6,396,039	12,067,907	26,484,001	31,937,901	31,217,750	30,532,477	29,979,910	29,257,873

**Revenue Requirements
Project 26 - LG&E**

In-Service	April									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
					1	2	3	4	5	6
Mill Creek 2NPC										
CapEx - MC2 PM Control System - SAM Mitigation	\$ -	\$ 12,967,870	\$ 41,386,670	\$ 49,120,072	\$ 47,612,217	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ -	\$ 12,967,870	\$ 54,354,740	\$ 103,474,812	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029	\$ 151,087,029
Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	4.700%	4.700%	4.700%	4.700%	4.700%	4.700%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.265%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	-	227,053	1,586,134	2,652,788	3,446,676	3,996,222	4,311,848
Book Accumulated Depreciation Balance	-	-	-	-	5,029,939	12,191,029	19,232,120	26,333,210	33,434,301	40,535,391
Unrecovered Investment - Book	-	12,967,870	54,354,740	103,474,812	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029
Book Depreciation	-	-	-	-	5,029,939	7,101,090	7,101,090	7,101,090	7,101,090	7,101,090
Unrecovered Investment - Tax total	-	12,967,870	54,354,740	103,474,812	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029
Tax Depreciation	-	-	-	-	5,665,764	10,906,973	10,088,081	9,332,646	8,631,602	7,984,949
Allowed Rate of Return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Book Depreciation expense total	-	-	-	-	5,029,939	7,101,090	7,101,090	7,101,090	7,101,090	7,101,090
Tax Depreciation expense total	-	-	-	-	5,665,764	10,906,973	10,088,081	9,332,646	8,631,602	7,984,949
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	-	227,053	1,359,081	1,066,654	796,888	546,546	315,626
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	-	12,967,870	54,354,740	103,474,812	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029	151,087,029
Less: Retired Plant	-	-	-	-	(625,711)	(625,711)	(625,711)	(625,711)	(625,711)	(625,711)
Less: Accumulated Depreciation	-	-	-	-	(5,029,939)	(12,131,029)	(19,232,120)	(26,333,210)	(33,434,301)	(40,535,391)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	550,727	550,727	550,727	550,727	550,727	550,727
Less: Deferred Tax Balance	-	-	-	-	(227,053)	(1,586,134)	(2,652,788)	(3,446,676)	(3,996,222)	(4,311,848)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	29,169	29,169	29,169	29,169	29,169	29,169
Environmental Compliance Rate Base	-	12,967,870	54,354,740	103,474,812	145,784,222	137,324,051	129,156,305	121,258,327	113,610,691	106,193,975
Rate of return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Return on Environmental Compliance Rate Base	\$ -	\$ 1,467,023	\$ 6,149,017	\$ 11,705,850	\$ 16,492,209	\$ 15,935,131	\$ 14,611,134	\$ 13,717,655	\$ 12,852,487	\$ 12,013,462
Operating Expenses										
Annual Depreciation expense	-	-	-	-	6,437,015	9,640,391	9,833,199	10,029,863	10,230,460	10,435,069
Less: Depreciation on retired plant	-	-	-	-	(5,029,939)	(7,101,090)	(7,101,090)	(7,101,090)	(7,101,090)	(7,101,090)
Annual Property Tax expense	-	-	-	-	2,461,9	4,451,9	4,451,9	4,451,9	4,451,9	4,451,9
Total OE	\$ -	\$ -	\$ 19,452	\$ 81,532	\$ 155,212	\$ 219,086	\$ 208,434	\$ 197,782	\$ 187,131	\$ 176,479
Total E(m) - Project	-	1,467,023	6,168,469	11,787,382	28,111,924	32,493,247	31,751,406	31,043,940	30,368,727	29,723,650

**Revenue Requirements
Project 26 - LG&E**

	October									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
In-Service										
Mill Creek 3NPC										
CapEx - MC3 PM Control System - SAM Mitigation - SCR Turn-down	\$ 192,372	\$ 4,615,765	\$ 45,032,370	\$ 49,061,558	\$ 43,768,430	\$ 7,545,814	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ 192,372	\$ 4,808,137	\$ 48,840,507	\$ 98,902,065	\$ 142,670,495	\$ 150,216,309	\$ 150,216,309	\$ 150,216,309	\$ 150,216,309	\$ 150,216,309
Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.870%	3.870%	3.870%	3.870%	3.870%	3.870%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.877%	6.177%	5.713%	5.285%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	-	1,499,771	3,296,250	4,801,988	6,039,514	7,028,141	7,787,178
Book Accumulated Depreciation Balance	-	-	-	-	1,150,281	6,963,652	12,777,023	18,590,394	24,403,766	30,217,137
Unrecovered Investment - Book	192,372	4,808,137	48,840,507	98,902,065	142,670,495	150,216,309	150,216,309	150,216,309	150,216,309	150,216,309
Book Depreciation	-	-	-	-	1,150,281	5,813,371	5,813,371	5,813,371	5,813,371	5,813,371
Unrecovered Investment - Tax total	192,372	4,808,137	48,840,507	98,902,065	142,670,495	150,216,309	150,216,309	150,216,309	150,216,309	150,216,309
Tax Depreciation	-	-	-	-	5,350,144	10,844,115	10,025,943	9,278,861	8,581,858	7,938,932
Allowed Rate of Return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Book Depreciation expense total	-	-	-	-	1,150,281	5,813,371	5,813,371	5,813,371	5,813,371	5,813,371
Tax Depreciation expense total	-	-	-	-	5,350,144	10,844,115	10,025,943	9,278,861	8,581,858	7,938,932
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	-	1,489,771	1,796,479	1,506,738	1,237,527	988,627	759,038
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	192,372	4,808,137	48,840,507	98,902,065	142,670,495	150,216,309	150,216,309	150,216,309	150,216,309	150,216,309
Less: Retired Plant	-	-	-	-	(10,458,472)	(10,458,472)	(10,458,472)	(10,458,472)	(10,458,472)	(10,458,472)
Plus: Accumulated Depreciation	-	-	-	-	(1,150,281)	(6,963,652)	(12,777,023)	(18,590,394)	(24,403,766)	(30,217,137)
Plus: Accumulated Expenditures on Retired Plant	-	-	-	-	3,546,670	3,546,670	3,546,670	3,546,670	3,546,670	3,546,670
Less: Deferred Tax Balance	-	-	-	-	(1,489,771)	(3,296,250)	(4,801,988)	(6,039,514)	(7,028,141)	(7,787,178)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	33,729	33,729	33,729	33,729	33,729	33,729
Environmental Compliance Rate Base	192,372	4,808,137	48,840,507	98,902,065	133,142,370	133,078,334	125,759,225	118,708,327	111,906,330	105,333,921
Rate of return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Return on Environmental Compliance Rate Base	\$ 21,763	\$ 549,933	\$ 5,638,333	\$ 11,188,546	\$ 15,062,067	\$ 15,054,823	\$ 14,226,830	\$ 13,429,160	\$ 12,659,687	\$ 11,916,166
Operating Expenses										
Annual Depreciation expense	-	-	1,693,407	3,454,550	4,645,582	12,749,152	13,004,135	13,264,218	13,529,502	13,800,092
Less: Depreciated on Retired Plant	-	-	-	-	1,150,281	5,813,371	5,813,371	5,813,371	5,813,371	5,813,371
Annual Property Tax expense	-	-	289	7,212	148,353	212,260	214,879	206,159	197,439	186,719
Total OE	-	-	289	7,212	148,353	212,260	214,879	206,159	197,439	186,719
Total E(m) - Project	21,763	544,221	7,338,953	14,717,857	20,209,578	33,032,921	32,462,510	31,916,222	31,403,293	30,921,643

**Revenue Requirements
Project 26 - LG&E**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
In-Service				November						
Mill Creek 4NPC				1	2	3	4	5	6	7
CapEx - MCA PM Control System - SAM Milligation - SCR Turn-down	\$ 5,376,845	\$ 54,419,721	\$ 58,645,099	\$ 39,657,052	\$ 9,115,060	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ 5,376,845	\$ 59,796,566	\$ 118,641,665	\$ 158,298,717	\$ 167,413,776	\$ 167,413,776	\$ 167,413,776	\$ 167,413,776	\$ 167,413,776	\$ 167,413,776
Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.850%	3.850%	3.850%	3.850%	3.850%	3.850%	3.850%
Tax Depreciation rate, per year	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Income tax rate	-	-	-	1,847,774	3,861,879	5,551,958	6,943,119	8,056,885	8,914,777	9,535,329
Deferred Tax Balance	-	-	-	761,813	7,207,243	13,652,673	20,098,104	26,543,534	32,988,964	38,434,395
Book Accumulated Depreciation Balance	5,376,845	59,796,566	118,641,665	158,298,717	167,413,776	167,413,776	167,413,776	167,413,776	167,413,776	167,413,776
Unrecovered Investment - Book	-	-	-	761,813	6,445,430	6,445,430	6,445,430	6,445,430	6,445,430	6,445,430
Unrecovered Investment - Tax total	5,376,845	59,796,566	118,641,665	158,298,717	167,413,776	167,413,776	167,413,776	167,413,776	167,413,776	167,413,776
Tax Depreciation	-	-	-	5,836,202	12,085,601	11,178,218	10,341,149	9,564,349	8,847,818	8,183,185
Allowed Rate of Return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Book Depreciation expense total	-	-	-	761,813	6,445,430	6,445,430	6,445,430	6,445,430	6,445,430	6,445,430
Tax Depreciation expense total	-	-	-	5,836,202	12,085,601	11,178,218	10,341,149	9,564,349	8,847,818	8,183,185
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	1,847,774	2,014,105	1,690,078	1,391,161	1,113,766	857,893	620,552
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	5,376,845	59,796,566	118,641,665	158,298,717	167,413,776	167,413,776	167,413,776	167,413,776	167,413,776	167,413,776
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	(761,813)	(7,207,243)	(13,652,673)	(20,098,104)	(26,543,534)	(32,988,964)	(39,434,395)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	(1,847,774)	(3,861,879)	(5,551,958)	(6,943,119)	(8,056,885)	(8,914,777)	(9,535,329)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	5,376,845	59,796,566	118,641,665	155,699,130	156,344,654	148,205,145	140,372,554	132,813,358	125,510,035	118,444,052
Rate of return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Return on Environmental Compliance Rate Base	\$ 608,269	\$ 6,764,638	\$ 13,421,638	\$ 17,612,727	\$ 17,686,884	\$ 16,766,534	\$ 15,880,000	\$ 15,024,847	\$ 14,188,640	\$ 13,399,283
Operating Expenses										
Annual Depreciation expense	-	-	-	3,611,316	15,160,250	15,463,455	15,772,725	16,088,179	16,409,943	16,738,141
Less: Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	-
Annual Property Tax expense	-	-	-	761,813	6,445,430	6,445,430	6,445,430	6,445,430	6,445,430	6,445,430
Total OE	-	-	-	8,065	8,065	8,065	8,065	8,065	8,065	8,065
Total E(m) - Project	608,269	6,772,703	13,511,333	22,163,818	39,528,871	38,915,730	36,328,797	37,779,430	37,565,318	36,784,492

