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COMMONWEALTH OF KENTUCKY

JAN 29 2010

PUBLIC SERVICE BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF LOUISVILLE GAS)
AND ELECTRIC COMPANY FOR AN)
ADJUSTMENT OF ITS ELECTRIC)
AND GAS BASE RATES)

CASE NO. 2009-00549

VOLUME 4 OF 5

DIRECT TESTIMONY AND EXHIBITS

Filed: January 29, 2010

Louisville Gas and Electric Company Case No. 2009-00549 Historical Test Period Filing Requirements Table of Contents

Volume Number	Description of Contents	,
-	Statutory Notice	
	Application	
	Financial Exhibit pursuant to 807 KAR 5:001 Section 6	
	Table of Contents	
	Response to Filing Requirements listed in 807 KAR 5:001 Section 10(1)(a)1 through 807 KAR 5:001 Section 10(6)(k)	
7	Response to Filing Requirements listed in 807 KAR 5:001 Section 10(6)(1) through 807 KAR 5:001 Section 10(6)(q)	······
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JAN 29 2010

PUBLIC SERVICE COMMISSION

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	Sponsoring Witness	Mr. Bellar	Mr. Bellar	Mr. Bellar	Mr. Bellar	Mr. Bellar	Mr. Bellar	Mr. Bellar	Mr. Bellar	Mr. Bellar
	Description	A statement of the reason the adjustment is required.	A statement that the utility's annual reports, including the annual report for the most recent calendar year, are on file with the Commission in accordance with 807 KAR 5:006, Section 3(1).	If the utility is incorporated, a certified copy of the utility's articles of incorporation and all amendments thereto or all out-of-state documents of similar import. If the utility's articles of incorporation and amendments have already been filed with the commission in a prior proceeding, the application may state this fact making reference to the style and case number of the prior proceeding	If the utility is a limited partnership, a certified copy of the limited partnership agreement and all amendments thereto or all out-of-state documents of similar import. If the utility's limited partnership agreement and amendments have already been filed with the commission in a prior proceeding, the application may state this fact making reference to the style and case number of the prior proceeding.	If the utility is incorporated or a is a limited partnership, a certificate of good standing or certificate of authorization dated within sixty (60) days of the date the application is filed.	A certified copy of a certificate of assumed name as required by KRS 365.015 or a statement that such a certificate is not necessary.	The proposed tariff in a form which complies with 807 KAR 5:011 with an effective date not less than thirty (30) days from the date the application is filed.	The utility's proposed tariff changes, identified in compliance with 807 KAR 5:011, shown either by: (a) Providing the present and proposed tariffs in comparative form on the same sheet side by side; or. (b) Providing a copy of the present tariff indicating proposed additions by italicized inserts or underscoring and striking over proposed deletions.	A statement that customer notice has been given in compliance with subsections (3) and (4) of this section with a copy of the notice.
	Filing Requirement	807 KAR 5:001 Section 10(1)(a)1	807 KAR 5:001 Section 10(1)(a)2	807 KAR 5:001 Section 10(1)(a)3	807 KAR 5:001 Section 10(1)(a)4	807 KAR 5:001 Section 10(1)(a)5	807 KAR 5:001 Section 10(1)(a)6	807 KAR 5:001 Section 10(1)(a)7	807 KAR 5:001 Section 10(1)(a)8	807 KAR 5:001 Section 10(1)(a)9
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Sponsoring Witness	Mr. Bellar	Mr. Bellar
Description	Notice of Intent. Utilities with gross annual revenues greater than S1,000,000 shall file with the commission a written notice of intent to file a rate application at least four (4) weeks prior to filing their application. The notice of intent shall state whether the rate application shall be supported by a historical test period or a fully forecasted test period. This notice shall be served upon the Attorney General, Utility Intervention and Rate Division.	Form of notice to customers. Every utility filing an application pursuant to this section shall notify all affected customers in the manner prescribed herein. The notice shall include the following information: (a) The amount of the change requested in both dollar amounts and percentage change for each customer requested in both dollar amounts and percentage change for each customer classification to which the proposed rate change will apply: (b) The present rates and the proposed rates shall include the effect upon the average bill for each customer class to which the proposed rate swall apply: (c) Local exchange companies shall include the effect upon the average bill for each customer class to which the proposed rate change in basic local service; (e) A statement that the rates contained in this notice are the rates proposed by (name of utility); however, the Public Service Commission may order rates to be charged that differ from the proposed rate changes in basic local serving that differ any itten request to intervent interest in the matter may. by written request, within thirty (30) days after publication or mailing of this notice of the proposed rate changes request to intervention may be granted beyond the thirty (30) day reprision may obtain copies of the rate application and any other filings made by the utility by contacting the utility and the rate application and any other filings made by the utility by contacting the utility at the main office of the proposed rates of both the commission's office indicating the utility at the person may eramine the rate application and any other number side of the commission and other sitter equest to intervent of the proposed rate changes request to intervent on the commission and the thirty through the rate application and any other filings made by the utility at the main office of the main office of the utility or at the commission soffice indicating the utility at the proposed rates provided the notice indeceed form of publising the top upon written request t
Filing Requirement	807 KAR 5:001 Section 10(2)	807 KAR 5:001 Section 10(3)
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No.	No.	Filing Requirement	Description	Witness
_	12	807 KAR 5:001 Section 10(4)(a)	Manner of notification. Sewer utilities shall give the required typewritten notice by mail to all of their customers pursuant to KRS 278.185.	Mr. Bellar
1	13	807 KAR 5:001 Section 10(4)(b)	Manner of notification. Applicants with twenty (20) or fewer customers affected by the proposed general rate adjustment shall mail the required typewritten notice to each customer no later than the date the application is filed with the commission.	Mr. Bellar
	14	807 KAR 5:001 Section 10(4)(c)	Manner of notification. Except for sever utilities, applicants with more than twenty (20) customers affected by the proposed general rate adjustment shall give the required notice by one (1) of the following methods: 1. A typewritten notice mailed to all customers no later than the date the application is filed with the commission; 2. Publishing the notice in a trade publication or newsletter which is mailed to all customers no later than the date on which the application is filed with the commission; 2. rounnission; or 3. Publishing the notice of general circulation is filed with the application in a prominent manner in a newspaper of general circulation in the utility's service area, the first publication to be made within seven (7) days of the filing of the application with the commission.	Mr. Bellar
	15	807 KAR 5:001 Section 10(4)(d)	Manner of notification. If the notice is published, an affidavit from the publisher verifying the notice was published, including the dates of the publication with an attached copy of the published notice, shall be filed with the commission no later than forty-five (45) days of the filed date of the application.	Mr. Bellar
-	16	807 KAR 5:001 Section 10(4)(e)	Manner of notification. If the notice is mailed, a written statement signed by the utility's chief officer in charge of Kentucky operations verifying the notice was mailed shall be filed with the commission no later than thirty (30) days of the filed date of the application.	Mr. Bellar
-	17	807 KAR 5:001 Section 10(4)(f)	Manner of notification. All utilities, in addition to the above notification, shall post a sample copy of the required notification at their place of business no later than the date on which the application is filed which shall remain posted until the commission has finally determined the utility's rates.	Mr. Bellar
-	18	807 KAR 5:001 Section 10(4)(g)	Manner of notification. Compliance with this subsection shall constitute compliance with 807 KAR 5:051, Section 2.	Mr. Bellar
	19	807 KAR 5:001 Section 10(5)	Notice of hearing scheduled by the commission upon application by a utility for a general adjustment in rates shall be advertised by the utility by newspaper publication in the areas that will be affected in compliance with KRS 424.300	Mr. Bellar

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Sponsoring Witness	n Mr. Rives	Mr. Bellar	Mr. Rives	Mr. Conroy	Mr. Conroy	Mr. Bellar	Mr. Conroy	Mr. Rives	Mr. Rives	Ms. Charnas	Mr. Rives	1 Ms. Scott
Description	A complete description and quantified explanation for all proposed adjustments, with proper support for any proposed changes in price or activity levels, and any other factors which may affect the adjustment.	If the utility has gross annual revenues greater than \$1,000,000, the prepared testimony of each witness the utility proposes to use to support its application.	If the utility has gross annual revenues less than \$1,000,000, the prepared testimony of each witness the utility proposes to use to support its application or a statement that the utility does not plan to submit any prepared testimony.	A statement estimating the effect that the new rates will have upon the revenues of the utility including, at minimum, the total amount of revenues resulting from the increase or decrease and the percentage of the increase or decrease.	If the utility provides electric, gas, water, or sewer service the effect upon the average bill for each customer classification to which the proposed rate change will apply.	If the utility is a local exchange company, the effect upon the average bill for each customer class for the proposed rate change in basic local service.	An analysis of customers' bills in such detail that revenues from the present and proposed rates can be readily determined for each customer class.	A summary of the utility's determination of its revenue requirements based on return on net investment rate base, return on capitalization, interest coverage, debt service coverage, or operating ratio, with supporting schedules.	A reconciliation of the rate base and capital used to determine its revenue requirement.	A current chart of accounts if more detailed that the Uniform System of Accounts prescribed by the commission.	The independent auditor's amual opinion report, with any written communication from the independent auditor to the utility which indicates the existence of a materia weakness in the utility's internal controls.	The most recent Federal Energy Regulatory Commission or Federal Communication Commission audit reports.
Filing Requirement	807 KAR 5:001 Section 10(6)(a)	807 KAR 5:001 Section 10(6)(b)	807 KAR 5:001 Section 10(6)(c)	807 KAR 5:001 Section 10(6)(d)	807 KAR 5:001 Section 10(6)(e)	807 KAR 5:001 Section 10(6)(f)	807 KAR 5:001 Section 10(6)(g)	807 KAR 5:001 Section 10(6)(h)	807 KAR 5:001 Section 10(6)(i)	807 KAR 5:001 Section 10(6)(j)	807 KAR 5:001 Section 10(6)(k)	807 KAR 5:001 Section 10(6)(1)
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Crononing	Sponsoring Witness	Ms. Scott	Mr. Seelye	Mr. Bellar	Ms. Scott		
	Description	If the utility had any amounts charged or allocated to it by an affiliate or general or home office or paid any monies to an affiliate or general or home office during the test period or during the previous three (3) calendar years. the utility shall file: 1. A detailed description of the method and amounts allocated or charged to the utility by the affiliate or general or home office for each charge allocation or payment: 2. An explanation of how the allocator for the test period was determined; and 3. All facts relied upon, including other regulatory approval, to demonstrate that each amount charged, allocated or paid during the test period was reasonable:	If the utility provides gas, electric or water utility service and has annual gross revenues greater than \$5,000,000, a cost of service study based on a methodology generally accepted within the industry and based on current and reliable data from a single time period.	Local exchange carriers with fewer than 50,000 access lines shall not be required to file cost of service studies, except as specifically directed by the commission. Local exchange carriers with more than 50,000 access lines shall file: 1. A jurisdictional separations study consistent with Part 36 of the Federal Communications Commission's rules and regulations; and 2. Service specific cost studies to support the pricing of all services that generate annual revenue greater than \$1,000,000, except local exchange access: a. Based on current and reliable data from a single time period; and b. Using generally recognized fully allocated, embedded, or incremental cost principles.	Upon good cause shown, a utility may request pro forma adjustments for known and measurable changes to ensure fair, just and reasonable rates based on the historical test period. The following information shall be filed with applications requesting pro forma adjustments or a statement explaining why the required information does not exist and is not applicable to the utility's application: (a) A detailed income statement and balance sheet reflecting the impact of all proposed adjustments:		
	<u> Filing Decuirement</u>	807 KAR 5:001 Section 10(6)(t)	807 KAR 5:001 Section 10(6)(u)	807 KAR 5:001 Section 10(6)(v)	807 KAR 5:001 Section 10(7)(a)		
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Sponsoring	Ms. Charnas	Ms. Charnas	Ms. Scott
	Description Upon good cause shown, a utility may request pro forma adjustments for known and measurable changes to ensure fair, just and reasonable rates based on the historical test period. The following information shall be filed with applications requesting pro forma adjustments or a statement explaining why the required information does not exist and is not applicable to the utility's application: (b) The most recent capital construction budget containing at least the period of time as proposed for any pro forma adjustment for plant additions.	Upon good cause shown, a utility may request pro forma adjustments for known and measurable changes to ensure fair, just and reasonable rates based on the historical test period. The following information shall be filed with applications requesting pro forma adjustments or a statement explaining why the required information does not exist and is not applicable to the utility's application: (c) For each proposed pro forma adjustment reflecting plant additions provide the following information. I. The starting date of the construction of each major component of plant; 2. The proposed in-service date; 3. The total estimated cost of construction at completion; 4. The amount contained in construction work in progress at the end of the test period; 5. A schedule containing a complete description of actual plant retirements and anticipated date of retirement; 6. The original cost, cost of removal and anticipated date of retirement; 5. An explanation of any differences in the salvage for each component of plant to be retired during the period of the proposed proform adjustment for plant to be retired during the period of the proposed proform adjustment for plant to be retired during the period of the proposed proform adjustment for plant to be retired during the mounts of capital construction cost contained in the proforma adjustments for plant additions and retirements; and retirements; and anticipated date of retirement; 7. An explanation of any differences in the amounts contained in the proforma adjustment period; and 8. The impact on depreciation expense of all proposed proforma adjustments for plant additions and retirements;	Upon good cause shown, a utility may request pro forma adjustments for known and measurable changes to ensure fair, just and reasonable rates based on the historical test period. The following information shall be filed with applications requesting pro forma adjustments or a statement explaining why the required information does not exist and is not applicable to the utility's application: (d) The operating budget for each period encompassing the pro forma adjustments.
	Filing Kequirement 807 KAR 5:001 Section 10(7)(b)	807 KAR 5:001 Section 10(7)(c)	807 KAR 5:001 Section 10(7)(d)
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Sponsoring	Witness	Mr. Seelye		
	Description	Upon good cause shown, a utility may request pro forma adjustments for known and measurable changes to ensure fair, just and reasonable rates based on the historical test period. The following information shall be filed with applications requesting pro forma adjustments or a statement explaining why the required information does not exist and is not applicable to the utility's application: (e) The number of customers to be added to the test period-end level of customers and the related revenue	requirements impact for all pro forma adjustments with complete details and	supporting work papers.
	Filing Requirement	807 KAR 5:001 Section 10(7)(e)		
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COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF BASE RATES)))	CASE	NO.	2009-00548
In the Matter of:				
APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS BASE RATES)))	CASE	NO.	2009-00549