**Revenue Requirements
Project 27 - LG&E**

In-Service	November											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
TrimblePC												
Capital Expenditures - Project 27 - TC1 Baghouse	\$ -	\$ -	\$ 23,479,869	\$ 37,849,548	\$ 57,140,608	\$ 5,282,332	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ -	\$ -	\$ 23,479,869	\$ 61,329,417	\$ 118,470,025	\$ 123,752,357	\$ 123,752,357	\$ 123,752,357	\$ 123,752,357	\$ 123,752,357	\$ 123,752,357	\$ 123,752,357
Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.620%	3.620%	3.620%	3.620%	3.620%	3.620%	3.620%	3.620%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	5.285%	5.285%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	-	1,395,029	2,985,498	4,336,446	5,466,435	6,391,372	7,127,169	7,127,169	7,127,169
Book Accumulated Depreciation Balance	-	-	-	-	536,077	5,015,912	9,495,748	13,975,583	18,455,418	22,935,254	22,935,254	22,935,254
Unrecovered Investment - Book	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357
Book Depreciation	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835
Unrecovered Investment - Tax total	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357
Tax Depreciation	-	-	-	-	4,442,626	8,933,683	8,262,945	7,644,183	7,069,972	6,540,312	6,540,312	6,540,312
Allowed Rate of Return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
Book Depreciation expense total	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835
Tax Depreciation expense total	-	-	-	-	4,442,626	8,933,683	8,262,945	7,644,183	7,069,972	6,540,312	6,540,312	6,540,312
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	-	1,395,029	1,590,469	1,350,948	1,129,989	924,938	735,796	735,796	735,796
Revenue Recovery on Capital Expenditure to date												
Eligible Plant, cumulative capital expenditures	-	-	23,479,869	61,329,417	118,470,025	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357	123,752,357
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	-	(536,077)	(5,015,912)	(9,495,748)	(13,975,583)	(18,455,418)	(22,935,254)	(22,935,254)	(22,935,254)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	-	(1,395,029)	(2,985,498)	(4,336,446)	(5,466,435)	(6,391,372)	(7,127,169)	(7,127,169)	(7,127,169)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	-	-	23,479,869	61,329,417	116,538,920	115,750,947	109,920,164	104,310,340	96,905,567	93,689,935	93,689,935	93,689,935
Rate of return	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%	11.31%
	\$ -	\$ -	\$ 2,656,220	\$ 6,938,045	\$ 13,183,760	\$ 13,094,619	\$ 12,434,997	\$ 11,800,371	\$ 11,188,942	\$ 10,598,911	\$ 10,598,911	\$ 10,598,911
Operating Expenses												
Annual Depreciation expense	-	-	-	-	3,732,365	7,614,024	7,766,305	7,921,631	8,080,064	8,241,665	8,241,665	8,241,665
Less depreciation on retired plant	-	-	-	-	536,077	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835	4,479,835
Annual Property Tax expense	-	-	-	-	91,994	176,901	178,105	171,385	164,655	157,945	157,945	157,945
Total OE	\$ -	\$ -	\$ -	\$ 35,220	\$ 4,360,435	\$ 12,270,761	\$ 12,424,245	\$ 12,572,851	\$ 12,724,564	\$ 12,879,446	\$ 12,879,446	\$ 12,879,446
Total E(m) - Project	-	-	2,656,220	6,973,265	17,544,196	25,365,379	24,859,241	24,373,222	23,913,506	23,478,366	23,478,366	23,478,366

**Revenue Requirements Summary
2011 Amended Plan - KU**

Project 23	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Brown Landfill (Phase I)										
Revenue Requirement										
Eligible Plant	7,887,735	34,610,113	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	(1,574,430)	(3,217,314)	(4,860,198)	(6,503,082)	(8,145,965)	(9,788,849)	(11,431,733)
Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	(223,485)	(1,149,392)	(1,951,725)	(2,669,296)	(3,279,646)	(3,800,319)	(4,237,810)
Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	7,887,735	34,610,113	58,674,420	56,876,485	54,307,714	51,852,497	49,502,043	47,248,808	45,065,252	43,004,877
Rate of return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
	\$ 870,487	\$ 3,819,556	\$ 6,475,281	\$ 6,276,863	\$ 5,993,373	\$ 5,722,417	\$ 5,463,022	\$ 5,214,356	\$ 4,975,587	\$ 4,745,998
Operating expenses										
Annual Depreciation expense	-	-	-	2,813,772	2,898,185	2,985,131	3,074,685	3,166,925	3,261,933	3,359,791
Less depreciation on retired plant	-	-	-	1,574,430	1,642,884	1,642,884	1,642,884	1,642,884	1,642,884	1,642,884
Annual Property Tax expense	-	-	-	-	-	-	-	-	-	-
Total OE	-	11,832	51,915	88,012	85,650	83,186	80,721	78,257	75,793	73,328
	\$ -	\$ 11,832	\$ 51,915	\$ 4,476,214	\$ 4,628,719	\$ 4,711,200	\$ 4,798,290	\$ 4,888,066	\$ 4,980,609	\$ 5,076,003
Total E(m)	870,487	3,831,387	6,527,196	10,753,077	10,620,092	10,433,617	10,261,312	10,102,422	9,956,196	9,822,001

Revenue Requirements Summary 2011 Amended Plan - KU

Project 34 BR Air Compliance - All Units - PM Control Systems	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Revenue Requirement										
Eligible Plant	5,224,347	71,624,419	196,530,009	307,550,104	343,785,964	343,785,964	343,785,964	343,785,964	343,785,964	343,785,964
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	(4,247,407)	(13,089,386)	(23,159,043)	(33,228,698)	(43,298,356)	(53,368,012)	(63,437,668)		
Plus: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	(1,521,248)	(5,777,851)	(10,605,360)	(14,801,503)	(18,412,981)	(21,483,980)	(24,054,674)		
Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	5,224,347	71,624,419	196,530,009	301,781,449	324,918,727	310,021,561	295,755,762	282,074,628	268,933,962	256,293,622
Rate of return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
	\$ 576,556	\$ 7,904,437	\$ 21,688,958	\$ 33,304,457	\$ 35,857,876	\$ 34,213,832	\$ 32,639,465	\$ 31,129,621	\$ 29,679,424	\$ 28,284,442
Operating expenses										
Annual Depreciation expense	-	-	-	7,536,179	16,368,110	19,085,903	19,467,621	19,856,973	20,254,113	20,659,195
Less depreciation on retired plant	-	-	-	4,247,407	8,841,979	10,069,656	10,069,656	10,069,656	10,069,656	10,069,656
Annual Property Tax expense	-	-	-	-	-	-	-	-	-	-
Total OE										
	\$ -	\$ 7,837	\$ 107,437	\$ 294,795	\$ 454,954	\$ 480,940	\$ 465,636	\$ 450,731	\$ 435,627	\$ 435,627
Total E(m)	576,556	7,912,273	21,796,395	45,382,838	61,522,919	63,865,435	62,657,682	61,522,087	60,463,924	59,448,920

**Revenue Requirements Summary
2011 Amended Plan - KU**

Project 35	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
GH Air Compliance - All Units - PM Control Systems										
Revenue Requirement										
Eligible Plant	5,094,166	101,828,630	299,923,984	530,338,048	698,652,348	711,534,820	711,534,820	711,534,820	711,534,820	711,534,820
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Plus: Accumulated Depreciation	-	-	-	(4,400,802)	(15,808,453)	(36,310,719)	(56,812,985)	(77,315,251)	(97,817,517)	(118,319,783)
Less: Accumulated Depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	(2,741,380)	(12,086,178)	(22,481,196)	(31,538,360)	(39,367,343)	(46,059,617)	(51,700,784)
Plus: Deferred Tax Balance on retired plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	5,094,166	101,828,630	299,923,984	523,195,866	670,747,717	652,742,905	623,183,475	594,852,226	567,657,686	541,514,253
Rate of return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
	\$ 562,190	\$ 11,237,759	\$ 33,089,468	\$ 57,739,646	\$ 74,023,398	\$ 72,036,395	\$ 68,774,231	\$ 65,647,608	\$ 62,646,431	\$ 59,761,255
Operating expenses										
Annual Depreciation expense	-	8,692	8,229,481	25,061,610	41,503,865	64,806,127	66,102,250	67,424,295	68,772,781	70,148,237
Less depreciation on retired plant	-	-	-	4,400,802	11,407,651	20,502,266	20,502,266	20,502,266	20,502,266	20,502,266
Annual Property Tax expense	-	-	-	-	-	-	-	-	-	-
Total OE	-	7,541	152,743	449,886	788,906	1,024,266	1,012,836	982,083	951,329	920,576
	\$ -	\$ 16,333	\$ 8,382,224	\$ 29,912,288	\$ 59,700,423	\$ 86,392,659	\$ 87,617,352	\$ 88,908,644	\$ 90,226,376	\$ 91,571,078
Total E(m)	562,190	11,254,092	41,481,691	87,651,944	127,723,820	158,369,055	156,391,583	154,556,251	152,872,807	151,332,333

**Revenue Requirements Summary
2011 Amended Plan - KU**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total E(m) - All KU Projects	2,009,233	22,997,753	69,805,282	143,787,858	199,866,832	232,668,107	229,310,577	226,180,760	223,282,928	220,603,254
	1,712,578	19,012,967	60,245,001	123,740,224	177,214,254	210,444,215	207,489,439	204,738,062	202,195,965	199,850,703
Total Revenue Requirements										
Project 29	870,487	3,831,387	6,527,196	10,753,077	10,620,092	10,433,617	10,261,312	10,102,422	9,956,196	9,822,001
Project 34	576,556	7,912,273	21,796,395	45,382,838	61,522,919	63,865,435	62,657,662	61,522,087	60,453,924	59,448,920
Project 35	562,190	11,254,092	41,481,691	87,651,944	127,723,820	158,359,055	156,391,583	154,556,251	152,872,807	151,332,333
Total	2,009,233	22,997,753	69,805,282	143,787,858	199,866,832	232,668,107	229,310,577	226,180,760	223,282,928	220,603,254
12 Month Average Jurisdictional Ratio	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%	86.99%
Jurisdictional Allocation	1,747,798	20,005,362	60,722,452	125,078,661	173,860,826	202,394,108	199,473,449	196,750,873	194,230,098	191,899,084
Forecasted 12-Month Retail Revenue	1,251,944,184	1,364,734,889	1,442,296,068	1,505,216,494	1,559,590,578	1,654,718,522	1,721,201,709	1,811,131,354	1,963,765,781	2,028,216,792
Billing Factor	0.14%	1.47%	4.21%	8.31%	11.15%	12.23%	11.59%	10.86%	9.89%	9.46%
KU Residential Bill Impact										
Customer Charge	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50	\$8.50
Energy - 1,000 Kwh @ \$0.06805	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05	\$68.05
FAC billings (12/1/201 factor - \$-0.0016/KWh)	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60	-\$1.60
DSM billings (12/1/201 factor - \$0.00243/KWh)	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43	\$2.43
ECR billings (12/1/201 factor: 2.55%)	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97	\$1.97
Additional ECR factor	\$0.11	\$1.13	\$3.26	\$6.43	\$8.63	\$9.46	\$8.97	\$8.41	\$7.65	\$7.32

**Summary Cash Flow
Cash Flow for 2011 thru 2020
2011 KU Amended ECR Plan**

	1	2	3	4	5	6	7	8	9	10
	BR Landfill	BR Air	BR Air	BR Air	BR Air	GH Air	GH Air	GH Air	GH Air	Total
Date	(Project 29)	Compliance - BR1 (Project 34)	Compliance - BR2 (Project 34)	Compliance - BR3 (Project 34)	Compliance - GH1 (Project 35)	Compliance - GH2 (Project 35)	Compliance - GH3 (Project 35)	Compliance - GH4 (Project 35)	Compliance - GH4 (Project 35)	
2010	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2011	\$ 7,887,735	\$ 2,536,274	\$ 2,688,073	\$ -	\$ 2,178,929	\$ 148,784	\$ -	\$ 1,307,716	\$ 1,458,737	\$ 18,206,248
2012	\$ 26,722,378	\$ 30,841,093	\$ 33,382,705	\$ 2,176,274	\$ 50,248,800	\$ 37,354,857	\$ 4,809,001	\$ 4,809,001	\$ 4,321,807	\$ 189,856,914
2013	\$ 24,064,307	\$ 46,546,567	\$ 50,067,464	\$ 28,291,560	\$ 66,924,592	\$ 48,163,861	\$ 47,890,171	\$ 35,116,729	\$ -	\$ 347,065,251
2014	\$ -	\$ 29,295,115	\$ 31,507,055	\$ 50,217,924	\$ 44,857,567	\$ 72,191,638	\$ 56,057,325	\$ 57,307,535	\$ -	\$ 341,434,159
2015	\$ -	\$ -	\$ -	\$ 36,235,860	\$ -	\$ 6,683,304	\$ 84,049,087	\$ 77,571,909	\$ -	\$ 204,550,160
2016	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,896,032	\$ 8,984,440	\$ -	\$ 12,882,472
2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2018	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	\$ 58,674,420	\$ 109,219,049	\$ 117,645,297	\$ 116,921,618	\$ 164,209,888	\$ 164,552,444	\$ 198,011,331	\$ 184,761,157	\$ -	\$ 1,113,995,204

**Revenue Requirements
Project 29 - KU**

	January									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
				1	2	3	4	5	6	7
In-Service										
Brown 3										
Capital Expenditures - Project 29 - Brown Landfill - Phase II	\$ 7,887,735	\$ 28,722,378	\$ 24,054,307	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ 7,887,735	\$ 34,610,113	\$ 58,674,420	\$ 58,674,420	\$ 58,674,420	\$ 58,674,420	\$ 58,674,420	\$ 58,674,420	\$ 58,674,420	\$ 58,674,420
Book Depreciation rate, per year	0.000%	0.000%	0.000%	2.800%	2.800%	2.800%	2.800%	2.800%	2.800%	2.800%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	223,495	1,149,392	1,961,725	2,669,296	3,279,946	3,800,319	4,237,810
Book Accumulated Depreciation Balance	-	-	-	1,574,430	3,217,314	4,860,198	6,503,082	8,145,965	9,788,849	11,431,733
Unrecovered Investment - Book	7,887,735	34,610,113	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420
Book Depreciation	-	-	-	1,574,430	1,642,884	1,642,884	1,642,884	1,642,884	1,642,884	1,642,884
Unrecovered Investment - Tax total	7,887,735	34,610,113	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420
Tax Depreciation	-	-	-	2,200,291	4,235,706	3,917,691	3,624,319	3,352,070	3,100,943	2,868,006
Allowed Rate of Return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Book Depreciation expense total	-	-	-	1,574,430	1,642,884	1,642,884	1,642,884	1,642,884	1,642,884	1,642,884
Tax Depreciation expense total	-	-	-	2,200,291	4,235,706	3,917,691	3,624,319	3,352,070	3,100,943	2,868,006
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	223,495	925,897	812,334	707,570	610,350	520,673	437,491
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	7,887,735	34,610,113	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420	58,674,420
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	(1,574,430)	(3,217,314)	(4,860,198)	(6,503,082)	(8,145,965)	(9,788,849)	(11,431,733)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	(223,495)	(1,149,392)	(1,961,725)	(2,669,296)	(3,279,946)	(3,800,319)	(4,237,810)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	7,887,735	34,610,113	58,674,420	58,676,465	54,307,714	51,852,497	49,502,043	47,248,809	45,085,252	43,004,877
Rate of return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Return on Environmental Compliance Rate Base	\$ 870,487	\$ 3,819,556	\$ 6,475,291	\$ 6,276,863	\$ 5,993,373	\$ 5,722,417	\$ 5,463,022	\$ 5,214,356	\$ 4,975,587	\$ 4,745,988
Operating Expenses										
Annual Depreciation expense	-	-	-	2,813,772	2,898,185	2,885,131	3,074,685	3,166,925	3,261,933	3,359,791
Less: depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
Annual Property Tax expense	-	-	-	1,574,430	1,642,884	1,642,884	1,642,884	1,642,884	1,642,884	1,642,884
Total OE	-	-	-	11,832	51,915	85,650	80,721	78,257	75,763	73,328
Total E(m) - Project	870,487	3,831,387	6,527,196	10,753,077	10,620,092	10,433,617	10,261,312	10,102,422	9,956,196	9,822,001

**Revenue Requirements
Project 34 - KU**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
				May						
In-Service				1	2	3	4	5	6	7
Brown 1										
CapEx - BR1 PM Control System - SAM Mitigation										
Accumulated Expenditures	\$ 2,536,274	\$ 30,841,093	\$ 46,546,567	\$ 29,295,115	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Book Depreciation rate, per year	0.000%	0.000%	0.000%	2.980%	2.980%	2.980%	2.980%	2.980%	2.980%	2.980%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	736,165	2,389,465	3,831,373	5,076,271	6,144,199	7,043,198	7,787,359
Book Accumulated Depreciation Balance	-	-	-	2,034,205	5,288,932	8,543,660	11,796,388	15,053,115	18,307,843	21,562,571
Unrecovered Investment - Book	2,536,274	33,377,367	79,923,934	109,219,049	109,219,049	109,219,049	109,219,049	109,219,049	109,219,049	109,219,049
Book Depreciation	-	-	-	2,034,205	3,254,728	3,254,728	3,254,728	3,254,728	3,254,728	3,254,728
Unrecovered Investment - Tax total	2,536,274	33,377,367	79,923,934	109,219,049	109,219,049	109,219,049	109,219,049	109,219,049	109,219,049	109,219,049
Tax Depreciation	-	-	-	4,095,714	7,884,523	7,292,556	6,746,461	6,239,684	5,772,227	5,338,627
Allowed Rate of Return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Book Depreciation expense total	-	-	-	2,034,205	3,254,728	3,254,728	3,254,728	3,254,728	3,254,728	3,254,728
Tax Depreciation expense total	-	-	-	4,095,714	7,884,523	7,292,556	6,746,461	6,239,684	5,772,227	5,338,627
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	736,165	1,653,300	1,441,908	1,246,898	1,065,928	899,959	744,160
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	2,536,274	33,377,367	79,923,934	109,219,049	109,219,049	109,219,049	109,219,049	109,219,049	109,219,049	109,219,049
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	(2,034,205)	(5,288,932)	(8,543,660)	(11,796,388)	(15,053,115)	(18,307,843)	(21,562,571)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	(736,165)	(2,389,465)	(3,831,373)	(5,076,271)	(6,144,199)	(7,043,198)	(7,787,359)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	2,536,274	33,377,367	79,923,934	106,448,679	101,540,651	96,644,015	92,342,390	88,021,734	83,868,007	79,669,119
Rate of return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Return on Environmental Compliance Rate Base	\$ 279,902	\$ 3,687,315	\$ 8,820,367	\$ 11,747,625	\$ 11,205,978	\$ 10,887,659	\$ 10,190,862	\$ 9,714,037	\$ 9,255,633	\$ 8,814,318
Operating Expenses										
Annual Depreciation expense	-	-	-	2,483,343	4,809,135	4,905,317	5,003,424	5,103,492	5,205,562	5,309,673
Less: deferred amort. on retired plant	-	-	-	-	-	-	-	-	-	-
Annual Property Tax expense	-	-	-	2,034,205	3,254,728	3,254,728	3,254,728	3,254,728	3,254,728	3,254,728
Total OE	\$ -	\$ 3,804	\$ 50,066	\$ 4,637,434	\$ 8,224,640	\$ 8,315,940	\$ 8,409,164	\$ 8,504,351	\$ 8,601,538	\$ 8,700,768
Total E(m) - Project	279,902	3,687,315	8,870,433	16,385,059	19,430,617	19,003,599	18,600,026	18,218,387	17,857,172	17,515,086

**Revenue Requirements
Project 34 - KU**

In-Service Brown 2	April									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CapEx - BRZ PM Control System - SAM Mitigation	\$ 2,688,073	\$ 33,382,705	\$ 50,067,464	\$ 31,507,055	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ 2,688,073	\$ 36,070,778	\$ 86,138,242	\$ 117,645,297	\$ 117,645,297	\$ 117,645,297	\$ 117,645,297	\$ 117,645,297	\$ 117,645,297	\$ 117,645,297
Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.010%	3.010%	3.010%	3.010%	3.010%	3.010%	3.010%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	785,083	2,553,332	4,093,880	5,424,373	6,559,934	7,515,687	8,304,656
Book Accumulated Depreciation Balance	-	-	-	2,213,202	5,754,325	9,295,449	12,836,573	16,377,696	19,918,819	23,459,943
Unrecovered Investment - Book	2,688,073	36,070,778	86,138,242	117,645,297	117,645,297	117,645,297	117,645,297	117,645,297	117,645,297	117,645,297
Book Depreciation	-	-	-	2,213,202	3,541,123	3,541,123	3,541,123	3,541,123	3,541,123	3,541,123
Unrecovered Investment - Tax total	2,688,073	36,070,778	86,138,242	117,645,297	117,645,297	117,645,297	117,645,297	117,645,297	117,645,297	117,645,297
Tax Depreciation	-	-	-	4,411,699	8,492,814	7,855,177	7,266,950	6,721,076	6,217,554	5,750,502
Allowed Rate of Return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Book Depreciation expense total	-	-	-	2,213,202	3,541,123	3,541,123	3,541,123	3,541,123	3,541,123	3,541,123
Tax Depreciation expense total	-	-	-	4,411,699	8,492,814	7,855,177	7,266,950	6,721,076	6,217,554	5,750,502
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	785,083	1,769,249	1,540,548	1,330,493	1,135,561	955,753	766,969
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	2,688,073	36,070,778	86,138,242	117,645,297	117,645,297	117,645,297	117,645,297	117,645,297	117,645,297	117,645,297
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	(2,213,202)	(5,754,325)	(9,295,449)	(12,836,573)	(16,377,696)	(19,918,819)	(23,459,943)
Plus: Accumulated Expenditures on Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	(785,083)	(2,553,332)	(4,093,880)	(5,424,373)	(6,559,934)	(7,515,687)	(8,304,656)
Plus: Deferred Tax Balance on Expired Plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	2,688,073	36,070,778	86,138,242	114,647,012	103,337,640	104,255,968	99,384,352	94,707,668	90,210,791	85,880,688
Rate of return	11.04%	-11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Return on Environmental Compliance Rate Base	\$ 296,654	\$ 3,980,754	\$ 9,506,175	\$ 12,652,390	\$ 12,066,450	\$ 11,505,639	\$ 10,969,010	\$ 10,451,893	\$ 9,955,620	\$ 9,477,753
Operating Expenses										
Annual Depreciation expense	-	-	-	5,052,836	6,871,856	7,009,293	7,149,479	7,292,469	7,438,318	7,597,085
Less: depreciation on retired plant	-	-	-	-	-	-	-	-	-	-
Annual Property Tax expense	-	-	-	2,213,202	3,541,123	3,541,123	3,541,123	3,541,123	3,541,123	3,541,123
Total OE	-	-	-	4,032	4,032	54,106	54,106	54,106	54,106	54,106
Total E(m) - Project	296,654	3,984,786	9,560,281	20,047,535	22,652,578	22,223,892	21,821,137	21,442,698	21,066,963	20,752,551