TESTIMONY OF VICTOR A. STAFFIERI CHAIRMAN OF THE BOARD, CHIEF EXECUTIVE OFFICER AND PRESIDENT LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY

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Filed: January 29, 2010

Q. Please state your name, position and business address.

A. My name is Victor A. Staffieri. I am the Chairman of the Board, Chief Executive
Officer and President of Louisville Gas and Electric Company ("LG&E") and
Kentucky Utilities Company ("KU") (collectively, "Companies"), and an employee
of E.ON U.S. Services, Inc. My business address is 220 West Main Street,
Louisville, Kentucky 40202.

7 Q. Please describe your employment history, education and civic involvement.

A. I joined LG&E Energy in March 1992 as Senior Vice President, General Counsel,
and Corporate Secretary. Since then, I have served in a number of positions at LG&E
Energy (now E.ON U.S. LLC), LG&E, and KU. I assumed my current position on
May 1, 2001. Descriptions of my employment history, educational background,
professional appearances and civic involvement are contained in the Appendix
attached hereto.

14 Q. Have you testified before this Commission on other occasions?

A. Yes. I testified before this Commission in the Companies' last two base rate cases.¹
I have also testified in various other cases, including three proceedings regarding
changes in the ownership of LG&E and KU.²

¹ Case No. 2008-00252, In the Matter of: Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Base Rates and in Case No. 2008-00251, In the Matter of: Application of Kentucky Utilities Company for an Adjustment of Base Rates; Case No. 2003-00433, In the Matter of: An Adjustment of the Gas and Electric Rates, Terms and Conditions of Louisville Gas and Electric Company and in Case No. 2003-00434, In the Matter of: An Adjustment of the Electric Rates, Terms and Conditions of Kentucky Utilities Company.

² See e.g., Case No. 2001-104, In the Matter of: Joint Application of E.ON AG, Powergen plc, LG&E Energy Corp., Louisville Gas and Electric Company and Kentucky Utilities Company For Approval of an Acquisition; Case No. 2000-095, In the Matter of: Joint Application of Powergen plc, LG&E Energy Corp., Louisville Gas and Electric Company and Kentucky Utilities Company For Approval of a Merger; Case No. 97-300, In the Matter of: Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company For Approval of a Merger; Case No. 97-300, In the Matter of: Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Approval of Merger.

Q. What is the purpose of your testimony?

2 A. I will provide a general overview of the cases, including why LG&E and KU are proposing to adjust their base rates at this time and why the adjustments should be 3 approved. I will also note the significant levels of investment in facilities to provide 4 service to customers that the Companies have continued to make since the 5 Companies' last base rate proceedings. Additionally, I will cover LG&E's and 6 7 KU's continued efforts to perform their functions in an environmentally conscious 8 manner, as well as the Companies' enduring commitment to the communities we 9 serve, especially through our assistance to low-income customers.

Q. Please identify the other witnesses offering direct testimony on behalf of the Companies in these cases and generally describe the subject matter of each such testimony.

13 A. LG&E and KU are offering direct testimony from the following witnesses:

Paul W. Thompson, Senior Vice President, Energy Services - Mr. Thompson 14 will describe the investments in and construction of generation and transmission 15 16 facilities which demonstrate the need for the proposed adjustment in base rates at 17 this time, as well as the increased efforts to ensure that our customers receive reliable service at a low cost to both customers and the environment through 18 19 enhanced measures to perform functions in an environmentally conscious manner; Chris Hermann, Senior Vice President, Energy Delivery - Mr. Hermann will 20 . describe how the Companies have been able to provide safe, reliable and cost-21 22 effective services for our electric and gas distribution businesses and retail 23 operations and will explain the investments in enhancing customer service, as well as the restoration expenses necessitated by the recent weather events, all of which support the need for the proposed adjustment in base rates at this time;

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S. Bradford Rives, Chief Financial Officer – Mr. Rives will describe why the
 financial condition of the Companies require the requested increase in base rates,
 present the financial exhibits to LG&E's and KU's applications, discuss the
 Companies' accounting records, describe the calculation of LG&E's and KU's
 adjusted net operating income for the twelve-month period ended October 31,
 2009, support the different valuations of the Companies' property, and support
 certain reference schedules supporting the Companies' applications;

- Valerie L. Scott, Controller Ms. Scott will support certain pro forma adjustments to the Companies' operating income for the twelve months ended
 October 31, 2009, demonstrate that those adjustments are known and measurable
 and, therefore, reasonable, and support certain reference schedules supporting the
 Companies' applications;
- Shannon L. Charnas, Director of Utility Accounting and Reporting Ms. Charnas
 will support certain pro forma adjustments to the Companies' operating income
 and rate base for the twelve months ended October 31, 2009, demonstrate that
 those adjustments are known and measurable and, therefore, reasonable, and
 support certain reference schedules supporting the Companies' applications;
- Ronald L. Miller, Director, Corporate Tax Mr. Miller will support certain pro
 forma adjustments to the Companies' operating income for the twelve months
 ended October 31, 2009, demonstrate that those adjustments are known and
 measurable and, therefore, reasonable;

- Daniel K. Arbough, Director, Corporate Finance and Treasurer Mr. Arbough
 will discuss LG&E's and KU's current and target capital structure, as well as
 explain bond financing issues;
- William E. Avera, President, FINCAP, Inc. Dr. Avera will present the results of his analysis, which demonstrates that the return on equity for the proxy groups of utilities and non-utility companies is from 10.5% to 12.5%. Additionally, Dr.
 Avera will present his recommendation that the Commission adopt an 11.5% allowed return on equity ("ROE") for both LG&E's electric and gas operations and KU's electric operations;
- Lonnie E. Bellar, Vice President, State Regulation and Rates Mr. Bellar will
 support certain exhibits that are required by the Commission's regulations,
 explain the revenue effects and impact to customers, present LG&E's and KU's
 recommendation for the allocation of proposed increases among the customer
 classes, describe how LG&E's and KU's cost-recovery mechanisms affect base
 rates, and explain certain pro forma adjustments to the Companies' operating
 income for the twelve months ended October 31, 2009;
- W. Steven Seelye, Principal and Senior Consultant, The Prime Group, LLC Mr.
 Seelye will support certain pro forma adjustments to the Companies' operating
 income for the twelve months ended October 31, 2009, demonstrate that those
 adjustments are known, measurable and reasonable, support certain reference
 schedules supporting the Companies' applications, and present the results of his
 cost-of-service study;

Robert M. Conroy, Director, Rates - Mr. Conroy will explain and support certain
 exhibits that are required by the Commission's regulations, describe certain
 proposed pro forma adjustments and discuss LG&E's and KU's proposed changes
 to the tariffs and electric and gas rates; and

John Wolfram, Director, Marketing and Customer Service – Mr. Wolfram will
 explain the Companies' new service offering for Low Emission Vehicles,
 describe the proposed revisions to LG&E's and KU's terms and conditions, and
 discuss the Companies' offerings, initiatives, and programs aimed at assisting
 customers or enhancing customer service.

10 Q. Have LG&E and KU continued to make significant investments in facilities to 11 serve their customers since the last rate cases?

12 Yes. To ensure that our customers continue to receive the reliable service they have A. come to expect, LG&E and KU have continued to make significant investments in its 13 generation, transmission and distribution facilities that are of historic scale, including 14 the construction of a state-of-the-art coal-fired generating unit in Trimble County, 15 16 Kentucky. The Companies' substantial investments in generation and transmission facilities, which are discussed in detail in Mr. Thompson's testimony, are 17 approximately \$391 million since April 30, 2008, the end of the test year in the last 18 19 rate case. In like fashion, as discussed in the testimony of Mr. Hermann, the Companies have made approximately \$234 million in capital investments to their 20 electric and gas distribution facilities, \$123 million for LG&E and \$111 million for 21 22 KU. Thus, the Companies have invested over \$698 million in facilities to serve 23 customers since their last rate case.

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Q. Have there been challenges to the delivery of service?

2 A. Yes. In September 2008 the Companies' service areas were greatly affected by a windstorm from the remnants of Hurricane Ike. The windstorm resulted in over 3 375,000 LG&E and KU customers losing service. Our employees worked tirelessly 4 5 to restore service and repair the significant damage to the distribution facilities. Less than five months later, in January and February 2009, another major weather event 6 occurred, this time inundating much of the Companies' service areas in ice and snow. 7 8 This storm, described by Governor Steve Beshear as the "worst natural disaster" in the modern history of the Commonwealth, left over 400,000 LG&E and KU 9 customers without service and required the largest use of restoration workers in the 10 11 Companies' history. These two weather events, which were of extraordinary 12 magnitude, caused significant challenges to the delivery of service and necessitated 13 significant restoration expenses. The restoration costs of these storms will be discussed more fully in Mr. Hermann's testimony, along with the improvements 14 LG&E and KU are making to respond to such contingencies in the future and to 15 16 further harden their distribution system.

However, I want to compliment the Commission's extensive and objective investigation into and report on the 2008 and 2009 storms. Many of the Commission's recommendations contained in the report are practices already undertaken by or in the planning stages for the Companies. We are committed to work with the Commission in implementing these recommendations.

Q. Have LG&E and KU taken steps since their last base rate proceedings to control costs?

A. Yes. Controlling costs is a predominant value in our culture. This philosophy
governs the Companies' business practices in the construction, operation and
maintenance of our systems and services. As discussed in the testimonies of Messrs.
Thompson and Hermann, the Companies have made every effort to contain the
increasing costs of providing reliable service and, LG&E and KU continuously
endeavor to implement initiatives that increase the efficiency of our existing assets
and avoid price increases where possible.

10

Q. Please describe the proposed increase in base rates.

11 LG&E is requesting a 12.1%, or \$94.6 million a year increase in its electric base A. 12 rates, and a 7.7%, or \$22.6 million a year, increase in its gas base rates. The monthly 13 impact of the requested increase in base rates will increase an average residential electric bill by 12.2%, or approximately \$8.92, for a customer using 992 kWh of 14 15 The monthly impact of the requested increase in gas base rates will electricity. increase an average residential gas bill by 8.7%, or approximately \$4.65, for a 16 17 customer using 58 Ccf of gas.

18 KU is requesting an 11.5%, or \$135.3 million a year increase in its base rates. 19 The monthly impact of the requested increase in base rates will increase an average 20 residential electric bill by 13.5%, or approximately \$11.70, for a customer using 21 1,230 kWh of electricity.

The testimonies of Mr. Rives, Ms. Scott, Ms. Charnas, Mr. Miller, Mr. Mr. Seelye, Mr. Conroy, and Mr. Bellar provide a comprehensive

accounting of LG&E's and KU's revenue requirements and how the calculation were determined. Mr. Avera's testimony supports LG&E's and KU's proposed rate of return on equity through an extensive cost of capital analysis. The testimonies of these witnesses demonstrate that LG&E and KU are not presently earning a fair and reasonable return and propose a just and reasonable increase in base rates.

6 7

Q.

If LG&E's and KU's requested rate adjustment becomes effective, will customers still receive a good value for the service received?

8 A. Yes. As mentioned, the Companies understand the effect any rate increase has on 9 their customers, but this necessary increase will ensure that customers continue to 10 receive the dependable service they have rightfully come to expect. LG&E's and 11 KU's significant investments in facilities, which have resulted in a decline in the 12 Companies' financial condition, are essential to the continued delivery of highly 13 reliable service.

LG&E and KU are proud to have been nationally recognized by J.D. Power & Associates each year for their customer satisfaction and have been ranked first in the Midwest Region in its residential survey eight times since 1999. These awards demonstrate that our customers have consistently ranked the Companies highly in areas such as price/value, power quality and reliability, billing and payment, customer service and overall company image.

Thus, while the Companies keenly appreciate the effect of any rate increase on our customers, they will continue to receive a good value for their service, as the Companies' significant investments in facilities and customer service capabilities

1 make certain that reliable energy delivery and outstanding customer service will 2 continue.

3 Q. Please describe the Companies' commitment to the protection of the 4 environment and their efforts in that regard.

5 A. LG&E and KU are committed to performing their operations in an environmentally 6 conscious manner so that customers can receive reliable service at low financial and environmental costs. The Companies have effectuated this goal through initiatives in 7 three main areas. First, LG&E and KU continue to utilize environmentally sound 8 9 methods of doing business. For example, when Trimble County Unit 2 is placed in commercial operation later this year, it will be among the most efficient and low 10 emission coal-fired units in the nation. In addition, the Transmission Control and 11 12 Data Center in Simpsonville, Kentucky, employs state-of-the-art energy-efficiency features. 13

Second, the Companies continue to invest in research endeavors purposed 14 15 upon reducing carbon emissions and other significant energy issues. For example, LG&E and KU have jointly agreed to provide \$200,000 per year for ten years to the 16 Carbon Management Research Group, pertaining to carbon and carbon dioxide 17 18 management in coal-fired generating units in Kentucky. The Companies have also pledged \$1.8 million to the Kentucky Consortium for Carbon Storage in support of its 19 efforts to investigate the feasibility of geologic storage in Kentucky of carbon dioxide 20 21 produced by coal-fired generation within the state. In addition to investing in local research projects, the Companies have also made a significant pledge and have taken 22 a leadership role in the FutureGen project, which is a global partnership consisting of 23

public and private entities that was organized to design and operate the world's first
 coal-fired generating unit with near-zero emissions. All of these investments are
 discussed in further detail in Mr. Thompson's testimony.

Finally, the Companies have also implemented initiatives that increase 4 customers' awareness of their energy consumption, as well as measures that assist in 5 6 reducing their energy usage. Examples of these programs include the Green Energy 7 Program, which allows customers to voluntarily offset their carbon impact through the purchase of renewable energy credits. Over 1,400 customers are currently 8 9 participating in this program. LG&E continues use of the Responsive Pricing and 10 Smart Metering Pilot Program, which is a three-year pilot program approved by the Commission in 2007 that allows 2,000 customers to better understand and control 11 12 their electricity usage through various types of equipment, such as Smart Meters and Programmable Thermostats. The Companies continue to provide on-site residential 13 and commercial energy audits to demonstrate where the most energy is being used. 14 The Companies performed approximately 1800 audits in 2009. Also, as of 15 December 31, 2009, there were approximately 117,000 LG&E and KU customers 16 currently participating in the Demand Conservation program, which decreases energy 17 consumption and the customers' utility bills. These programs are discussed more 18 19 fully in Mr. Hermann's and Mr. Wolfram's testimony. Finally, the Companies have ensured that customers are able to better understand their environmental impact by 20 providing an explanation on each customer's monthly bill of how much carbon 21 22 dioxide the customer's usage has produced.

23

Q. Please describe the Companies' commitment to the community.

2 A. Our commitment to the communities in which we serve is long-standing and truly 3 part of LG&E's and KU's culture. This commitment is evidenced through our 4 employees' giving of their time and talent throughout our service area to improve the 5 quality of life in the communities in which they work and live. For example, our 6 employees currently serve on over 150 boards representing a wide range of 7 community interests. Also, for three consecutive years, LG&E and KU employees 8 have contributed more than \$1 million annually to the Companies' Power of One 9 initiative, which is a structured program for employee volunteering that was 10 established in 2004. These generous contributions are distributed to nonprofit 11 organizations throughout the Companies' service areas.

12 In addition to the efforts of our employees, the E.ON U.S. Foundation continues to contribute to our communities through supporting education, diversity 13 initiatives, the environment, and health and safety programs. The E.ON U.S. 14 15 Foundation was established in 1994 and has since awarded \$20 million to hundreds of 16 organizations to support benevolent endeavors across the Commonwealth. In 2009, over \$750,000 was awarded to various nonprofit organizations, universities and 17 18 colleges to support causes ranging from child advocacy to reading and art programs. 19 All of these donations are funded solely by our shareholders.

20 Q. What steps have the Companies taken to assist low-income customers with their 21 energy bills?

A. LG&E and KU have long assisted low-income customers with their utility bills
 through several programs the Companies have developed, many of which are

administered with non-profit organizations throughout our service area. One such
 initiative is the Winter Blitz, in which community volunteers –including many LG&E
 and KU employees and their families—"weatherize" the homes of low-income,
 disabled and elderly persons in our service area. To date, over 3,000 homes have
 been weatherized.

6 Although LG&E and KU have well-established initiatives to assist low-7 income customers, the Companies have intensified their efforts in response to these 8 challenging economic times. For example, the Companies are matching all donations 9 to Community Winterhelp and the WinterCare Energy Assistance Fund, which aids 10 low-income customers throughout the winter heating season, at an increased rate of 11 one dollar for every one dollar customers donate from November 1, 2009, through 12 March 31, 2010.

13

Q.

Do you have any final comments?

A. Please let me reiterate that the decision to seek a base rate increase was not made
lightly, as the Companies take their obligation to provide reliable service at a low-cost
very seriously. Although the Companies have aggressively attempted to contain
costs, base rate increases are necessary at this time so that LG&E and KU can
continue the high standard of service that customers have come to expect.

19

Q. Does this complete your testimony?

20 A. Yes, it does.

VERIFICATION

COMMONWEALTH OF KENTUCKY) SS: **COUNTY OF JEFFERSON**

The undersigned, **Victor A. Staffieri**, being duly sworn, deposes and says that he is Chairman of the Board, Chief Executive Officer and President of Louisville Gas and Electric Company and an employee of E.ON U.S. Services, Inc., and that he has personal knowledge of the matters set forth in the foregoing testimony, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.

Victor A. Staffieri

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 22^{ml} day of <u>January</u> 2010. 2010. <u>Auto</u> (SEAL) Notary Public

My Commission Expires:

6/3/2010

APPENDIX

Victor A. Staffieri

Chairman, Chief Executive Officer and President E.ON U.S. LLC

Mr. Staffieri is Chairman, CEO and President of Louisville Gas and Electric Company, Kentucky Utilities Company and E.ON U.S. LLC. Mr. Staffieri is also a member of E.ON AG's Executive Committee.

Civic Activities

<u>Boards</u>

Metro United Way – Chairman Metro Campaign 2002
Leadership Louisville – Board of Directors – June 2006 – 2008
Louisville Area Chamber of Commerce – Board of Directors -- 1994-1997; 2000-2003;
Chairman 1997
MidAmerica Bancorp – Board of Directors – 2000 - 2002
Muhammad Ali Center – Board of Directors – 2003 - 2006
Kentucky Country Day – Board of Directors – 1996 - 2002
Bellarmine University – Board of Trustees – 1995 - 1998, 2000 - 2006
Executive Committee – 1997 - 1998
Finance Committee – 1995 - 1997, 2000 - 2003
Strategic Planning Committee – 1997

Industry Affiliations

Edison Electric Institute, Washington, DC - Board of Directors -- June 2001 - Present Electric Power Research Institute, Palo Alto, CA - Board of Directors -- May 2001 -April 2002

Other

Louisville Area Chamber of Commerce -- African-American Affairs Committee -- 1996-1997

Louisville Area Chamber of Commerce -- Vice Chairman, Finance and Administration Steering Committee -- 1995

Jefferson County/Louisville Area Chamber of Commerce Family Business Partnership Co-Chair – 1996-1997

The National Conference - Dinner Chair -- 1997

Chairman of the Coordination Council for Economic Development Activities

-- Regional Economic Development Strategy -- 1997

Metro United Way - Cabinet Member -- 1995 and 2000 Campaigns

--Chairman -- Kentucky Chamber of Commerce Education Task Force - 2008

--Member - Governor's Task Force on Higher Education - 2009

Education

Fordham University School of Law, J.D. -- 1980 Yale University, B.A. - 1977

Previous Positions

LG&E Energy LLC, Louisville KY

March 1999 - April 2001 -- President and Chief Operating Officer

May 1997 - February 1999 -- Chief Financial Officer

December 1995 - May 1997 -- President, Distribution Services Division

December 1993 - May 1997 -- President, Louisville Gas and Electric Company

December 1992 - December 1993 -- Senior Vice President - Public Policy, and General Counsel

March 1992 - November 1992 -- Senior Vice President, General Counsel and Corporate Secretary

Long Island Lighting Company, Hicksville, NY

1989-1992 -- General Counsel and Secretary

1988-1989 -- Deputy General Counsel

1986-1988 -- Assistant General Counsel

1985-1986 -- Managing Attorney

1984-1985 -- Senior Attorney

1980-1984 -- Attorney

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF BASE RATES)))	CASE	NO.	2009-00548
In the Matter of:				
APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS BASE RATES)))	CASE	NO.	2009-00549

TESTIMONY OF PAUL W. THOMPSON SENIOR VICE PRESIDENT, ENERGY SERVICES LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY

Filed: January 29, 2010

Q. Please state your name, position and business address.

A. My name is Paul W. Thompson. I am the Senior Vice President, Energy Services of
Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company
("KU") (collectively, the "Companies"), and an employee of E.ON U.S. Services,
Inc. My business address is 220 West Main Street, Louisville, Kentucky 40202.

6 Q. Please describe your educational and professional background.

A. I received a Bachelor of Science degree in Mechanical Engineering from the Massachusetts Institute of Technology in 1979 and a Master of Business Administration from the University of Chicago in Finance and Accounting in 1981.
Before joining LG&E Energy (now E.ON U.S.) in 1991, I worked eleven years in the oil, gas and energy-related industries in positions of financial management, general management and sales. A complete statement of my work experience and education is contained in the Appendix attached hereto.

14 Q. Please describe your duties and responsibilities as Senior Vice President, Energy 15 Services.

A. I am responsible for power generation functions, electric transmission, and fuels and
energy marketing activities. For purposes of this testimony, I will refer to the above
functions collectively as "Energy Services."

19 Q. Have you previously testified before this Commission?

A. Yes. I testified in LG&E's 2008 rate application, Case No. 2008-00252, In re the
Matter of: Application of Louisville Gas and Electric Company for an Adjustment of
Its Electric and Gas Base Rates, and KU's 2008 rate application, Case No. 200800251, In re the Matter of: Application of Kentucky Utilities Company for an

Adjustment of Base Rates. Additionally, I testified in In re the Matter of: The 1 2 Application of Big Rivers Electric Corporation, E.ON U.S. LLC, Western Kentucky 3 Energy Corp., and LG&E Energy Marketing Inc. for Approval of Transaction in Case No. 2007-00455. I also filed testimony in the Commission's investigation of LG&E's 4 and KU's membership in the Midwest Independent Transmission System Operator, 5 6 Inc., In the Matter of: Investigation into the Membership of Louisville Gas and 7 Electric Company and Kentucky Utilities Company in the Midwest Independent Transmission System Operator, Inc., Case No. 2003-0266. I testified in LG&E's 8 9 2003 rate application, Case No. 2003-0433, In re the Matter of: An Adjustment of the Gas and Electric Rates, Terms and Conditions of Louisville Gas and Electric 10 11 Company, and KU's 2003 rate application. Case No. 2003-0434, In re the Matter of: 12 An Adjustment of the Electric Rates, Terms and Conditions of Kentucky Utilities 13 *Company.* Finally, I testified in the merger proceedings of LG&E and KU before the 14 Kentucky Public Service Commission in Case No. 1997-0300, In the Matter of: 15 Application of Louisville Gas and Electric Company and Kentucky Utilities Company 16 for Approval of a Merger under KRS 278.020.

17 Q. Please provide an overview of your testimony and why an increase in base rates 18 is needed at this time.

A. In this testimony I will describe Energy Services' capital investments in and
 construction of generation and transmission facilities to serve our customers, which
 are of historic scale and are one of the principal causes for the deterioration of the
 Companies' financial health. The Companies' construction efforts are wholly
 designed to further serve our customers through the development of generation units

1 that produce energy in the most efficient manner and transmission facilities that enhance reliability. The Companies have invested over \$698 million dollars since the 2 last rate case in facilities to serve customers, including \$391 million in generation and 3 transmission facilities. With this additional investment to serve customers, operating 4 expenses associated with these new facilities such as property taxes and insurance 5 have increased as well. In addition to these significant capital investments, Energy 6 Services has continued its efforts to perform its functions in an environmentally 7 conscious manner. Through constructing new facilities and endeavoring to lessen 8 9 their environmental impact, LG&E and KU are striving to ensure that customers continue to receive an exceptional value in electric service through the delivery of 10 reliable service at a low cost to both customers and the environment. 11

12 In the construction of new generation and transmission facilities, every effort to contain costs and remain within the original budget has been made. As a result of 13 these efforts, the facilities are being constructed at a cost below the national average. 14 The cost efficient measures that have been taken, however, are no longer sufficient to 15 16 offset the increasing cost of the Companies' service obligations which have been exacerbated by significant restoration expenses as a result of unprecedented weather 17 events that affected LG&E's and KU's service areas. As demonstrated in my 18 19 testimony and the testimonies of Messrs. Rives and Hermann, LG&E and KU must implement a base rate increase in order to sustain the costs of providing customers the 20 reliable service they have come to expect. 21

22

Q. In general, what is Energy Services' major corporate objective?

A. Energy Services has four major, and overlapping, objectives: (i) to maximize the performance and investment life of the Companies' electric generation and transmission assets; (ii) to maintain sound operating and maintenance practices that promote reliable operations, high efficiency, and a safe working environment; (iii) to continue to provide high value electric service to LG&E and KU customers; and (iv) to operate as a good steward of the environment.