**Revenue Requirements
Project 34 - KU**

	May									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
In-Service					1	2	3	4	5	6
Brown 3										
CapEx - BR3 PM Control Systems	\$ -	\$ 2,176,274	\$ 28,291,560	\$ 50,217,924	\$ 36,235,660	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ -	\$ 2,176,274	\$ 30,467,834	\$ 80,685,758	\$ 116,921,618	\$ 116,921,618	\$ 116,921,618	\$ 116,921,618	\$ 116,921,618	\$ 116,921,618
Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	2.800%	2.800%	2.800%	2.800%	2.800%	2.800%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	-	835,054	2,680,106	4,298,859	5,708,848	6,925,104	7,962,659
Book Accumulated Depreciation Balance	-	-	-	-	2,046,128	5,319,934	8,593,739	11,867,544	15,141,350	18,415,155
Unrecovered Investment - Book	-	2,176,274	30,467,834	80,685,758	116,921,618	116,921,618	116,921,618	116,921,618	116,921,618	116,921,618
Book Depreciation	-	-	-	-	2,046,128	3,273,805	3,273,805	3,273,805	3,273,805	3,273,805
Unrecovered Investment - Tax total	-	2,176,274	30,467,834	80,685,758	116,921,618	116,921,618	116,921,618	116,921,618	116,921,618	116,921,618
Tax Depreciation	-	-	-	-	4,384,561	8,440,572	7,806,856	7,222,248	6,679,732	6,179,308
Allowed Rate of Return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Book Depreciation expense total	-	-	-	-	2,046,128	3,273,805	3,273,805	3,273,805	3,273,805	3,273,805
Tax Depreciation expense total	-	-	-	-	4,384,561	8,440,572	7,806,856	7,222,248	6,679,732	6,179,308
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	-	835,054	1,845,052	1,616,753	1,409,989	1,216,256	1,037,555
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	-	2,176,274	30,467,834	80,685,758	116,921,618	116,921,618	116,921,618	116,921,618	116,921,618	116,921,618
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	-	(2,046,128)	(5,319,934)	(8,593,739)	(11,867,544)	(15,141,350)	(18,415,155)
Plus: Accumulated Expenditure on Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	-	(835,054)	(2,680,106)	(4,298,859)	(5,708,848)	(6,925,104)	(7,962,659)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	-	2,176,274	30,467,834	80,685,758	114,040,436	108,921,578	104,029,020	99,345,226	94,855,164	90,543,804
Rate of return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Return on Environmental Compliance Rate Base	\$ -	\$ 240,173	\$ 3,362,416	\$ 8,904,442	\$ 12,585,448	\$ 12,020,533	\$ 11,480,593	\$ 10,953,892	\$ 10,468,171	\$ 9,992,371
Operating Expenses										
Annual Depreciation expense	-	-	-	-	4,687,119	7,171,282	7,314,718	7,461,012	7,610,232	7,762,437
Less: depreciation on retired plant	-	-	-	-	2,046,128	3,273,805	3,273,805	3,273,805	3,273,805	3,273,805
Annual Property Tax expense	-	-	-	-	3,264	3,264	3,264	3,264	3,264	3,264
Total OE	\$ -	\$ -	\$ -	\$ -	\$ 45,702	\$ 45,702	\$ 45,702	\$ 45,702	\$ 45,702	\$ 45,702
Total E(m) - Project	-	240,173	3,365,680	8,950,144	19,439,724	22,637,944	22,236,519	21,861,001	21,509,789	21,161,284

**Revenue Requirements
Project 35 - KU**

In-Service Event 1	May									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CapEx - GH1 PM Control Systems-SAM Mitigation-SCR Turn-down	\$ 2,178,929	\$ 50,249,800	\$ 66,924,592	\$ 44,857,567	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ 2,178,929	\$ 52,427,728	\$ 119,352,320	\$ 164,209,888	\$ 164,209,888	\$ 164,209,888	\$ 164,209,888	\$ 164,209,888	\$ 164,209,888	\$ 164,209,888
Book Depreciation rate, per year	0.000%	0.000%	0.000%	3.840%	3.840%	3.840%	3.840%	3.840%	3.840%	3.840%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	791,631	2,773,055	4,436,653	5,807,055	6,905,370	7,752,709	8,387,249
Book Accumulated Depreciation Balance	-	-	-	3,941,037	10,246,697	16,552,357	22,858,016	29,163,676	35,469,336	41,774,995
Unrecovered Investment - Book	2,178,929	52,427,728	119,352,320	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888
Book Depreciation	-	-	-	3,941,037	6,305,660	6,305,660	6,305,660	6,305,660	6,305,660	6,305,660
Unrecovered Investment - Tax total	2,178,929	52,427,728	119,352,320	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888
Tax Depreciation	-	-	-	6,157,871	11,854,312	10,964,294	10,143,245	9,381,311	8,678,493	8,026,579
Allowed Rate of Return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Book Depreciation expense total	-	-	-	3,941,037	6,305,660	6,305,660	6,305,660	6,305,660	6,305,660	6,305,660
Tax Depreciation expense total	-	-	-	6,157,871	11,854,312	10,964,294	10,143,245	9,381,311	8,678,493	8,026,579
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	791,631	1,981,424	1,683,598	1,370,402	1,098,315	847,339	614,540
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	2,178,929	52,427,728	119,352,320	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888	164,209,888
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	(3,941,037)	(10,246,697)	(16,552,357)	(22,858,016)	(29,163,676)	(35,469,336)	(41,774,995)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	(791,631)	(2,773,055)	(4,436,653)	(5,807,055)	(6,905,370)	(7,752,709)	(8,387,249)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	2,178,929	52,427,728	119,352,320	159,477,219	151,190,136	143,220,878	135,544,816	128,140,842	120,987,843	114,067,643
Rate of return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Return on Environmental Compliance Rate Base	\$ 240,466	\$ 5,789,167	\$ 13,171,665	\$ 17,599,830	\$ 16,665,271	\$ 15,805,788	\$ 14,958,681	\$ 14,141,562	\$ 13,352,161	\$ 12,588,451
Operating Expenses										
Annual Depreciation expense	-	-	2,730,914	12,899,794	17,179,567	17,523,158	17,873,621	18,231,093	18,595,715	18,967,630
Less: depreciation on retired plant	-	-	-	3,941,037	6,305,660	6,305,660	6,305,660	6,305,660	6,305,660	6,305,660
Annual Property Tax expense	-	-	76,642	179,028	240,403	230,945	221,486	212,028	202,569	193,111
Total OE	-	-	2,809,555	17,019,860	23,725,530	24,059,762	24,400,767	24,748,781	25,103,944	25,466,400
Total Etm) - Project	240,466	5,789,167	15,981,220	34,619,690	40,410,901	39,865,550	39,359,428	38,890,343	38,456,105	38,054,851

**Revenue Requirements
Project 35 - KU**

In-Service	November									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
CapEx - GH2 PM Control Systems & SAM Mitigation	\$ 148,784	\$ 37,354,857	\$ 48,163,861	\$ 72,191,638	\$ 6,693,304	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ 148,784	\$ 37,503,641	\$ 85,667,502	\$ 157,859,140	\$ 164,552,444	\$ 164,552,444	\$ 164,552,444	\$ 164,552,444	\$ 164,552,444	\$ 164,552,444
Book Depreciation rate, per year	0.000%	0.000%	0.000%	2.330%	2.330%	2.330%	2.330%	2.330%	2.330%	2.330%
Tax Depreciation rate, per year	35.71%	35.71%	35.71%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	4.888%
Income tax rate	-	-	-	1,949,749	4,822,608	7,376,078	9,637,540	11,625,447	13,361,855	14,864,978
Deferred Tax Balance	-	-	-	459,765	4,293,837	8,127,909	11,961,981	15,786,053	19,630,124	23,464,196
Book Accumulated Depreciation Balance	148,784	37,503,641	85,667,502	157,859,140	164,552,444	164,552,444	164,552,444	164,552,444	164,552,444	164,552,444
Unrecovered Investment - Book	-	-	-	459,765	3,834,072	3,834,072	3,834,072	3,834,072	3,834,072	3,834,072
Book Depreciation	148,784	37,503,641	85,667,502	157,859,140	164,552,444	164,552,444	164,552,444	164,552,444	164,552,444	164,552,444
Unrecovered Investment - Tax total	-	-	-	5,919,718	11,879,041	10,987,167	10,164,404	9,400,881	8,696,597	8,043,323
Tax Depreciation	-	-	-	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%
Allowed Rate of Return	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%
Book Depreciation expense total	-	-	-	459,765	3,834,072	3,834,072	3,834,072	3,834,072	3,834,072	3,834,072
Tax Depreciation expense total	-	-	-	5,919,718	11,879,041	10,987,167	10,164,404	9,400,881	8,696,597	8,043,323
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	1,949,749	2,872,858	2,564,370	2,260,562	1,987,908	1,736,408	1,503,124
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	148,784	37,503,641	85,667,502	157,859,140	164,552,444	164,552,444	164,552,444	164,552,444	164,552,444	164,552,444
Less: Retired Plant	-	-	-	(459,765)	(4,293,837)	(8,127,909)	(11,961,981)	(15,786,053)	(19,630,124)	(23,464,196)
Less: Accumulated Depreciation	-	-	-	-	-	-	-	-	-	-
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	(1,949,749)	(4,822,608)	(7,376,078)	(9,637,540)	(11,625,447)	(13,361,855)	(14,864,978)
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	148,784	37,503,641	85,667,502	155,449,626	155,436,000	149,047,558	142,952,924	137,130,944	131,560,465	126,223,269
Rate of return	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%
Return on Environmental Compliance Rate Base	\$ 16,420	\$ 4,138,884	\$ 9,454,225	\$ 17,155,347	\$ 17,153,843	\$ 16,448,817	\$ 15,776,216	\$ 15,133,706	\$ 14,518,950	\$ 13,929,940
Operating Expenses										
Annual Depreciation expense	-	6,692	1,276,686	2,193,254	12,112,005	12,354,245	12,091,330	12,853,356	13,110,424	13,372,632
Less: Depreciation on retired plant	-	-	-	459,765	3,834,072	3,834,072	3,834,072	3,834,072	3,834,072	3,834,072
Annual Property Tax expense	-	-	-	-	-	-	-	-	-	-
Total OE	\$ -	\$ 6,692	\$ 1,276,686	\$ 1,733,489	\$ 8,277,933	\$ 8,520,173	\$ 8,257,258	\$ 9,019,284	\$ 9,276,354	\$ 9,538,660
Total E(m) - Project	16,420	4,147,799	10,787,176	19,926,866	33,336,019	32,877,522	32,446,255	32,050,020	31,686,580	31,354,027