8

Generation Systems

9 Q. Please describe LG&E's generation system.

10 A. LG&E owns and operates approximately 3,200 MW of generating capacity with a net 11 book value of approximately \$1.1 billion. LG&E's generation system consists 12 primarily of three coal-fired generating stations - Cane Run and Mill Creek, both located in Jefferson County, and Trimble County. All of these stations are equipped 13 with flue gas desulfurization systems or "scrubbers" to reduce sulfur dioxide, 14 15 allowing the units to burn lower-cost, higher-sulfur content coal. LG&E also owns 16 and operates multiple natural gas-fired combustion turbines, which supplement the 17 system during peak periods, and the Ohio Falls hydroelectric station, which provides 18 baseload supply, subject to river flow constraints.

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Please describe KU's generation system.

A. KU owns and operates approximately 4,500 MW of generating capacity with a net
 book value of approximately \$1.6 billion. KU's generation system consists primarily
 of four generating stations – Ghent in Carroll County, Tyrone in Woodford County,
 E.W. Brown in Mercer County and Green River in Muhlenberg County. The

installation of scrubbers on all KU coal-fired units has continued, except for the much
smaller Green River 3 and 4 and Tyrone 3 units. The scrubbers installed on all of the
Ghent units are in operation with only minor punchlist-type items remaining. The
scrubber to service the E.W. Brown units will be in operation by November 2010.
KU also owns and operates multiple natural gas fired-combustion turbines, which
supplement the system during peak periods, and a hydroelectric generating station at
Dix Dam, located next to the Dix System Control Center.

8 Q. Are LG&E's and KU's generation systems operated jointly?

9 Yes. LG&E and KU, as owners and operators of interconnected electric generation, A. and transmission facilities, achieve economic benefits through joint operation as a 10 single interconnected and centrally dispatched system and have operated jointly since 11 the acquisition of KU Energy Corporation by LG&E Energy in 1998. In addition, the 12 Companies implemented joint integrated resource planning and acquisition as a result 13 A map of LG&E's and KU's generating units is attached as 14 of the merger. 15 Thompson Exhibit 1.

16 The joint dispatch of the generation units continues to produce energy 17 efficiencies through joint dispatch capabilities and intercompany sales of power. 18 These efficiencies have enabled the Companies to provide a higher value of electric 19 service to our customers.

20

Trimble County Unit No. 2. 1 2 Q. Please describe the investments in and construction of generation facilities which support the need for an adjustment of base rates at this time. 3 On November 1, 2005, in Case No. 2004-00507, LG&E and KU were granted a 4 A. certificate of public convenience and necessity ("CPCN") to construct Trimble 5 County Unit No. 2 ("TC2"). The Companies are currently in the latter phase of 6 constructing TC2, a super-critical, pulverized coal-fired generating unit utilizing 7 state-of-the-art technology to accomplish the dual goals of extraordinary efficiency 8 and low environmental impact. It is currently scheduled for commercial operation in 9 June 2010, and once in commercial operation, TC2 will have a net generation 10 11 capacity of 760 MW, of which the Companies will own 75%, or approximately 570 MW. LG&E will be entitled to 19% or approximately 108 MW, and KU will be 12 entitled to 81% or approximately 462 MW. A recent aerial photograph showing the 13 14 construction of TC2 is attached as Thompson Exhibit 2. Also, aerial photographs of the Trimble County Generation Station are attached as Thompson Exhibit 3. 15 The construction of TC2 is the most significant ongoing generation 16

investment. The total projected cost to the Companies in constructing TC2 is approximately \$965 million, with \$871 million required for the generation unit. Through October 2009, the Companies have invested \$815 million in TC2 generation, with \$322 million having been expended since the last base rate application. As a result of significant economic changes in the construction industry during the building of TC2, such as increased labor costs, the total projected cost of TC2 has increased by approximately 9% from original estimates in 2004.

Despite the increase, the construction of TC2 has been very cost efficient, 1 which will allow our customers to enjoy its benefits on schedule. The cost of the unit 2 per kW, when compared to its generation capacity, is projected to be \$1,528 per kW, 3 well below the current market estimate of \$2,400-\$3,000 per kW. When the \$125 4 million tax credit which LG&E and KU received for TC2 is taken into account, the 5 estimated cost is \$1,308 per kW. This makes TC2 a leader in terms of dollars per kW 6 among other plants currently under construction in the United States, which ensures 7 that TC2 will provide customers with reliable service at a great value. 8

Please describe how TC2 will achieve extraordinary efficiency while minimizing

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its environmental impact.

In designing TC2, the Companies were aware of the ever-increasing need to protect 11 A. and preserve the environment. TC2 utilizes the latest technology, such as state-of-12 the-art air pollution control equipment, to maximize its electrical output while 13 reducing its environmental impact. TC2 incorporates more environmental control 14 technologies than any other coal fired unit in Kentucky. TC2 releases significantly 15 fewer regulated emissions than Trimble County Unit No. 1, which became operable 16 in 1991, while generating over 40% more electricity with approximately 20% better 17 18 heat rate efficiency. As a result of TC2's efficiency and environmental advances, the Companies were awarded a \$125 million tax credit under the Qualifying Advanced 19 Coal Project Credit. 20

21 Q. What is the projected commercial in-service date for TC2?

A. The contract commercial in-service date for TC2 is June 2010. Bechtel, the entity
 constructing the TC2 generating unit, has significant financial incentive to complete
TC2 in June 2010 due to the substantial liquidated damages provision in its contract. 1 Construction is on a tight schedule and many milestones have been achieved, as all 2 major equipment has been delivered, the new cooling tower has been placed into 3 4 operation, the water treatment upgrades are completed, the coal blending facility has 5 been commissioned and the new auxiliary boiler has been installed and placed into operation. Commissioning operations and check out began in November, which are 6 7 operations that lead up to the final phase of full load generation testing. First fire on fuel oil is expected to begin in February 2010, with the first fire on coal expected in 8 April, 2010. Full load performance testing is expected to occur during May and June 9 10 2010 prior to the commercial in-service date.

11 Q. Have there been reductions in available generation supply since TC2's CPCN 12 was granted?

13 A. Yes. Since TC2's CPCN was granted, the Companies' generating supply has decreased by over 3,200 GWh annually. First, the available supply has decreased as 14 KU no longer purchases energy from Electric Energy, Inc. ("EE Inc"). In 2006, KU's 15 16 power supply agreement with EE Inc expired under its own terms and the majority owners of EE Inc, over KU's objection, elected to pursue market-based pricing 17 18 authority. Under a long-standing agreement, KU had been purchasing 200 MW of 19 relatively low-cost base load energy, the equivalent of approximately 1,450 GWh of 20 energy each year.

Secondly, Owensboro Municipal Utility ("OMU") has terminated its purchase
power contract with KU effective May, 2010. KU had purchased OMU's excess
energy (approximately 200 MWat OMU's peak), and, at the time of the TC2 CPCN

approval, planned to purchase approximately 1,775 GWh of energy annually from
 OMU. The OMU contract was a long-standing resource for low cost energy and
 OMU's termination of the contract, over KU's objection, will result in a loss to KU's
 baseload power supply.

5 Q. Has the recession affected the Companies' load since TC2's CPCN was granted?

6 A. Yes. The Companies have continuously prepared load forecasts during the construction of TC2 and monitored their actual loads. The most recent load forecast 7 is attached as Thompson Exhibit 4. The Companies' electricity sales forecast is lower 8 9 as a result of the economic recession. Driven primarily by reductions in energy usage by industrial customers, the Companies' 2011 energy requirements (2011 is the first 10 full year of TC2 operation) are forecasted to be approximately 4,000 GWh less than 11 12 the 2011 level forecasted at the time of the TC2 CPCN.

Q. Does the public convenience and necessity require TC2 today, given this revised view of native load energy requirements and generating supply?

15 A. Absolutely. Combining the reduction in native load energy requirements with the 16 loss of base load energy from OMU and EE Inc, the Companies' 2011 energy supply 17 with TC2 exceeds the forecast in the TC2 CPCN by only 800 GWh, or 2% of the 18 Companies' 2011 energy requirements. TC2 is expected to provide the Companies 19 with over 4,000 GWh of energy in 2011 effectively replacing the energy lost from 20 OMU and EE Inc while also displacing higher-cost energy in the company's supply 21 to native load customers. Customers will benefit from all of the low cost energy 22 produced by TC2, as it is expected to be the lowest cost unit in the system and 23 therefore the first unit in the merit order of economic dispatch. In the first full year of operation the Companies' project fuel and purchase power offsets from TC2 to be in excess of \$67 million growing to over \$80 million in 2012. Indeed, customers will begin to benefit from TC2 this spring, prior to its commercial operation, when the coal cost associated with the test power from this unit is reflected in the calculation of the fuel adjustment clause. Without TC2, the Companies cannot ensure an adequate energy supply at a reasonable cost to provide customers with reliable electric service.

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What is the impact on the Companies' reserve margin when TC2 begins commercial operation in 2010?

The addition of a base load unit to a generation system typically increases the reserve 9 A. margin for a limited period of time due to the size of the base load capacity and the 10 critical need to maintain an adequate reserve margin during the construction of the 11 new base load unit. This impact was reflected in the CPCN proceeding and is 12 expected to occur this summer when TC2 is placed into commercial operation. 13 Although there have been changes in both load and generation resources since the 14 15 CPCN was granted in 2005, the impact of the addition of TC2 on the Companies' reserve margin remains very similar to the impact presented at the proceeding for the 16 CPCN. The most recent projection is that the reserve margin will be 22.6% when 17 18 TC2 begins commercial operation in 2010, instead of the 19.3% forecast in the TC2 19 CPCN.

In addition, due to the reduction in the annual peak hour load due to the Companies' DSM programs, the resulting load shape is now flatter than projected in the CPCN case, thereby increasing the need for a generation resource that supports base load requirements. TC2 is an excellent base load generation resource for this

purpose. TC2 is a generation asset primarily targeted at meeting the demand of base
 load by providing low cost energy around the clock, not only the demands at *the* peak
 hour.

The addition of a base load unit typically increases the reserve margin for a 4 5 period of time. This is so because adding base load generation necessarily involves adding larger blocks of generating capacity than, for example, a combustion turbine. 6 More importantly, due to the need to maintain an adequate reserve margin at all 7 times, especially during the construction of the base load unit, the addition of a base 8 9 load unit inevitably adds to the reserve margin. To avoid this increase would require the utility to maintain an unreasonable reserve margin during the construction of the 10 11 base load unit or rely heavily on short-term purchase power.

12

Efficiency Initiatives

13 Q. Please describe what is meant by the phrase "asset management."

A. As used by Energy Services, the term "asset management" refers to a business
discipline for maximizing the performance of long-term generation and transmission
assets through management of the assets' life cycles. The dual goals of asset
management are to increase the efficiency of the assets while continuing to provide
reliable service. Asset management allows for realization of these goals in the most
cost-effective manner possible.

Q. Can you provide examples of the Companies' asset management initiatives for their generation systems?

A. Yes. LG&E and KU continue to modernize and expand the use of digital control
 technology (Distributed Control Systems or DCS) in its generation facilities, as new

systems have recently been installed in the Ghent units and Trimble County Unit No
 DCS provides the Companies with enhanced control over the many interconnected
 operations occurring within the generation fleet, while also providing improved
 coordination and monitoring over these processes. The technology provides the
 advantages of centralized control, while preserving the ability for localized control.

LG&E and KU continue to utilize a Predictive Maintenance Program that 6 7 increases the reliability of the Companies' equipment while ensuring that Through the Predictive Maintenance Program, 8 maintenance is cost-effective. assessments of the equipment's condition are made such that maintenance occurs 9 10 only when necessary to maintain the equipment's optimum performance. Unlike a 11 time-based maintenance program, maintenance only occurs when issues have been 12 identified, reducing unnecessary repairs and maintenance costs. Additionally, the 13 Predictive Maintenance Program provides better data analysis and reporting, as well 14 as enhanced equipment troubleshooting and diagnostics. Consequently, Energy Services is able to minimize maintenance costs while ensuring the continued 15 reliability of its equipment. 16

The Companies have also instituted a Corrosion Fatigue Program, which seeks to improve the Companies' response to corrosion fatigue, as well as its proactive capabilities in preventing corrosion occurrences. The Program is intended to improve the Companies' response through enhanced identification of LG&E and KU boilers susceptible to corrosion fatigue, prioritization and implementation of inspections and implementation of mitigation measures as required. The Program

also includes boiler feedwater chemistry management as it relates to future corrosion
 fatigue occurrences.