**Revenue Requirements
Project 35 - KU**

	October									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
In-Service										
Ghent 3										
CapEx - GH3 PM Control Systems-SAM Mitigation-SCR Turn-down	\$ 1,307,716	\$ 4,809,001	\$ 47,890,171	\$ 56,057,325	\$ 84,048,087	\$ 3,899,032	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ 1,307,716	\$ 6,116,717	\$ 54,006,888	\$ 110,064,213	\$ 194,113,300	\$ 198,011,331	\$ 198,011,331	\$ 198,011,331	\$ 198,011,331	\$ 198,011,331
Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	2.630%	2.630%	2.630%	2.630%	2.630%
Tax Depreciation rate, per year	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Income tax rate	-	-	-	-	2,219,616	5,464,490	8,326,118	10,834,196	13,014,181	14,891,527
Deferred Tax Balance	-	-	-	-	1,063,579	6,271,277	11,478,975	16,686,673	21,894,371	27,102,069
Book Accumulated Depreciation Balance	1,307,716	6,116,717	54,006,888	110,064,213	194,113,300	198,011,331	198,011,331	198,011,331	198,011,331	198,011,331
Unrecovered Investment - Book	-	-	-	-	1,063,579	5,207,698	5,207,698	5,207,698	5,207,698	5,207,698
Book Depreciation	1,307,716	6,116,717	54,006,888	110,064,213	194,113,300	198,011,331	198,011,331	198,011,331	198,011,331	198,011,331
Unrecovered Investment - Tax total	-	-	-	-	7,279,249	14,294,438	13,221,217	12,231,160	11,312,387	10,464,899
Tax Depreciation	-	-	-	-	11,04%	11,04%	11,04%	11,04%	11,04%	11,04%
Allowed Rate of Return	-	-	-	-	1,063,579	5,207,698	5,207,698	5,207,698	5,207,698	5,207,698
Book Depreciation expense total	-	-	-	-	7,279,249	14,294,438	13,221,217	12,231,160	11,312,387	10,464,899
Tax Depreciation expense total	-	-	-	-	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	-	2,219,616	3,244,875	2,861,627	2,506,078	2,179,985	1,877,346
Revenue Recovery on Capital Expenditure to date										
Eligible Plant, cumulative capital expenditures	1,307,716	6,116,717	54,006,888	110,064,213	194,113,300	198,011,331	198,011,331	198,011,331	198,011,331	198,011,331
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	-	(1,063,579)	(6,271,277)	(11,478,975)	(16,686,673)	(21,894,371)	(27,102,069)
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	(2,219,616)	(5,464,490)	(8,326,118)	(10,834,196)	(13,014,181)	(14,891,527)
Less: Deferred Tax Balance	-	-	-	-	-	-	-	-	-	-
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	190,830,105	186,275,564	178,206,238	170,490,462	163,102,779	156,017,735
Environmental Compliance Rate Base	1,307,716	6,116,717	54,006,888	110,064,213	190,830,105	186,275,564	178,206,238	170,490,462	163,102,779	156,017,735
Rate of return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Return on Environmental Compliance Rate Base	\$ 144,319	\$ 675,038	\$ 5,960,174	\$ 12,146,634	\$ 21,059,919	\$ 20,557,282	\$ 19,666,755	\$ 18,815,246	\$ 17,999,945	\$ 17,218,043
Operating Expenses										
Annual Depreciation expense	-	-	642,953	4,721,847	6,363,418	17,537,222	17,887,966	18,245,725	18,610,640	18,982,853
Less: Depreciation on retired plant	-	-	-	-	1,063,579	5,207,698	5,207,698	5,207,698	5,207,698	5,207,698
Annual Property Tax expense	-	1,982	9,175	81,010	165,096	289,575	287,610	279,799	271,987	264,175
Total OE	\$ -	\$ 1,982	\$ 652,128	\$ 4,802,857	\$ 7,592,093	\$ 23,034,494	\$ 23,383,274	\$ 23,733,222	\$ 24,090,325	\$ 24,454,726
Total E(m) - Project	144,319	677,000	6,612,303	16,949,491	28,652,013	43,591,777	43,050,030	42,548,468	42,090,270	41,672,769

**Revenue Requirements
Project 35 - KU**

In-Service Ghent 4	December											
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020		
CapEx - GH4 PM Control Systems-SAM Mitigation-SCR Turn-down	\$ 1,458,737	\$ 4,321,807	\$ 35,116,729	\$ 57,307,535	\$ 77,571,909	\$ 8,984,440	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Accumulated Expenditures	\$ 1,458,737	\$ 5,780,544	\$ 40,897,273	\$ 98,204,808	\$ 175,776,717	\$ 184,761,157	\$ 184,761,157	\$ 184,761,157	\$ 184,761,157	\$ 184,761,157	\$ 184,761,157	\$ 184,761,157
Book Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	2.790%	2.790%	2.790%	2.790%	2.790%	2.790%	2.790%	2.790%
Tax Depreciation rate, per year	0.000%	0.000%	0.000%	0.000%	3.750%	7.219%	6.677%	6.177%	5.713%	5.285%	5.713%	5.285%
Income tax rate	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%	35.71%
Deferred Tax Balance	-	-	-	-	2,280,900	5,203,075	7,767,648	10,002,330	11,930,873	13,577,029	-	-
Book Accumulated Depreciation Balance	-	-	-	-	204,340	5,359,177	10,514,013	15,668,849	20,823,686	25,978,522	-	-
Unrecovered Investment - Book	1,458,737	5,780,544	40,897,273	98,204,808	175,776,717	184,761,157	184,761,157	184,761,157	184,761,157	184,761,157	184,761,157	184,761,157
Book Depreciation	-	-	-	-	204,340	5,154,836	5,154,836	5,154,836	5,154,836	5,154,836	5,154,836	5,154,836
Unrecovered Investment - Tax total	1,458,737	5,780,544	40,897,273	98,204,808	175,776,717	184,761,157	184,761,157	184,761,157	184,761,157	184,761,157	184,761,157	184,761,157
Tax Depreciation	-	-	-	-	6,591,627	13,337,908	12,336,502	11,412,687	10,555,405	9,764,627	-	-
Allowed Rate of Return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Book Depreciation expense total	-	-	-	-	204,340	5,154,836	5,154,836	5,154,836	5,154,836	5,154,836	5,154,836	5,154,836
Tax Depreciation expense total	-	-	-	-	6,591,627	13,337,908	12,336,502	11,412,687	10,555,405	9,764,627	-	-
Annual Property Tax Rate	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%	0.1500%
Deferred Tax Balance	-	-	-	-	2,280,900	2,922,175	2,564,573	2,234,682	1,928,543	1,646,156	-	-
Revenue Recovery on Capital Expenditure to date	1,458,737	5,780,544	40,897,273	98,204,808	175,776,717	184,761,157	184,761,157	184,761,157	184,761,157	184,761,157	184,761,157	184,761,157
Eligible Plant, cumulative capital expenditures	-	-	-	-	-	-	-	-	-	-	-	-
Less: Retired Plant	-	-	-	-	-	-	-	-	-	-	-	-
Less: Accumulated Depreciation	-	-	-	-	(204,340)	(5,359,177)	(10,514,013)	(15,668,849)	(20,823,686)	(25,978,522)	-	-
Plus: Accumulated Depreciation on Retired Plant	-	-	-	-	-	-	-	-	-	-	-	-
Less: Deferred Tax Balance	-	-	-	-	(2,280,900)	(5,203,075)	(7,767,648)	(10,002,330)	(11,930,873)	(13,577,029)	-	-
Plus: Deferred Tax Balance on Retired Plant	-	-	-	-	-	-	-	-	-	-	-	-
Environmental Compliance Rate Base	1,458,737	5,780,544	40,897,273	98,204,808	173,291,476	174,198,905	166,479,496	159,089,978	152,006,599	145,205,606	-	-
Rate of return	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%	11.04%
Return on Environmental Compliance Rate Base	\$ 160,986	\$ 637,938	\$ 4,513,404	\$ 10,837,836	\$ 19,124,365	\$ 19,224,508	\$ 18,372,588	\$ 17,557,094	\$ 16,775,376	\$ 16,024,821	-	-
Operating Expenses	-	-	-	-	5,848,876	17,391,503	17,739,333	18,094,120	18,456,002	18,825,122	-	-
Annual Depreciation expense	-	-	-	-	204,340	5,154,836	5,154,836	5,154,836	5,154,836	5,154,836	5,154,836	5,154,836
Less: Depreciation on retired plant	-	-	-	-	-	-	-	-	-	-	-	-
Annual Property Tax expense	-	2,188	8,671	61,346	147,307	263,359	269,103	261,371	253,638	245,906	-	-
Total OE	\$ -	\$ 2,188	\$ 3,587,589	\$ 5,318,061	\$ 6,200,524	\$ 22,609,698	\$ 23,163,272	\$ 23,510,327	\$ 23,864,477	\$ 24,225,865	-	-
Total E(m) - Project	160,986	640,126	8,100,983	16,155,897	25,324,888	42,034,206	41,535,870	41,067,421	40,639,852	40,250,686	-	-

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Year in Service	Tax Depreciation, 20 yr HL		Book Depreciation	
1	3.75%	Ghent 1PC	3.87%	Assumes all investments to plant account 312 Updated using Depreciation Rates in effect as of 2/6/09 Source: KU and LG&E ECR Databases
2	7.22%	Ghent 1	3.84%	
3	6.68%	Ghent 2	2.33%	
4	6.18%	Ghent 3	2.63%	
5	5.71%	Ghent 4	2.79%	
6	5.29%	Brown 1	2.98%	
7	4.89%	Brown 2	3.01%	
8	4.52%	Brown 3	2.80%	
9	4.46%	Ghent 1,3,&4	3.09%	
10	4.46%	Mill Creek 1PC	4.50%	
11	4.46%	Mill Creek 1NPC	4.24%	
12	4.46%	Mill Creek 2PC	4.28%	
13	4.46%	Mill Creek 2NPC	4.70%	
14	4.46%	Mill Creek 3PC	3.85%	
15	4.46%	Mill Creek 3NPC	3.87%	
16	4.46%	Mill Creek 4NPC	3.85%	
17	4.46%	Mill Creek 4PC	3.71%	
18	4.46%	TrimblePC	3.62%	
19	4.46%	TrimbleNPC	3.62%	
20	4.46%	All Plants-LGE	4.59%	
21	2.23%	All Plants-KU	3.07%	
22	0.00%			
23	0.00%			
24	0.00%			
25	0.00%			
26	0.00%	Cane Run 4	5.88%	
27	0.00%	Cane Run 5	6.11%	
28	0.00%	Cane Run 6	4.46%	
29	0.00%	Green River 3	3.08%	
30	0.00%	Green River 4	4.20%	
31	0.00%			
32	0.00%			
33	0.00%			
34	0.00%			
35	0.00%			
36	0.00%			
37	0.00%			
38	0.00%			
39	0.00%			
40	0.00%			
41	0.00%			
42	0.00%			
43	0.00%			
44	0.00%			
45	0.00%			
46	0.00%			
47	0.00%			
48	0.00%			
49	0.00%			
50	0.00%			
51	0.00%			
52	0.00%			
53	0.00%			
54	0.00%			
55	0.00%			
56	0.00%			
57	0.00%			

PC = Scrubber/FGD
NPC = All other Pollution Control

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Unit	12/31/1995 Rate	1/1/2005 Rate	2/6/2009
BR1N.1311	2.90%	2.90%	0.60%
BR1N.1312	2.88%	2.88%	2.98%
BR1N.1314	2.88%	2.88%	1.12%
BR1N.1315	2.88%	2.88%	2.10%
BR1N.1316	2.88%	2.88%	2.26%
BR2N.1311	2.88%	2.88%	0.08%
BR2N.1312	2.88%	2.88%	3.01%
BR2N.1314	2.88%	2.88%	2.91%
BR2N.1315	2.88%	2.88%	0.48%
BR2N.1316	2.88%	2.88%	0.71%
BR3N.1311	3.91%	3.91%	0.54%
BR3N.1312	3.91%	3.91%	2.80%
BR3N.1314	3.91%	3.91%	3.17%
BR3N.1315	3.91%	3.91%	0.54%
BR3N.1316	3.91%	3.91%	2.33%
BR3S.1311	3.91%	3.91%	2.65%
BR3S.1312	3.91%	3.91%	3.87%
BR3S.1314	3.91%	3.91%	0.00%
BR3S.1315	3.91%	3.91%	2.70%
GH1N.1311	3.12%	3.12%	0.39%
GH1N.1312	3.12%	3.12%	3.84%
GH1N.1314	3.12%	3.12%	2.23%
GH1N.1315	3.12%	3.12%	0.55%
GH1N.1316	3.12%	3.12%	1.38%
GH1S.1311	3.12%	3.12%	2.65%
GH1S.1312	3.12%	3.12%	3.87%
GH1S.1314	3.12%	3.12%	0.00%
GH1S.1315	3.12%	3.12%	2.70%
GH1S.1316	3.12%	3.12%	2.87%
GH2N.1311	1.84%	1.84%	0.50%
GH2N.1312	1.84%	1.84%	2.33%
GH2N.1314	1.84%	1.84%	2.08%
GH2N.1315	1.84%	1.84%	0.60%
GH2N.1316	1.84%	1.84%	1.07%
GH2S.1311	1.84%	1.84%	2.65%
GH2S.1312	1.84%	1.84%	3.87%
GH2S.1314	1.84%	1.84%	0.00%
GH2S.1315	1.84%	1.84%	2.70%
GH2S.1316	1.84%	1.84%	2.87%
GH3N.1311	2.22%	2.22%	1.19%
GH3N.1312	2.22%	2.22%	2.63%
GH3N.1314	2.22%	2.22%	2.03%
GH3N.1315	2.22%	2.22%	1.03%
GH3N.1316	2.22%	2.22%	1.40%
GH3N.1392	2.22%	2.22%	0.00%
GH3S.1311	5.67%	5.67%	2.65%
GH3S.1312	5.67%	5.67%	3.87%
GH3S.1314	5.67%	5.67%	0.00%
GH3S.1315	5.67%	5.67%	2.70%
GH3S.1316	5.67%	5.67%	0.00%
GH4N.1311	2.16%	2.16%	1.41%
GH4N.1312	2.16%	2.16%	2.79%
GH4N.1314	2.16%	2.16%	2.20%
GH4N.1315	2.16%	2.16%	1.22%
GH4N.1316	2.16%	2.16%	2.03%
GH4S.1311	2.16%	5.67%	2.65%

KU Depreciation Rate

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GH4S.1312	2.16%	5.67%	3.87%
GH4S.1314	2.16%	5.67%	0.00%
GH4S.1315	2.16%	5.67%	2.70%
GH4S.1316	2.16%	5.67%	0.00%
GR2N.1311	0.00%	1.94%	0.00%
GR2N.1312	0.00%	1.94%	2.18%
GR2N.1314	0.00%	1.94%	0.00%
GR2N.1315	0.00%	1.94%	0.00%
GR2N.1316	0.00%	1.94%	0.00%
GR3N.1311	0.00%	1.94%	0.00%
GR3N.1312	0.00%	1.94%	3.08%
GR3N.1314	0.00%	1.94%	2.90%
GR3N.1315	0.00%	1.94%	0.00%
GR3N.1316	0.00%	1.94%	3.97%
GR4N.1311	3.10%	3.10%	0.00%
GR4N.1312	3.10%	3.10%	4.20%
GR4N.1314	3.10%	3.10%	3.79%
GR4N.1315	3.10%	3.10%	1.46%
GR4N.1316	3.10%	3.10%	2.71%
KUTR.1392	2.22%	5.67%	20.00%
SW00.1391	20%	20%	10.14%
TY3N.1311	2.13%	2.13%	0.00%
TY3N.1312	2.13%	2.13%	3.99%
TY3N.1314	2.13%	2.13%	3.44%
TY3N.1315	2.13%	2.13%	0.00%
TY3N.1316	2.13%	2.13%	3.12%

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Unit	12/31/1995 Rate	1/1/2005 Rate	2/6/2009
CR4N.131100	2.94%	2.94%	1.14%
CR4N.131200	2.94%	2.94%	5.88%
CR4N.131500	2.94%	2.94%	3.18%
CR4S.131100	3.47%	3.47%	0.95%
CR4S.131200	3.47%	3.47%	4.93%
CR4S.131500	3.47%	3.47%	0.82%
CR5N.131100	2.87%	2.87%	1.92%
CR5N.131200	2.87%	2.87%	6.11%
CR5N.131500	2.87%	2.87%	2.97%
CR5S.131100	3.47%	3.47%	1.56%
CR5S.131200	3.47%	3.47%	4.07%
CR5S.131500	3.47%	3.47%	1.49%
CR6N.131100	3.06%	3.06%	2.13%
CR6N.131200	3.06%	3.06%	5.19%
CR6N.131500	3.06%	3.06%	2.80%
CR6S.131100	2.18%	2.18%	2.04%
CR6S.131200	2.18%	2.18%	4.46%
CR6S.131500	2.18%	2.18%	1.44%
CRLF.131200	2.82%	2.82%	2.13%
MC1N.131100	2.39%	2.39%	1.64%
MC1N.131200	2.39%	2.39%	4.24%
MC1N.131500	2.39%	2.39%	2.75%
MC1S.131100	3.90%	3.90%	1.65%
MC1S.131200	3.90%	3.90%	4.50%
MC1S.131500	3.90%	3.90%	1.67%
MC2N.131100	2.29%	2.29%	1.42%
MC2N.131200	2.29%	2.29%	4.70%
MC2N.131500	2.29%	2.29%	2.03%
MC2S.131100	3.99%	3.99%	1.81%
MC2S.131200	3.99%	3.99%	4.28%
MC2S.131500	3.99%	3.99%	1.69%
MC3N.131100	3.03%	3.03%	1.51%
MC3N.131200	3.03%	3.03%	3.87%
MC3N.131500	2.29%	2.29%	1.58%
MC3S.131100	4.54%	4.54%	1.47%
MC3S.131200	4.54%	4.54%	3.85%
MC3S.131500	3.99%	3.99%	1.56%
MC4N.131020	2.82%	2.82%	0.00%
MC4N.131100	2.82%	2.82%	1.85%
MC4N.131200	2.82%	2.82%	3.85%
MC4N.131500	2.29%	2.29%	1.75%
MC4S.131100	5.38%	5.38%	1.76%
MC4S.131200	5.38%	5.38%	3.71%
MC4S.131500	3.99%	3.99%	1.71%
MSUB.135310	2.10%	2.10%	1.32%
SW00.339130	20.00%	20.00%	21.96%
TC1N.131100	2.41%	2.41%	2.08%
TC1N.131200	2.41%	2.41%	3.62%
TC1N.131500	2.41%	2.41%	2.13%
TC1S.131100	3.47%	3.47%	2.28%
TC1S.131200	3.47%	3.47%	3.62%
TC1S.131500	3.47%	3.47%	2.12%
TC2N.131100	2.41%	2.41%	2.10%
TC2N.131200	2.41%	2.41%	4.28%
TC2N.131500	2.41%	2.41%	2.49%
TC2S.131100	3.47%	3.47%	2.10%
TC2S.131200	3.47%	3.47%	4.28%
TC2S.131500	3.47%	3.47%	2.49%

LGE Depreciation Rate

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 49

Witness: Charles R. Schram / Gary H. Revlett

Q-49. How do the changes between the proposed rule and the final Cross-State Air Pollution Rule impact the assumptions and results in your modeling and thus your recommendations in this case?

A-49. In finalizing CATR, now called the Cross-State Air Pollution Rule ("CSAPR"), the EPA also modified SO₂ and NO_x allowance allocations. The allowance allocation update, which primarily impacts the timing of allowances in the 2012-2014 period, does not affect the Companies' recommendations in the 2011 Compliance Plan filing.

The Companies jointly dispatch their generating fleets and optimize dispatch to meet emissions regulations in a least cost manner. The Companies have reviewed CSAPR and concluded that all of the projects in the 2011 Compliance plan are still required. The modifications to various systems at the Ghent and Mill Creek stations to expand the operating range at which the SCRs can function to reduce NO_x are still needed. These proposed modifications will provide additional margin against the NO_x tonnage caps. The FGD project at Mill Creek is required to meet NAAQS regulations and also supports compliance with CSAPR.

The table below compares allowance allocation assumed in the filing with the final rule.