LG&E and KU have also implemented a Catalyst Management Program designed to manage the life-cycle cost of selective catalytic reduction ("SCR") catalysts throughout the Companies' fleet. The purpose of the program is to maximize the performance of SCR NOx reduction equipment, ensure compliance with NOx emission regulations, such as the Clean Air Interstate Rule, and achieve the lowest available operating costs.

9

Performance of the Generation Systems

10 Q. Please describe the reliability of LG&E's and KU's generation systems over the
11 last several years.

12 A. LG&E and KU have a tradition of excellent generation performance. This is evidenced through Energy Services' weighted average Equivalent Forced Outage 13 Rate ("EFOR") and capacity factors. The EFOR, a commonly used industry standard 14 15 to measure the reliability of coal-fired generating units, has historically remained 16 below the industry average. LG&E's and KU's EFOR during the test year averaged 17 4.96% and 6.13%, respectively. These numbers are well below the most recent three-18 year national average of 8.32%.

19 Q. Please describe the Companies' capacity factor trend over the last several years.

A. For many years, LG&E's and KU's steam capacity factor for coal-fired baseload generating units has trended consistently upward. LG&E's capacity factor has consistently remained above 78% since 2005. KU's average capacity factor for the same period has been over 66%. Although KU's average is lower, KU's steam

capacity factor has increased steadily in recent years as a result of the continued
installation of scrubbers, on KU's generating units. LG&E's units are already fully
scrubbed. Despite the consistent upward trend, both LG&E's and KU's capacity
factor decreased in 2009 due to the general economic downturn. The capacity factor
results over this time period, however, demonstrate excellent performance.

6 7

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performance to others in the industry?

How do LG&E and KU benchmark the reliability of their generation

8 A. Through utilizing the EFOR metric, LG&E and KU benchmark the performance of 9 each individual generating unit and then combine the data to construct a combined 10 system metric. Once the data is compiled, LG&E and KU establish the preferred 11 performance quartile for each unit based upon the age of each asset and other factors 12 relevant to efficiency. Once the target performance quartiles have been decided, the 13 Companies compare each unit's rolling three-year EFOR to the rolling three-year EFORs of similarly sized coal units within the North American Electric Reliability 14 Council's ("NERC") Reliability First Corporation ("RFC") region. NERC's RFC 15 region is an appropriate basis for comparison as the generating units in that region are 16 17 similar to LG&E's and KU's with regard to design, fuel quality and environmental 18 controls.

19 20

Q. How has Energy Services' combined system compared to those of the benchmark groups described above?

A. The combined system EFOR demonstrates that the Companies' generation systems
 are operating reliably and efficiently. The Companies' overall system EFOR has
 consistently achieved top quartile or second quartile performance. In the most recent

three-year rolling EFOR, which was from 2005-2007, top quartile performance was at
 4.77% and second quartile performance was 7.11%. During this same period the
 Companies' overall system EFOR was 5.8%. The Companies are continuing their
 efforts to again reach top quartile performance levels.

5

Q. Please describe any contingency reserves that the Companies maintain.

A. In order to ensure a continued tradition of outstanding reliability, the Companies
maintain contingency reserves, in which the Companies pool excess capacity with the
excess capacity of other reserve sharing group members to ensure reliable service
even when there are unexpected variations in customer demand and unplanned or
unforced outages of generating equipment. The Companies had previously belonged
to the Midwest Contingency Reserve Sharing Group ("MCRSG"), but under the
terms of the MCRSG Agreement, the contract terminated on December 31, 2009.

13 In order to ensure continued access to adequate contingency reserves, the 14 Companies entered into a reserve sharing group effective January 1, 2010, with East 15 Kentucky Power Cooperative, Inc. and the Tennessee Valley Authority. The 16 formation of this reserve sharing group was the most cost-effective manner in which 17 to ensure sufficient contingency reserves. The Companies, under the terms of the 18 agreement, are required to maintain 201 MW of capacity reserves, with the 19 Companies being able to control how much of the 201 MW are spinning and 20 supplemental reserves, respectively. As part of establishing the new reserve sharing 21 group, the Companies were required to invest approximately \$100,000 for their share 22 of software development costs.

23

1		Transmission Systems			
2	Q.	Please describe LG&E's transmission system.			
3	A.	LG&E serves approximately 391,000 electricity customers over its transmission and			
4		distribution network extending across 9 counties in Kentucky. LG&E's transmission			
5		plant covers approximately 900 circuit miles, and has a net book value of			
6		approximately \$110 million.			
7	Q.	Please describe KU's transmission system.			
8	A.	KU serves approximately 513,000 electricity customers over a transmission and			
9		distribution network extending across 77 counties in Kentucky. KU's transmission			
10		plant covers approximately 4,300 circuit miles, and has a net book value of			
11		approximately \$202 million.			
12	Q.	Are LG&E's and KU's transmission systems operated jointly?			
13	A.	Yes. LG&E and KU, as owners and operators of interconnected electric transmission			
14		facilities, achieve economic and reliability benefits through joint operation as a single			
15		interconnected and centrally dispatched system and have operated jointly following			
16		the acquisition of KU Energy Corporation by LG&E Energy in 1998. The joint			
17		operation of the transmission systems has resulted in increased reliability and			
18		efficiency. In turn, the Companies are enabled to provide a higher value of electric			
19		service to our customers. Additionally, the Companies implemented joint			
20		transmission planning as a result of the merger.			
21	Q.	Please describe the investments in and construction of transmission facilities			
22		which support the need for an adjustment of base rates at this time.			

The Companies are building significant additional transmission facilities in 1 A. 2 conjunction with the TC2 project. The Companies are constructing a 345 kV 3 transmission line, approximately 42 miles in length, running from LG&E's Mill Creek Generating Station ("Mill Creek Station") through Jefferson County, Bullitt 4 County, Meade County and Hardin County to KU's Hardin County Substation near 5 Elizabethtown, Kentucky. LG&E will own that portion of the line beginning at the 6 7 Mill Creek Station and running to the east boundary of the Fort Knox Military 8 Reservation, and KU will own the remainder of the line from the east boundary of the 9 Fort Knox Military Reservation to the Hardin County Substation.

10 The projected completion date for the Mill Creek to Hardin County transmission line is June 2010. Construction is almost complete except for three 11 12 small segments in Hardin County. Construction in this area has been delayed as a 13 result of litigation involving proposed right-of-way acquisitions. On December 22, 14 2009, the Commission granted a CPCN for the construction of the temporary lines in 15 Case No. 2009-00325, In the Matter of: Application of Kentucky Utilities Company 16 Concerning the Need to Obtain Certificates of Public Convenience and Necessity for the Construction of Temporary Transmission Facilities in Hardin County, Kentucky. 17 18 While construction is complete in the remaining areas of the line unaffected by the pending litigation, construction of temporary facilities around the properties involved 19 20 in the litigation began in January 2010.

Also in conjunction with TC2, the Companies have interconnected the TC plant to a 345 kV transmission line in Indiana owned by Duke Energy Indiana and Duke Energy Ohio, which necessitated crossing the Ohio River.

In addition to the construction of the new transmission line, the Companies
 have been upgrading transmission facilities in Anderson, Carroll, Fayette, Franklin,
 Trimble and Woodford counties.

The Companies have currently spent over \$87 million on TC2 related 4 transmission construction since the project began. The Companies have been able to 5 efficiently manage increases in the cost of materials while staying within 10% of the 6 sanctioned budget. The only significant deviation from the original estimates has 7 been the unanticipated costs of the construction of the "work-around" segments 8 9 necessitated by the litigation in Hardin County, and the higher than expected cost of the line crossing the Ohio River, due to the extremely rough terrain that was 10 11 encountered.

12 Q. Please describe the operation and performance of the current transmission 13 facilities.

14 A. Energy Services places great emphasis on the reliability of its transmission facilities. So do the Federal Energy Regulatory Commission ("FERC") and the North American 15 Electric Reliability Corporation ("NERC"). Together, they have steadily increased 16 reliability requirements for operating transmission systems. And, their compliance 17 18 monitoring and enforcement activities associated with the measurement and enforcement of compliance standards has steadily increased as well. To satisfy its 19 obligations, Energy Services has increased its activities to ensure reasonable 20 21 compliance with both the FERC/NERC reliability requirements and their monitoring 22 and oversight activities.

In addition, to further ensure continued reliability, the Companies invested 1 2 \$26 million in the construction of a new Transmission Control and IT Data Center. 3 The facility, located in Simpsonville, Kentucky, became fully operational in August 4 2008 and is designed to operate continuously, 24 hours a day, 365 days a year. It is 5 designed to address both transmission control and IT data needs for the Companies. 6 The facility consolidated LG&E's and KU's old and outdated transmission control 7 centers and will aid in the more efficient coordination of the Companies' combined transmission systems. The Companies maintain one of the previous control centers, 8 9 the Dix System Control Center, for backup system control. Also, the Transmission 10 Control Center is designed to ensure compliance with the cyber security standards that were approved by FERC in January 2008 and the NERC Board of Trustees in 11 12 2006. The Data Center was constructed to ensure reliability and improve efficiencies as the facility is designed to withstand an extended outage and transitions disaster 13 recovery control from a third-party contract to internal capability. The design of the 14 facility is hallmarked by reliability, as it is constructed to withstand a F4 tornado and 15 16 the equipment is redundant and physically separated. Energy efficiency was also vital to the design of the facility, which utilizes motion sensor lighting, scalable 17 18 facility components and a free cooling system that utilizes external air temperatures to 19 assist in the cooling process.

20

Q. Have there been challenges to the operation of the transmission systems?

A. Yes. The ice and wind storms that occurred from January 26 through February 11,
 2009 ("Winter Storm") caused unprecedented damage to LG&E's and KU's
 transmission systems and a consequent disruption of transmission service and

1 operations. Governor Steve Beshear described the ice storm portion of the Winter 2 Storm, which consisted of three days of accumulating ice, as the "worst natural 3 disaster" in the modern history of the Commonwealth. By January 28, measurable ice accumulation ranged from a quarter of an inch to three inches. Ice accumulation of 4 5 such a substantial nature greatly affected the integrity of LG&E's and KU's lines. At 6 peak, the accumulation resulted in 404,000 LG&E and KU customers being without power. The magnitude of the damage was vast, as a full 100% of the transmission 7 substations in western portions of KU's service area were affected and 40% of the 8 9 transmission substations in KU's central regions were affected. As for LG&E, 33% 10 of the transmission substations were impacted. Over 100 transmission lines sustained actual damage or were otherwise affected. In LG&E's and KU's transmission 11 12 system, 188 towers and poles had to be replaced and 368 spans of line were out of service. Not even two full days after the last customer affected by the initial ice 13 accumulation was restored, a windstorm occurred on February 11, also causing 14 15 damage to the transmission system.

The Companies began restoration efforts immediately on January 26, 16 17 attempting to mitigate the effects of the continuing ice accumulation and restore service to customers when possible. The restoration effort, which at peak involved 18 19 6,016 employees, contractors and mutual assistance personnel, is the largest 20 restoration effort ever undertaken by the Companies. Mutual assistance personnel are 21 workers from other utility companies who assist in restoration efforts when needed. 22 The Companies belong to several mutual assistance groups such that adequate 23 personnel will be available in the event a significant restoration effort is required.

1		Due to the severity of the damage to LG&E's and KU's equipment, contractors were				
2		retained through March 13 to complete repairs.				
3		In restoring service and repairing the significant damage to its equipment as a				
4		result of the Winter Storm, the Companies spent \$148 million, \$17 million of which				
5		was spent on Transmission. Nearly 95% of the costs to repair the Transmission				
6		system involved capital investments.				
7		Safety Performance and Recognitions				
8	Q.	Please discuss the Companies' safety performance in the areas of generation,				
9		construction and transmission.				
10	A.	The Companies hold the safety of its employees paramount. An emphasis on safety				
11		has long been part of Energy Services' culture. For the 12 months ended October 31,				
12		2009, Energy Services' recordable injury incident rate ("RIIR") under OSHA				
13		regulations is 1.02, which is almost 71% below the comparable national utility				
14		average of 3.5. The RIIR for contractors for the 12 months ended October 31, 2009,				
15		is 1.95, less than one-half of the national average for construction. The emphasis on				
16		safety is also reflected in the numerous recognitions Energy Services has received				
17		since 2008. LG&E has reached several milestones, such as the Ohio Falls				
18		hydroelectric station operating for twenty years without a single lost-time incident.				
19		In 2008, the employees working at the Cane Run generating unit received the				
20		Governor's Health and Safety Award in recognition of 250,000 hours worked without				
21		an incident. In July 2009, the Mill Creek plant achieved one year with no recordable				
22		injuries for employees and contractors. KU's employees have performed comparably				
23		as the Brown and Tyrone stations have had eleven years without a lost-time incident				

and two years without a single recordable incident. The Ghent scrubber construction
 project has operated for 4.5 million hours without a lost-time incident and the Brown
 scrubber construction project has also operated for 700,000 hours without a lost-time
 incident. Finally, the Companies' Transmission employees have had seven injury free years. Despite these significant achievements, Energy Services continues its
 efforts to ensure that its employees are working as safely as possible.

7 Q.

Please describe any new safety initiatives Energy Services has implemented.

8 Although injury rates are well below the national average, Energy Services continues A. 9 to look for innovative measures to ensure best practices are being followed. In 2009, 10 Energy Services conducted a full-day seminar attended by nearly 800 managers, employees and contractors that emphasized the importance of teamwork and the 11 value of shared knowledge in improving safety. Further, Energy Services conducts 12 quarterly safety meetings with its contractors to further improve safety practices. 13 Additionally, Energy Services has begun emphasizing the reporting of "near miss" 14 15 incidents. The reported data will be compiled and evaluated as an innovative means to detect safety issues before an incident occurs. Finally, a newly implemented 16 safety planning model will measure the effectiveness of proactive initiatives, such as 17 18 the reporting of "near miss" accidents.

19

Clean Coal and Renewable Generation

Q. What efforts are the Companies making in the arena of clean coal and
renewable generation?

A. LG&E and KU have made a significant pledge to FutureGen, which is the world's
most advanced clean coal project. FutureGen is a public-private partnership, created

1 at the Department of Energy's request, to design, build, and operate the world's first 2 coal-fueled, near-zero emissions power plant, at an estimated net project cost of \$2.25 3 billion. The Department of Energy demonstrated its commitment to the project in 4 June 2009 by reaffirming its decision to provide financial support through the next 5 phase of development. The commercial-scale plant will prove the scientific 6 feasibility and economic affordability of producing low-cost electricity and hydrogen from coal while nearly eliminating emissions. It will be a "living laboratory," 7 8 supporting testing and commercialization of technologies focused on generating clean 9 power and fully integrated carbon capture and storage. In so doing, FutureGen will 10 create unprecedented opportunities for scientific exploration, education, and 11 stakeholder engagement. FutureGen is currently approximately three years ahead of 12 other fully integrated near zero emission power generation projects using saline 13 aquifers for carbon dioxide sequestration. All investments by LG&E and KU in 14 FutureGen are currently treated as below-the-line costs.

15 In addition to collaborating with global entities in the FutureGen project, 16 LG&E and KU have also invested locally in furtherance of advancing carbon storage 17 in Kentucky. LG&E and KU have both invested in the Carbon Management Research Group ("CMRG") and the Kentucky Consortium for Carbon Storage 18 19 ("KCCS"). CMRG is a partnership between the private sector, state government and 20 academia, administered by the University of Kentucky Center for Applied Energy 21 Research, pertaining to carbon and carbon dioxide management in coal-fired 22 generating units in Kentucky. The Companies have jointly agreed to invest up to

1

2

\$200,000 annually for 10 years in this project. The Commission, in Case No. 2008-00308 approved the establishment of a regulatory asset with regard to this investment.

3 KCCS is a partnership between government and private industry stakeholders created by the Kentucky Geological Survey and the Governor's Office of Energy 4 5 Policy (now the Department of Energy Development and Independence) to 6 investigate the feasibility of geologic storage of carbon dioxide produced by coal-7 fired generating units in Kentucky. The Companies jointly agreed to provide KCCS with up to \$1.8 million in funding over two years. The Commission, in Case No. 8 9 2008-00308 approved the establishment of a regulatory asset with regard to this 10 investment.

11 As the interest in renewable energy has intensified in the last several years, the Companies have been investigating ways in which to diversify their supply mix with 12 13 renewable resources. For example, in 2009, the Companies undertook a pilot initiative by entering into two purchase power agreements for output from wind 14 15 farms. The first contract is with Grand Ridge Energy LLC for 99 MW. The second 16 contract is with Grand Ridge Energy IV LLC for 10.5 MW. Both are under review in 17 pending investigation before the Commission and the subject of consumer group 18 opposition.

In addition to investing in FutureGen and expanding their use of renewable resources, the Companies have also taken an active informational role in explaining the "carbon footprint" Kentuckians are leaving and ways in which to reduce the impact. A presentation is available on the Companies' website outlining Kentucky's carbon emissions, the feasibility of alternative energy sources and current legislative

initiatives to reduce emissions. A copy of this presentation is attached as Thompson
 Exhibit 5.

3 Q. Do you have any closing thoughts?

As I stated at the outset of this testimony, Energy Services' mission is 4 A. Yes. 5 predicated on four fundamental and overlapping objectives: (i) maximizing the 6 performance and investment life of the Companies' electric generation and 7 transmission assets; (ii) maintaining sound operating and maintenance practices that 8 promote both reliable and efficient operations and a safe working environment; (iii) 9 providing high-value electric service to the Companies' customers; and (iv) operating 10 as a good steward of the environment. While these objectives have been achieved 11 through the commitment of its employees, the Companies cannot continue to deliver 12 the quality electric service customers have rightfully come to expect without 13 increasing its base rates. The substantial investments required to provide an adequate 14 and reliable supply, coupled with unanticipated and significant storm restorations, are 15 cost pressures that prohibit the Companies from adequately recovering its costs under 16 its existing base rates.

17 Q. Does this conclude your testimony?

18 A. Yes.

VERIFICATION

COMMONWEALTH OF KENTUCKY)) SS: COUNTY OF JEFFERSON)

The undersigned, **Paul W. Thompson**, being duly sworn, deposes and says that he is Senior Vice President, Energy Services for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of E.ON U.S. Services, Inc., and that he has personal knowledge of the matters set forth in the foregoing testimony, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.

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Paul W. Thompson

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 22^{2} day of 4 and 2010.

Notary Public) (SEAL)

My Commission Expires:

November 9, 2010

Paul W. Thompson

Senior Vice President, Energy Services E.ON U.S. LLC 220 West Main Street Louisville, KY 40202

Industry Affiliations

FutureGen Industrial Alliance, Board Member and former Chairman of the Board Center for Applied Energy Research, Advisory Board Member American Coalition for Clean Coal Electricity, Board Member Electric Energy Inc., Board Member Ohio Valley Electric Corporation, Board Member

Civic Activities

Jefferson County Public Education Foundation Board University of Kentucky College of Engineering, *Project Lead The Way*, Council Member Greater Louisville Inc. Board Member Louisville Downtown Development Corporation Board, Finance Committee Chair Louisville Free Public Library Foundation Board, Chairman Chair, Annual Appeal 2002 & 2003 Co-Chair Annual Children's Reading Appeal 1999, 2000, & 2001 March of Dimes 1997 & 1998 - Honorary Chair Habitat for Humanity - Representing LG&E as co-sponsor Friends of the Waterfront Board 1998 – 2002 Leadership Louisville – 1997-98

Education

University of Chicago, MBA in Finance and Accounting -- 1981 Massachusetts Institute of Technology (MIT), BS in Mechanical Engineering -- 1979

Previous Positions

LG&E Energy Marketing, Louisville, KY 1998 - 1999 - Group Vice President Louisville Gas and Electric Company, Louisville, KY 1996 - 1998 - Vice President, Retail Electric Business LG&E Energy Corp., Louisville, KY 1994 - 1996 (Sept.) - Vice President, Business Development 1994 - 1994 (July) - Louisville Gas & Electric Company, Louisville, KY **General Manager, Gas Operations** 1991 - 1993 - Director, Business Development Koch Industries Inc. 1990 - 1991 - Koch Membrane Systems, Boston, MA National Sales Manager, Americas 1989 - 1990 – John Zink Company, Tulsa, OK Vice President, International Lone Star Technologies (a former Northwest Industries subsidiary) 1988 - 1989 - John Zink Company, Tulsa, OK Vice Chairman 1986 - 1988 - Hydro-Sonic Systems, Dallas, TX **General Manager** 1986 – 1986 (July) – Ft. Collins Pipe, Dallas, TX, General Manager 1985 - 1986 - Lone Star Technologies, Dallas, TX Assistant to Chairman 1980 - 1985 - Northwest Industries, Chicago, IL



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Com companies





Trimble County Unit 2 Construction









Thompson Exhibit 3 Page 1 of 2





Con companies Trimble County Station



Thompson Exhibit 3 Page 2 of 2

Louisville Gas and Electric Company and Kentucky Utilities Company Energy Requirments 2010 - 2039

	Energy					
	Requirements					
Year	(GWh)					
2010	33906.60					
2011	34890.25					
2012	35954.04					
2013	36740.98					
2014	37306.79					
2015	37902.26					
2016	38428.96					
2017	38848.06					
2018	39392.20					
2019	39976.33					
2020	40544.28					
2021	40980.20					
2022	41545.24					
2023	42077.48					
2024	42733.27					
2025	43293.56					
2026	43867.10					
2027	44444.45					
2028	45122.14					
2029	45673.33					
2030	46244.89					
2031	46744.71					
2032	47296.60					
2033	47845.79					
2034	48379.65					
2035	48918.59					
2036	49520.46					
2037	50089.89					
2038	50633.59					
2039	50613.49					

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Thompson Exhibit 5











- Renewable Energy
- Carbon Tax (or Cap and Trade)
- Transmission Grid
- Efficient Use of Electricity







co, emissions: 100 times larger issue than So,/Nox



Sources: U.S. DOE Energy Information Administration for historic emissions and generation. U.S. EPA for future SO₂ and NOx state budgets. In-house projections of generation and CO₂ based on 1.5% annual growth. 2007 data. $_{4}$











NGE KU



Co.	LUGI	

Natural Gas

Renewables

Hydro

Currently Zero Renewables



Under 2020 Federal Proposals



Note: Existing hydro does not count toward renewable mandates.







ICH KU

Annual availability equivalent up to 40 percent of continuous maximum capability Many legal/regulatory entities involved with different missions - recreation, transportation, nature preserves

Low operating cost — "no fuel" Most hydro locations are already being used





SOURCES: Dept. of Energy National Renewable Energy Laboratory

Why not Florida? Frequent afternoon thunderstorms









SOURCES: Dept. of Energy National Renewable Energy Laboratory






Zero-carbon option

Enormous investment of time and money

Critical that there be a strong public and political consensus

Disposal still an issue

Nuclear currently prohibited in Ky.













Current grid is stretched would require major new construction at large capital cost Risks of over-reliance on single highway (Canadian blackout)

Development/approval time

NIMBY





Transmission grid system needed to support new



Federal proposal to "sell" allowances to CO₂ producers

Concept: All utilities will bid or compete for allowances, market sets price

Previously stated goals:

 Create new revenue stream for federal budget (\$80B/year for 8 years)

 Create economic rationale for industry to move more quickly to renewable power









- Passed House on June 26, 2009.
- Mandates a 17 percent reduction in greenhouse gases by 2020 and 83 percent by 2050 from 2005 levels.
 - Moves to Senate for vote later this year.
- Current form contains elements that are a step in the right direction.

To further mitigate costs to our customers, additional elements E.ON U.S. would like to see included in the bill are:

- Modified near- and mid-term greenhouse gas reduction targets and timetables.
 - Inclusion of a price "ceiling" on emission allowance costs.
- Extension of the phase-out period for the allocation of allowances.





Percent rate impact of carbon tax and renewable energy requirements on E.ON U.S. customer bills



Percentage increases calculated using 2008 rates applied to 2020 projected sales

 $\blacksquare CO_2 cost$

Renewables & Efficiency cost

CO2 allowance is calculated at \$20 a ton, allocation methodology is 41% purchase in 2012, 53% purchase in 2020 Assumes utilities meet the CERES target entirely through purchase of Alternative Compliance Payments (ACPs) set in the bill at 2.5 cents per KWH in 2010 (and subsequently indexed). R S

N.C.F.





15+% reduction in demand

Unprecedented consumer commitment to energy efficiency Commitment to "smart grid"

Less coal in total generation mix, less exposure to carbon tax, but high cost of purchased or developed renewable power sources







programs annually – at least \$182 million over the life of the program E.ON U.S. is investing more than \$25 million in energy efficiency

Examples:

- -- Enhanced energy audits
- -- Commercial rebates
- -- Residential lighting
- Expected to reduce the need for additional generation by more than 500 megawatts



- **Conserve Energy During Heavy Demand**
- -- Load control program partnership with customers that allows us to cycle off AC units during peak demand
- --- Smart meter pilot program -helps customers manage their usage





- Understand that rising energy costs will be a way of life for years to come - consider everything you do with that in mind
- Make major, sustained commitment to energy efficiency
- E.ON U.S. to address issues of carbon capture and sequestration with help of policy-makers
- E.ON U.S. share information and work constructively with policy-makers 0









- Insist on a thorough evaluation of cost
- Allow technology to catch up
- Demand an equitable allocation of carbon credits
- Be efficient seek incentives for efficiencies



"To build may have to be the slow and laborious task of years.

To destroy can be the thoughtless act of a single day."