Allowance Allocations Under the Proposed and Final CATR/CSAPR Rule			
	Proposed Rule	Final Rule	Change
Louisville Gas and Electric Company			
SO2 2012-2013	35,277	37,306	6%
SO2 2014+	21,999	17,170	-22%
Annual NOx 2012-2013	13,540	13,871	2%
Annual NOx 2014+	13,540	12,620	-7%
Kentucky Utilities Company			
SO2 2012-2013	32,632	41,847	28%
SO2 2014+	22,449	19,887	-11%
Annual NOx 2012-2013	10,673	15,555	46%
Annual NOx 2014+	10,673	14,247	33%
Combined LG&E/KU System			
SO2 2012-2013	67,909	79,153	17%
SO2 2014+	44,448	37,057	-17%
Annual NOx 2012-2013	24,213	29,426	22%
Annual NOx 2014+	24,213	26,867	11%

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 50

Witness: Charles R. Schram

Q-50. Do you anticipate that the cap and trade provision will provide any lower cost alternatives to KU? Will it provide any economic opportunities to allow the KU to create any new revenue streams?

A-50. No. KU assumes the question refers to the cap and trade provisions under CATR (the EPA now calls the rule Cross-State Air Pollution Rule, or CSAPR). The cap and trade provisions under CSAPR depend on intra-state allowance trading rather than the unrestricted inter-state allowance trading characteristic of the acid rain program. CSAPR appears to discourage trading as a method of compliance. It is unlikely that these limited trade provisions will result in a robust allowance market or provide any lower cost alternatives to KU.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 51

Witness: Lonnie E. Bellar

Q-51. Refer to Bellar Testimony at page 4. Mr. Bellar discusses the need to amend the project to convert the Main Ash Pond to a dry-storage facility. Are the O&M cost incremental to the original project or should there be any credit provided for the original project O&M?

A-51. There was no O&M associated with the original project as an ash pond. There will be O&M associated with a landfill. Therefore, all O&M is incremental.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 52

Witness: John N. Voyles, Jr.

- Q-52. Refer to Bellar Testimony. In this Project Kentucky Utilities proposes adding Particulate Matter Control Systems to serve all three Brown coal units and the four generating units at Ghent. Each Particulate Matter Control System comprises a pulse-jet Fabric filter ("baghouse") to capture particulate matter, a Powdered Activated Carbon ("PAC") injection system to capture mercury and a lime injection system to protect the baghouses from corrosive effects of sulfuric acid mist ("SAM"). Project 34 also includes installing SAM mitigation equipment consisting of sorbent injection systems on Brown Units 1 and 2 that is independent of the lime injection systems associated with the baghouses. (There is already a SAM mitigation system being installed on Brown Unit 3, which is part of the Selective Catalytic Reduction ("SCR") project the Commission approved as a part of KU's 2009 Plan.
- a. Explain the make and model and the technology of all pulse-jet fabric filter ("baghouses") to capture particulate matter.
 - b. Explain the make and model and the technology of all PAC injection system to capture mercury.
 - c. Is the technology of the Selective Catalytic Reduction ("SCR") proposed to be installed in Ghent and Brown units (Other than SCR used in Brown unit 3) the most cost effective and the most efficient available in the power generation industry? If there are other technologies available in the market, explain why they were not selected.
 - d. Explain if the above Particulate Matter Control Systems technologies are flexible, so it can provide reduction of inhalable particulate required by future regulations.
- A-52. a. KU has not yet conducted a bid process to choose the final technology vendor for pulse-jet fabric filters for any of the units in our fleet. The selection of the specific vendor does not impact the compliance plan.
- b. KU has not yet conducted a bid process to choose the final technology vendor for PAC injection systems for any of the units in our fleet. The selection of the specific vendor does not impact the compliance plan.

- c. KU is not requesting approval to install new SCR's in this plan. The projects proposed in this compliance plan include modifications to the boiler circuits that will enhance the operation of those same SCR installations to improve their operating ranges.

- d. There is no information provided by the EPA on the future standards for inhalable particulate matter. It is not possible to assess the future performance of equipment based on unknown standards.

KENTUCKY UTILITIES COMPANY

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Case No. 2011-00161

Question No. 53

Witness: Robert M. Conroy

Q-53. Refer to Voyles Testimony regarding the Brown wet ash pond.

- a. How are the current wet ash pond costs being recovered?
- b. What percentage of the approved project costs have been spent?
- c. How much has been spent on the project to date?

A-53. a. The costs associated with Phase I of the expansion of the Main Pond and construction of the Auxiliary Pond are recovered as part of Project 20 (Ash Treatment Basin – Phase I) which the Commission approved as part of the 2005 Environmental Compliance Plan⁴. Project 29 (CCP Storage Ash Treatment Basin – Phase II) was approved as part of the 2009 Environmental Compliance Plan⁵, to continue Phase II the expansion of the Main Pond and Auxiliary Pond. Work on the Main Pond was suspended prior to the start of the Phase II expansion approved as part of Project 29, therefore no costs have been incurred.

b. The original cost estimate as filed for Project 20 was \$39.8 million. The cost estimate was updated in March 2006 to \$72.7 million. As of June 30, 2011, the eligible net plant in service for Project 20 is \$47.8 million, approximately 34% below the updated cost estimate. Since work on the Main Pond was suspended, there are no costs associated with the Main Pond currently being recovered through Project 29.

c. Please see the response to part b.

⁴ *In the Matter of: Application of Kentucky Utilities Company for a Certificate of Public Convenience and Necessity to Construct Flue Gas Desulfurization Systems and Approval of Its 2004 Compliance Plan and Recovery by Environmental Surcharge*, PSC Case No. 2004-00426.

⁵ *In the Matter of: The Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge*, Case No. 2009-00197.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 54

Witness: John N. Voyles, Jr.

Q-54. Refer to Voyles Testimony at page 5. The statement passages concerning "the existing E. W. Brown Station ("Brown") Main Ash Pond and the construction of an Auxiliary Pond" indicate various project phase elevations. What are the starting pond bed elevations for these two ponds?

A-54. The Main Ash Pond and Auxiliary Ash Pond were constructed taking advantage of the existing topography. The Main Ash Pond has undergone several horizontal and vertical expansions to extend its useful life. The Main Ash Pond bed elevation for the phase of expansion referenced in the Voyles Testimony is elevation 883.5' above sea level. The Main Ash Pond bed elevation at the time of its inception, at its lowest elevation, is approximately elevation 770' with the slope of the pond bed rising to the west with the ravine topography. The Auxiliary Ash Pond bed elevation changes from 826' on the eastern portion of the pond slightly rising to the west with the ravine topography.

KENTUCKY UTILITIES COMPANY

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Case No. 2011-00161

Question No. 55

Witness: Gary H. Revlett

- Q-55. Refer to Voyles Testimony at page 8. Mr. Voyles states that only the Main Ash Pond expansion phases completed at the time the proposed CCR regulation becomes final would be "grandfathered" under the most lenient of the three regulatory alternatives contained in the proposed rulemaking (the so-called "D-prime" alternative; under either of the other two proposed regulatory schemes, there would be no such grandfathering of existing ash ponds.) As the rules become closer to finality, does the D-prime alternative seem more likely than the other choices?
- A-55. No. Based on the record in the rule-making, D-prime continues to be the least likely option chosen by EPA.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 56

Witness: John N. Voyles, Jr.

Q-56. Refer to Voyles Testimony. Did KU consider the need for a landfill type enclosure and its associated land footprint as a future possibility for CCR when it initially proposed its wet-ash solution?

A-56. Yes. KU did originally consider constructing a landfill at E.W. Brown for future storage needs as an option for expansion of the existing wet storage facility in the 2005 Environmental Compliance Plan⁶ as part of the analysis for Project 20. Through engineering and financial feasibility analysis, and taking into consideration regulations existing or proposed at the time, the expansion of the existing wet storage pond was chosen for Project 20 as the favorable option. Furthermore, as part of the evaluation for Project 29 when presented in the 2009 Environmental Compliance Plan⁷, the option of a landfill versus continuation of Phase II for the ash pond expansion was considered. The wet storage option was and remains compliant with all current regulatory requirements, however, future requirements will restrict the volume of storage in the pond once they become final to the height of the pond as constructed at the time the regulations becoming final, thus dry storage will be required within 5-7 years of the final EPA rule.

⁶ *In the Matter of: Application of Kentucky Utilities Company for a Certificate of Public Convenience and Necessity to Construct Flue Gas Desulfurization Systems and Approval of Its 2004 Compliance Plan and Recovery by Environmental Surcharge*, PSC Case No. 2004-00426.

⁷ *In the Matter of: The Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge*, Case No. 2009-00197.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 57

Witness: John N. Voyles, Jr. / Charles R. Schram

- Q-57. Refer to Voyles Testimony at page 10. Mr. Voyles states, "...we were able to eliminate SCRs for certain units from the 2011 Plan." Provide details concerning the unit SCRs eliminated.
- A-57. Black and Veatch studied the applicable NO_x reduction technologies, but the Companies' needs analysis demonstrated that the construction of additional SCRs was not required to meet NO_x emissions limits or allowance allocations. The non-SCR equipped units are: KU Brown Units 1-2 and Ghent Unit 2; LG&E Mill Creek Units 1-2. Please see the detailed discussions in Exhibit JNV-2 and Exhibit CRS-1.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 58

Witness: Robert M. Conroy

- Q-58. Refer to Voyles Testimony at pages 11 and 13. The testimony states that the existing SAM sorbent O&M costs are to be included in the Project 35's SAM sorbent O&M costs. What assurance is there that these costs will not be double counted when Project 35 is completed?
- A-58. Voyles Testimony at page 11 discussed SAM sorbent O&M cost at Brown (Project 34) and Voyles Testimony at page 13 discussed SAM sorbent O&M costs at Ghent (Project 35). As discussed in the testimony of Mr. Conroy at pages 5 and 6, all SAM sorbent O&M cost for Brown and Ghent will be reported on ES Form 2.50 under the 2011 ECR Plan. KU currently has approval for the recovery of SAM sorbent O&M for Ghent Units 1, 3, and 4 under the 2006 Environmental Compliance Plan⁸ and for Brown Unit 3 under the 2009 Environmental Compliance Plan⁹. Upon Commission approval in this proceeding, SAM sorbent O&M costs for Brown and Ghent will only be reported on ES Form 2.50 under the 2011 Plan. Therefore, it will be transparent that no costs are double counted. Please see the ES Form 2.50 contained in Exhibit RMC-4.

⁸ *In the Matter of: The Application of Kentucky Utilities Company for a Certificate of Public Convenience and Necessity to Construct a Selective Catalytic Reduction System and Approval of Its 2006 Compliance Plan for Recovery by Environmental Surcharge, Case No. 2006-00206.*

⁹ *In the Matter of: The Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of Its 2009 Compliance Plan for Recovery by Environmental Surcharge, Case No. 2009-00197.*

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 59

Witness: Charles R. Schram

- Q-59. Refer to Voyles Testimony at page 12. Mr. Voyles states that for Ghent Project 35 that the proposed modifications will provide additional margin against the NO_x tonnage caps in the EPA regulations, thus deferring the need for additional SCR installations and supporting least-cost compliance with the proposed CATR, which will impose stricter NO_x emissions requirements on KU. By the use of the word "defer," what lifetime/timeframe do you expect from the proposed SCRs?
- A-59. No additional SCRs are being proposed in this Compliance Plan. By "defer", the Companies are recognizing that even more stringent NO_x emission reduction requirements, which could require the construction of SCRs on remaining non-SCR equipped units, are possible in the future. The EPA's current timeline for proposing additional NO_x regulations has not been established.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 60

Witness: John N. Voyles, Jr.

- Q-60. Refer to Voyles Testimony at page 12, concerning SCRs on units 1, 3 and 4 modifications, and page 19, adjusting the economizers.
- a. Describe the exact SCR modifications which allow the SCRs to operate at lower unit load levels.
 - b. Explain how adjusting the economizers increases the flue gas temperature and also maintain efficiency.
- A-60. a. Modifications are not being considered for the SCR, but rather to the boiler circuits prior to the SCR to increase or decrease the flue gas temperature entering the SCR. The modifications could include economizer surface modifications, flue gas ductwork modifications, economizer boiler water circuit modifications, or a combination of these dependent upon specific unit design.
- b. Changes can be made to the economizer surface area to lower or increase flue gas temperatures. Changes to economizer water circuits can also be made with or without the economizer surface modifications. Boiler efficiency can be moderately improved or reduced depending on the economizer scope chosen. Reductions in economizer surface usually increase the flue gas temperature leaving the economizer due to a reduction in heat transfer from the flue gas entering the economizer to the water circuit. Vice versa, increasing surface will usually reduce the flue gas temperature leaving the economizer. Hot water bypasses can be installed to increase the water temperature entering the economizer, thus decreasing the heat transfer from the flue gas to the water circuit and increasing the flue gas temperature leaving the economizer.

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Case No. 2011-00161

Question No. 61

Witness: John N. Voyles, Jr.

Q-61. Refer to Voyles Testimony at page 16. The testimony states that lime injection ahead of the baghouse protects the components from SAM corrosion. There is no mention of any FGD controls on any of these units; would not FGD's provide the same protection?

A-61. FGDs are located downstream from the baghouses thus they provide no benefit to protecting the baghouses from SAM.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 62

Witness: John N. Voyles, Jr.

- Q-62. Refer to Voyles Testimony at page 19. The testimony states that one way to expand the operating range at which an SCR can operate efficiently is to adjust the economizers (the last boiler circuit component) on a generating unit to keep the flue gas at higher temperatures when operating at lower load levels.
- a. Does KU prioritize keeping the SCRs adjacent to the last boiler so that the flue temperature is at its maximum?
 - b. What materials are used in the SCRs and do the materials affect the SCR cost and ability to remover toxins?
 - c. Are SCRs mature or evolving technology?
- A-62. a. SCRs are always located between the boiler economizer and the air-heater to maximize the required temperature range of the SCR.
- b. SCRs are made from carbon steel. The SCR catalyst is made from a ceramic composition which includes exotic metals that act as the catalyst for the chemical reaction of NO_x to form water and nitrogen. The catalyst is a fraction of the total cost of an SCR, where the carbon steel is the primary cost. Carbon steel is the least expensive choice for an SCR over more expensive stainless steels or alloys. The SCR is not designed to remove toxins.
 - c. SCR is a mature technology for NO_x control on coal-fired utility boilers. However, improvements are being made in the mixing of ammonia in the flue gas path, as well as improvements by the catalyst vendors to increase the NO_x conversion abilities of the catalyst while decreasing the conversion of sulfur dioxide to sulfur trioxide (SAM).

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 63

Witness: John N. Voyles, Jr.

Q-63. Refer to Voyles Testimony at page 20. The testimony states that the addition of new SCRs have the benefit of allowing KU's generating units equipped with SCRs to be dispatched economically over a broader operating range after the CATR goes into effect and fewer CATR NO_x allowances will be consumed. Having the ability to bring Ghent Units 1, 3, and 4 to lower operating levels while still having high degrees of NO_x removal will allow system operators greater flexibility to ensure economical generating system operation, ultimately resulting in cost savings for customers.

- a. How do you define the cost savings?
- b. Has KU maximized the NO_x removal with the latest state of the art removal systems?
- c. Are there cheaper technologies which will allow the proposed limits to be met?

A-63. a. The testimony of Mr. Voyles does not state that additional SCRs will be installed on the KU generating units but rather that the modifications to the boiler circuits will increase the operating range of the existing SCRs. The cost savings Mr. Voyles was referring to is the savings customers would receive by maximizing the operations of the SCRs.

- b. Yes. The previously installed SCRs represent the state of the art NO_x removal systems.
- c. No. The modifications proposed in this compliance plan represent the least cost technology to enhance the operating range of the SCRs.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 64

Witness: John N. Voyles, Jr.

Q-64. Refer to Voyles Testimony. Provide a brief discussion of the maturity and upgrade potential of:

- a. Baghouse technology;
- b. Powder Activated Carbon Injection;
- c. Lime injection for SAM Systems;
- d. FGDs (dry and wet); and
- e. SCRs.

A-64. Please see Exhibit JNV-2 Appendix A. A brief discussion is below.

- a. Baghouse technology has been in operation around the world for decades and thus is considered mature technology. However, most high sulfur coal units have utilized dry electrostatic precipitators throughout the world. The utilization of baghouses on coal fired units burning regional high sulfur coal is relatively new to the U.S. Regarding potential for upgrades, baghouse performance upgrades may be possible in the future as improved capabilities to model the flue gas flow through the baghouses evolves. It is also possible that improvements will be realized in the materials of construction for the bags and cages.
- b. PAC injection for the utility application is a relatively new application; however, the technology is rather simple in that PAC is injected in the flue gas prior to the baghouse. Upgrades in the future may include improvements in injection lances and material handling components.
- c. Lime injection is not a mature technology for coal fired utilities. Both the physical systems to transport the lime to the ductwork and the injection methodologies are new to the industry over the last 3-5 years. In addition to the physical components, the modeling of injection locations and specific methods is considered to be a new technology, especially when considering the industry's inexperience in understanding

the exact impacts on sulfur trioxide formation and reduction variables in the flue gas as it exits the boiler and progresses through the flue gas path to the stack.

- d. Both wet and dry FGD technologies are considered mature technologies. As with baghouses, upgrade potentials are likely in the future in specific components such as reactant nozzle design, pump component design, mist eliminator design and materials of construction.
- e. SCRs are considered mature technology with improvements in the primarily expected to be in catalyst formulation improvements.

KENTUCKY UTILITIES COMPANY

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Case No. 2011-00161

Question No. 65

Witness: Charles R. Schram

- Q-65. In Exhibit JNV-2 in the fifth paragraph on page 1, it states that, "After careful study and internal modeling..." Indicate which modeling software was used during the studies and indicate where the results are in the submittal or provide those results.
- A-65. The "careful study" refers to the Black and Veatch evaluation of effective technologies. With respect to internal modeling, Exhibit CRS-1 sections 4.1.1 and 4.1.2 discuss the needs assessment for required emission reductions required. This assessment used PROSYM and Excel (in the case of the HAPS assessment) to provide the results contained in Exhibit CRS-1.

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Case No. 2011-00161

Question No. 66

Witness: Charles R. Schram

Q-66. Refer to Schram Testimony at page 3. The testimony states that the Companies' Project Engineering department (working with an outside engineering firm, Black and Veatch) provided a suite of environmental compliance facilities for each coal unit in the Companies' generating fleet and asked us to determine whether all of the proposed facilities would be necessary to meet the applicable environmental regulations, some of which regulations require unit-by-unit compliance, some of which require compliance at the generating-station level, and others at the fleet level.

- a. Were environmental regulations studied and implemented on unit-by-unit facilities or were they defaulted to the station or fleet level?
- b. Are there cases where the studies indicated that individual units in a station might be upgraded while others are left as-is?

A-66. a. Environmental regulations and the need for controls were studied at the level specified in the regulation:

CATR (CSAPR) – fleet level
NAAQS – station level
MACT/HAPS – station level

Station level emissions are generally significantly impacted by individual units. For example, NAAQS is a one-hour standard at the station level, but an uncontrolled individual unit's contribution to the one-hour emissions can quickly cause the station to exceed the emissions limits.

- b. The studies resulted in the recommendation for fabric filter bag houses on all remaining coal units, so no units (with the exception of Trimble County Unit 2) are left "as is". However, the Compliance filing does not include the construction of SCRs on non-SCR equipped units.

KENTUCKY UTILITIES COMPANY

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Case No. 2011-00161

Question No. 67

Witness: John N. Voyles, Jr. / Charles R. Schram

- Q-67. Refer to Schram Testimony. For each project to be constructed, provide the PV for every alternative that was considered and the reasons they were eliminated. (provide all supporting calculations)
- A-67. Please see Exhibits JNV-2 and CRS-1 for a complete description of the process of developing alternatives and the subsequent economic analysis. The NPVRR for each project to be constructed is included in Exhibit CRS-1. The economic analysis compares the cost of each environmental control project to the cost of retiring the unit.

KENTUCKY UTILITIES COMPANY

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Case No. 2011-00161

Question No. 68

Witness: John N. Voyles, Jr.

- Q-68. Refer to Schram Testimony. How was the estimated cost for each proposed project derived?
- A-68. The estimated cost for each project was taken from the Companies' work with Black and Veatch which resulted in recommended projects to meet the emissions limits. Please see the details and discussions contained in Exhibit JNV-2 and the reports (inclusive of the cost estimates) from Black and Veatch contained in Appendices A – H of Exhibit JNV-2.

KENTUCKY UTILITIES COMPANY

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Case No. 2011-00161

Question No. 69

Witness: John N. Voyles, Jr.

- Q-69. Refer to Schram Testimony. Did Mr. Schram send an RFP to construct the proposed facilities?
- a. If no, explain why it is not necessary.
 - b. If yes, provide a list to whom it was sent and the responses. Also, explain how the successful bidder was chosen.
- A-69. a. No, a RFP to construct the proposed facilities has not been issued. Engineering and technology specification development was not mature enough to support issuing a RFP. KU is currently developing specifications to utilize in a RFP for the purchase of equipment and installation of environmental controls. The estimates contained in the Compliance Plan are reasonable for the purposes of evaluating and selecting technology for the Compliance Plan in this proceeding.
- b. Not applicable.

KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's First Information Request Dated July 12, 2011

Case No. 2011-00161

Question No. 70

Witness: Shannon L. Charnas

Q-70. What is the impact of the planned retirements on KU's depreciation?

A-70. Consistent with past practices, ECR monthly filings will reflect the retirement of assets already included in base rates. Asset retirements on KU are expected to be minimal. KU's depreciation will decrease by the amount of expense applicable to the retired assets immediately upon their retirement. The next depreciation study completed and approved by the Commission will address any future impacts on the depreciation rates resulting from any remaining accumulative reserve amounts related to these retirements.

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Case No. 2011-00161

Question No. 71

Witness: Robert M. Conroy

Q-71. Are any costs associated with any retirements proposed to be recovered in this proceeding?

A-71. No, there are no costs associated with any retirements proposed to be recovered in this proceeding.