- Winston Churchill



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COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

)	
)	CASE NO. 2009-00548
)	
)	
)	CASE NO. 2009-00549
)	
)	
))))))

TESTIMONY OF CHRIS HERMANN SENIOR VICE PRESIDENT – ENERGY DELIVERY LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY

Filed: January 29, 2010

1

Please state your name, position and business address. 0.

2 My name is Chris Hermann. I am Senior Vice President – Energy Delivery for Louisville A. Gas and Electric Company ("LG&E") and Kentucky Utilities Company ("KU") 3 (collectively, the "Companies") and am employed by E.ON U.S. Services, Inc., a service 4 company subsidiary wholly-owned by E.ON U.S., LLC ("E.ON U.S."). My business 5 6 address is 220 West Main Street, Louisville, Kentucky 40202.

7 0. Please describe your educational and professional background.

8 I received a B.S. degree in Mechanical Engineering from the University of Louisville in A. 9 1970. I joined LG&E that same year and have spent my entire career at LG&E and E.ON 10 U.S. In 1978, I began working as the Plant Manager for the LG&E Cane Run generating station. I held a number of other positions before assuming my current duties in 2003. A 11 12 complete statement of my work experience and education is contained in Appendix A attached hereto. 13

14 Q. Please describe your duties and responsibilities as Senior Vice President - Energy 15 Delivery and the mission of the Energy Delivery division.

As Senior Vice President - Energy Delivery, I am responsible for Energy Delivery, which 16 A. 17 includes the gas and electric distribution functions for LG&E, the electric distribution 18 functions for KU, and the retail operations for both KU and LG&E. Our mission is 19 simple and constant. We strive to provide safe, reliable, cost-effective service to our 20 customers.

Q.

21 Have you previously appeared before this Commission?

22 Yes. I have appeared before this Commission in informal conferences and participated in A. 23 the merger proceedings of LG&E and KU before the Commission in Case No. 97-300, In

the Matter of: Joint Application of Louisville Gas and Electric Company and Kentucky 1 Utilities Company for Approval of a Merger. I also testified in LG&E's 2003 rate 2 application, Case No. 2003-0433, In re the Matter of: An Adjustment of the Gas and 3 4 Electric Rates, Terms and Conditions of Louisville Gas and Electric Company, and KU's 2003 rate application, Case No. 2003-0434, In re the Matter of: An Adjustment of the 5 Electric Rates, Terms and Conditions of Kentucky Utilities Company. I also testified in 6 7 LG&E's 2008 rate application, Case No. 2008-00252, In re the Matter of: Application of Louisville Gas and Electric Company for an Adjustment of Its Electric and Gas Base 8 9 Rates, and KU's 2008 rate application, Case No. 2008-00251, In re the Matter of: 10 Application of Kentucky Utilities Company for an Adjustment of Base Rates.

11

Q.

What is the purpose of your testimony?

A. I will explain in my testimony how the Companies have been able to provide safe, reliable and cost-effective services for our electric and gas distribution business and retail operations while continuing our efforts to provide quality customer service. I will also describe how Energy Delivery responded to the unprecedented weather events that recently affected the Companies' service area. Finally, I will explain why a rate increase is needed at this time as it relates to Energy Delivery.

18

Energy Distribution Systems

19 Q. Please describe LG&E's electric and gas distribution businesses.

A. LG&E's electric distribution business serves approximately 391,000 electric customers in
 Jefferson County and 8 surrounding counties. The electric distribution assets we manage
 include over 90 substations (of which more than 30 are shared with the transmission
 system) and over 3,900 miles of overhead and about 2,300 miles of underground electric
 lines. LG&E's service area covers approximately 700 square miles. Our electricity is

produced primarily by our coal-fired generating stations which are discussed in greater detail in the testimony of Paul Thompson. LG&E's gas distribution business serves approximately 317,000 gas customers in Jefferson County and 16 surrounding counties. The gas distribution assets we manage include approximately 4,200 miles of gas distribution pipe, over 380 miles of transmission pipe, and five underground gas storage fields.

7

Q. Please describe KU's distribution business.

A. KU's distribution business serves approximately 513,000 electric customers in 77
counties in Kentucky. The electric distribution assets we manage include over 475
substations (of which more than 50 are shared with the transmission system) and over
16,000 miles of electric lines, with approximately 2,150 miles of such line being
underground. KU's service area covers approximately 6,600 noncontiguous square
miles. Our electricity is produced primarily by our coal-fired generating stations which
are discussed in greater detail in the testimony of Mr. Thompson.

Q. Will you please describe how the Energy Delivery division operates and maintains
 the distribution networks that serve the Companies' customers?

A. Yes. We deliver electricity and gas to our customers by operating and maintaining the
electric and gas distribution infrastructure required to provide safe and reliable service.
We also provide retail and customer service to our residential, commercial and industrial
customers and support economic development efforts in the Commonwealth.

The cornerstone of our distribution and retail operations continues to be our commitment to the delivery of safe and reliable service at a low cost to our customers. We remain dedicated to providing high quality customer service through refining our

1 current programs and implementing innovative practices. Finally, recognizing our 2 customers' increased environmental awareness, we have responded by providing our 3 customers with opportunities to manage their use through our energy efficiency 4 programs.

5

Application for Increase in Base Rates

6 Q. Why are the Companies now seeking a base rate increase?

7 Energy Delivery strives to contain the increasing cost of providing the safe and reliable A. 8 service our customers have come to expect. Since the last rate case, Energy Delivery has made approximately \$234 million in capital investments to its electric and gas 9 10 distribution facilities. \$123 million for LG&E and \$111 million for KU. With these additional investments to serve customers, costs, such as property taxes and insurance, 11 12 have increased as well. As S. Bradford Rives' testimony indicates, the Companies' 13 operation and maintenance costs and capital investments have compromised our ability to earn a reasonable return on our investment. 14

In addition, the substantial operation and maintenance costs and capital investments resulting from the two storms that recently impacted our service area have contributed to the decline in the Companies' financial health. The first storm occurred on September 14, 2008, which developed from the remnants of Hurricane Ike ("2008 Wind Storm"). The second occurred from January 26 through February 14, 2009, and involved an ice, snow and wind storm ("2009 Winter Storm"). Both of these storms and their impacts are discussed in more detail below.

- 22
- 23

1

Energy Delivery's Safety Record

2 Q. Please discuss Energy Delivery's commitment to safety.

Energy Delivery is committed to ensuring the health and safety of its employees and the 3 Α. 4 public. To effectuate this commitment, a culture of safety has been established within our workforce that ensures our "No Compromise" policy is reflected in our attitudes and 5 behaviors. This policy has been in effect since 2001 and unequivocally affirms that 6 7 safety is our preeminent operating priority. LG&E and KU continue to utilize programs such as random field audits, safety "tailgate" meetings and quarterly safety meetings to 8 9 ensure the policy is operating as it should. As a result of these concerted efforts, in 2009 10 Energy Delivery's employees achieved a 1.32 recordable injury incident rate under OSHA regulations, which is well below the comparable utility employee industry average 11 12 of 4.1 and comparable to the Edison Electric Institute Top Performer designation of 1.25.

As a result of our efforts, Energy Delivery continues to receive numerous safety awards, which are listed in Appendix B. While these awards demonstrate that LG&E and KU are certainly leaders among utility companies in safety performance, we continually seek improvement so that our employees are working in the safest possible manner.

Energy Delivery equally values the safety of its contractors and consequently holds its contractors to the same high standard of safety practices. As a result of making safety a focus of its relationship with its contractors, in 2009 Energy Delivery's contractors had a recordable injury incident rate of 1.53, well below the industry average of 5.90 for utility contractors. Further, the number of employee and contractor safety audits performed continues to grow, and is now well over 5,700 per year, helping to ensure best practices are being employed.

1

Energy Delivery's Performance

2 Q. How have the Companies performed in the area of electric reliability?

A. The period since the last rate case has presented some of the greatest challenges to Energy Delivery in my career. This is especially so due to the unprecedented storms in 2008 and 2009. I am proud to say that the employees and contractors for LG&E and KU rose to the occasion with uncompromising focus and dedication.

7 Q. Do LG&E and KU measure its Energy Distribution performance by objective 8 criteria?

9 A. Yes. LG&E and KU track the reliability of their distribution facilities through analyzing performance metrics such as the Customer Average Interruption Duration Index 10 ("CAIDI"), which measures the average electric service interruption duration per 11 12 interrupted customer for the specified period and system. CAIDI is calculated by utilizing two other measurements, System Average Interruption Duration Index 13 ("SAIDI") and System Average Interruption Frequency Index ("SAIFI"). 14 SAIDI 15 measures the average electric service interruption duration in minutes per customer for the specified period and system, while SAIFI measures the average electric service 16 interruption frequency per customer for the specified period and system. The Companies 17 18 track their performance monthly, which provides valuable information regarding their 19 distribution reliability on a short-term basis, while allowing for aggregation to evaluate 20 historical trends. Prior to the 2008 Wind Storm and the 2009 Winter Storm, LG&E and 21 KU had been seeing improvements in these metrics owing to some of the specialized 22 reliability programs (such as focusing on poorly performing circuits and utilizing technology to identify faulted circuits; both of which are discussed in more detail below) 23

that we had put in place. However, residual damage from these two events has had a
 significant and detrimental impact on these reliability metrics.

3 Q. Please describe some of the residual impacts from these storms on electric 4 reliability.

5 The residual impacts of these two storms are taking the form of increased outages. For Α. 6 example, the two storms with their strong winds and heavy ice significantly weakened a 7 number of trees, but did not bring them down during either of the storms. As time passes, 8 the weakened trees become more likely to fall, and we are literally continuing to see fallout from these two storms in even subsequent minor or "blue-sky" events. Typically, 9 10 these events affect equipment, such as lightning arrestors, cross arms, or transformers, 11 which were weakened or damaged, but which could not be identified at the time, and now 12 fail during even minor events. Our experience leads us to conclude that these residual storm effects can be expected to continue to negatively impact our SAIDI and SAIFI 13 14 metrics for some time into the future.

15 Q. Have there been challenges with regard to electric reliability?

A. Yes. As the result of the two severe weather events, LG&E and KU faced significant
 challenges to electricity delivery as damage to the distribution facilities was extensive,
 requiring substantial restoration efforts. The weather events caused the largest reported
 outages in the Companies' history, even surpassing the effects of the 1974 tornado in
 Louisville.

Q. Have the Companies had an opportunity to examine the report issued by the Commission on November 19, 2009, relating to the 2008 Wind Storm and 2009 Winter Storm?

Yes, we are carefully examining the Commission's report. However, and preliminarily, 1 Α. 2 we believe that we are already taking a number of the actions discussed in the report. For example, the Companies already participate in emergency planning exercises and have 3 4 access to satellite-based telecommunications. Further, the Companies already conduct formal inspections following major outages and have a fully functional Outage 5 In regard to the recommendations that are not currently 6 Management System. 7 undertaken, the Companies are committed to working with the Commission to review 8 and understand its recommendations.

9 Q. Please describe the 2008 Wind Storm that occurred in September 2008 and its effect
10 on electricity delivery.

11 A. The 2008 Wind Storm affected much of LG&E's service area and a portion of KU's 12 service area. Although the remnants of Hurricane Ike were forecasted to pass well north 13 of Kentucky, the remnant dropped southward, bringing hurricane-force wind gusts of up 14 to 80 mph. The 2008 Wind Storm resulted in the then-largest documented electric outage 15 in LG&E's history, as 301,000 customers, representing approximately 75% of all 16 customers, were affected. KU's service area was also affected, as 75,000 customers, 17 representing approximately 15% of all customers, were also without service.

18 The 2008 Wind Storm caused significant damage to the Companies' distribution 19 and transmission systems. The Companies immediately began restoration efforts as a 20 Level IV alert was issued, signifying the highest level of storm response.¹ Employees

¹ A Level IV emergency exists when there is a significant problem with the general health and welfare of residents caused by a system wide disaster or extremely severe weather which will require more than 3 days to be resolved. During such an event, the Companies closely cooperate with state and local governments. Like a Level III alert, and in addition to employees and regular contractors, outside contractors are employed and assistance from other utilities through regional mutual assistance groups is requested. Additionally, employees throughout the Companies are called upon to assist in more routine duties in order to relieve linemen and other personnel involved directly in service restoration.

1 were quickly dispatched to identify and isolate damaged areas and ensure the safety of 2 the public with regard to the tremendous number of downed lines. The Companies immediately recalled over 200 personnel that had been deployed to the Texas Gulf Coast 3 region pursuant to mutual assistance agreements to assist with storm restoration efforts 4 from Hurricane Gustav, a prior storm. As it was quickly evident that additional personnel 5 6 were required, the Companies began garnering assistance from regional mutual assistance 7 groups. The Companies are a member (through its parent E.ON U.S.) of three regional 8 mutual assistance groups, in which the member utility companies send available personnel to assist when significant restoration efforts are required.² At its peak, 2,943 9 employees and contractors were engaged, which was then the Companies' largest 10 11 deployment of personnel ever undertaken in a restoration effort. Restoration efforts were 12 prioritized for critical agencies and community facilities, such as hospitals, in accordance with the Terms and Conditions set forth in the tariffs on file with the Commission. As a 13 14 result of the tremendous efforts of those working to restore service, all LG&E customers' 15 service was restored by September 24 and all KU customers' service was restored by September 21. As part of its restoration efforts, LG&E replaced 555 utility poles and 207 16 17 transformers, while KU replaced 143 utility poles and 133 transformers. As the amount of damage to distribution infrastructure was vast, restoration costs for LG&E totaled 18 19 about \$32.9 million, KU experienced costs of about \$4.7 million.

20 During the restoration efforts, the safety of employees, contractors and the public 21 remained the first priority. Energy Delivery was committed to ensuring that the "No 22 Compromise" approach to safety was utilized by employees and contractors alike during

² LG&E and KU belong to the following regional mutual assistance groups: Southeastern Electric Exchange, Great Lakes Mutual Assistance, and Midwest Mutual Assistance.

those difficult and challenging days. To ensure the safety of personnel who were not
 employees of LG&E and KU, all personnel were trained under the Passport program³ to
 ensure consistent safety practices among the workforce.

In order to communicate with customers, governmental officials, and the public at 4 5 large, the Companies relied upon a comprehensive restoration plan established prior to the 2008 Wind Storm that was reviewed and updated by the Companies. Understanding 6 the importance of providing estimated system-wide restoration times, on the day 7 following the storm, the Companies made it clear to the public that some customers may 8 9 not have service restored for up to two weeks. As restoration progressed, information regarding the number of lines remaining down, the number of crews working, the 10 importance of generator safety and other essential information was disseminated. To 11 12 reach the public, LG&E and KU conveyed announcements on television, radio stations 13 and their website. Additionally, LG&E and KU conducted numerous press briefings and conducted tours with work crews for media, government officials and the members and 14 staff of the Commission. 15

16 Q. Please describe the 2009 Winter Storm that occurred from January 26 to February 17 11, 2009 and its effect on electricity delivery.

A. The 2009 Winter Storm was so severe that Governor Steve Beshear described the storm as the "worst natural disaster" in the modern history of the Commonwealth and was the first time the entire Kentucky National Guard was activated. From January 26 to 28, snow and ice accumulated up to three inches on trees and utility lines, with ice and snow accumulation on the ground as high as ten inches in some areas of the state. Many trees

³ The Passport program is a process that certifies that contract workers have sufficient safety training so as to safely work on LG&E's and KU's systems.

and limbs fell due to the ice accumulation, which resulted in a loss of service for many
persons across the state. At peak, 205,000 LG&E customers lost service, representing
approximately 51% of all customers, while 199,000 KU customers were without service,
representing approximately 40% of all customers. Cumulatively, the number of
customers affected represented the largest outage in the Companies' history, exceeding
even the number of customers affected by the 2008 Wind Storm less than five months
earlier.

In addition to damaging LG&E's and KU's distribution systems, the 2009 Winter 8 Storm caused unprecedented damage to the transmission system, which further 9 complicated restoration efforts. KU's service area was particularly affected, as 100% of 10 the transmission substations in the western portion of its service area were affected by 11 damage and 40% of the transmission substations in the central region were also affected. 12 33% of LG&E's substations were affected. As outages started to occur, restoration 13 efforts began immediately as personnel began to isolate damaged electric facilities and 14 restore as much power as possible. Restoration efforts were prioritized for critical 15 agencies and community facilities, such as hospitals, in accordance with the Terms and 16 Conditions set forth in the tariffs on file with the Commission. Such efforts were 17 hindered by continually deteriorating weather conditions, resulting in additional outages. 18 By Wednesday, January 28, the Companies issued a Level IV storm response as it 19 became clear that the damage had exceeded that of the 2008 Wind Storm months prior. 20

As additional personnel would be required, LG&E and KU began participating in conference calls with our regional mutual assistance groups to secure additional contractors. At peak, 6,016 restoration workers, comprised of employees, contractors and

1 mutual assistance crews from 21 states were engaged in restoring service. This was the 2 single largest use of restoration workers in the Companies' history. Through the 3 workers' efforts, all service to LG&E customers was restored by February 7 and all KU 4 customers' service was restored by February 9. Although service was restored, 5 contractor resources were retained for several weeks to repair the damaged infrastructure. 6 The damage was extensive with the Companies expending about \$148 million as of 7 October 31, 2009.⁴

8 Energy Delivery had to ensure the safety of the thousands of transient workers 9 involved in the restoration efforts, as well as the safety of its employees and the general 10 public. In order to ensure that all restoration workers were espousing the "No 11 Compromise" approach to safety, LG&E and KU required all workers (other than 12 employees and contractors who had already received the training) to complete Passport 13 training, which certifies the contract worker has received sufficient safety training to 14 work safely on LG&E's and KU's systems.

15 Throughout the restoration process, every effort was made to keep customers, 16 government officials and the public informed. LG&E and KU ran "safety crawls" on 17 television throughout the restoration process, which provided important safety and 18 restoration information. The Companies participated in daily press briefings, with 19 targeted press releases being issued daily. LG&E and KU also coordinated closely with 20 the Commission throughout the restoration process. On February 9, 2009, the last 21 customers were returned to the distribution network.

⁴ As of October 31, 2009, LG&E expended about \$56 million in restoration costs (about \$55 million for distribution infrastructure and about \$1 million for transmission infrastructure), while KU incurred costs of about \$92 million (about \$76 million in distribution infrastructure and about \$16 million in transmission infrastructure).

Incredibly, on February 11—not even two full days after the last customers' service had been restored—a wind storm occurred with gusts of over 60 mph. Although the damage from this part of the 2009 Winter Storm did not compare to the damage from the previous 2008 Wind Storm or the ice accumulation of two weeks prior, it was significant as 37,000 LG&E customers lost service, in addition to 44,000 KU customers.

6 Importantly, our experiences from the 2008 Wind Storm and the 2009 Winter 7 Storm served us well during our recent restoration efforts following the December 2009 8 Mountain Snow Storm where we restored power to approximately 16,000 Kentucky 9 customers in about 7 days in difficult terrain with no injuries or accidents. Local 10 authorities have favorably recognized our efforts in that restoration.

11 Q. Following the storms, did the Companies conduct a review to evaluate their 12 responses?

Yes. The Companies' efforts in restoring service provided a meaningful opportunity for 13 A. 14 internal review of our storm response practices. This review allowed for recognition of 15 areas in which our restoration efforts were proficient, as well as areas in which 16 improvement is possible. The Companies engaged Davies Consulting, Inc. to assess the feasibility and relative benefits in further "hardening" the electric system, as well as 17 18 converting the overhead electric systems to underground construction. While the report indicated that fully converting the electric systems to underground is cost-prohibitive, the 19 20 report provided several hardening options that the Companies are currently considering. 21 One alternative outlined in the Davies report relates to hazard tree removal outside of LG&E's and KU's typical tree trimming programs. The cost of this alternative could add 22 about \$5.6 million per year in operation and maintenance costs (about \$3.8 million for 23

KU and about \$1.8 million for LG&E) not previously incurred by the Companies. This
 adjustment is further discussed in the testimony of Lonnie Bellar.

In addition to examining potential improvements to the electric system, the Companies also evaluated their responses to customer concerns and questions throughout the restoration efforts. One principal area identified for improvement was customer communications. As technology has progressed, customers' expectations regarding the immediacy of information understandably have changed. Namely, customers are seeking estimated restoration times ("ERT") that are frequently updated throughout the restoration process.

10 Q. What steps have LG&E and KU taken to improve the communication of this kind of 11 information?

Once this area was identified, the Companies began implementing measures to improve 12 A. communications with customers regarding restoration efforts. Several initiatives have 13 14 already been implemented, such as displaying service area maps online when major 15 events occur. The maps indicate where outages are concentrated across the service area. In recognition of customers' increased reliance on online services, outages can now be 16 reported on the Companies' websites. Finally, the Companies have created a "Twitter" 17 social networking account that can be used to update customers regarding outages and 18 restoration efforts. This allows the Companies to quickly disseminate information that is 19 20 receivable through the Internet or cell phone.

In addition to the programs already in place, the Companies are planning further improvements. The Companies plan to provide ERT information online during major storm events that will be searchable by location. The ERT information will be updated

consistently throughout the restoration process, providing updated information on a daily
 basis. The Companies are also looking for innovative ways to reach customers during
 major events, such as through text messaging and email.

4 Q. Are there any other actions LG&E and KU have taken to ensure reliability?

Yes. LG&E and KU have implemented several programs to ensure the reliability of their 5 Α. distribution systems. One such initiative is the Worst Performing Circuits program, in 6 which the Companies annually analyze and rank the reliability performance of all 7 distribution circuits. Reliability data is received from the Outage Management System, 8 which tracks and compiles outage information. Through utilizing SAIFI and other 9 metrics, the worst performing circuits are identified and targeted for improvement 10 through vegetation management initiatives and other reliability projects. The purpose of 11 the program is not only to improve the individual circuits that have been identified, but 12 also to reduce the number of circuits whose performance deviates substantially from the 13 14 mean value of all circuits.

LG&E and KU also employ a Vegetation Management Plan that emphasizes flexibility in recognition of variances within their service areas with regard to growth and tree density. This multi-cycle strategy better enables the Companies to maintain a proactive trim cycle while balancing the reactive needs of the circuits identified as "Worst Performing." The goal is to maintain an average trim cycle for the Companies of 5 years or less, while ensuring that all circuits identified as "Worst Performing" are trimmed in the year that they have been so identified.

Additionally, LG&E and KU are increasing the use of Faulted Circuit Indicators, which is a cost-effective device that allows for partial restorations more quickly when

outages occur. The devices can readily identify where a fault has occurred, which 1 2 simplifies restoration efforts and enhances the employees' ability to avoid hazardous Finally, the Companies have implemented a plan to mitigate animal-related 3 areas. Devices designed to prevent animals from reaching and affecting critical 4 outages. equipment are installed on all new equipment. As a result of this effort, fewer animal-5 6 related outages are expected to occur, which should lead to increased reliability and 7 decreased maintenance costs as equipment damage is reduced.

8 Q. Are there any other actions the Companies have taken to mainfain or improve their 9 performance?

A. Yes. A new customer information system known as the Customer Care Solution system
("CCS") was fully implemented in April 2009. Implementing CCS was a substantial
undertaking, with about \$45 million having been invested since the last rate case, and a
total investment of about \$83 million as of October 31, 2009. This commitment required
significant time, planning and resources from the Companies, but is well worthwhile due
to the many advantages of CCS. This is described in John Wolfram's testimony.

Q. Are there any particular challenges for safety and reliability specific to LG&E's gas business?

A. Yes. With regard to LG&E's gas business, since 1996, LG&E has installed 386 miles of
distribution main as part of its large scale main replacement effort, including 25 miles
since LG&E's last gas rate case. The main replacement program helps ensure continued
safety, improved reliability, enhanced operating efficiencies, and lower operating costs
for LG&E's gas customers. There are 229 miles yet to be replaced in LG&E's gas
system. LG&E is also in the process of upgrading other components of the gas system,

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including gas regulation and measurement facilities and storage field infrastructure. As with the main replacement program, these upgrades will enhance reliability and safety.

LG&E's gas transmission business must comply with the Pipeline Safety 3 4 Improvement Act of 2002. In complying, LG&E has already identified all High Consequence Areas in its gas transmission lines, conducted risk analyses of its pipeline 5 6 segments and began baseline assessments of covered pipeline segments. After 7 conducting an analysis of the feasibility of the inspection methods permissible under the federal regulations, modifications have been made on certain pipelines to allow for in-8 9 line inspections and preparations for similar projects on other pipelines have been made. 10 To comply with these pipeline integrity requirements, \$1.9 million has been spent on capital investments and \$1.8 million has been spent on operation and maintenance costs 11 12 since the last rate case.

Also, LG&E must comply with the Pipeline Inspection, Protection, Enforcement and Safety Act of 2006 ("2006 PIPES Act"), which requires natural gas distribution operators to establish a distribution integrity management program as well as implement control room management procedures in order to mitigate safety risks. Final regulations regarding control room management and distribution integrity were issued in December 2009. In order to comply with the 2006 PIPES Act, LG&E has begun working with industry organizations to develop a written program.

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Customer Satisfaction

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Q. Please describe the Companies' performance in customer satisfaction.

A. Both LG&E and KU have been nationally recognized over the last decade as among the
leaders in customer satisfaction. In 2009, KU was ranked second by J.D. Power &

1		Associates in its Midsize Midwest residential survey of the nation's electric utilities and
2		LG&E was ranked fourth. This reflects a slight decline relative to the period from 1999
3		to 2007, during which the combined Companies were ranked both first in the Midwest
4		and among the top ten in the nation in the J.D. Power residential survey eight out of nine
5		times. The Companies have performed comparably in the Midwest midsize business
6		electric survey. While customer satisfaction indices have been broadly on the decline for
7		the utility industry at large, KU and LG&E remain competitive with other investor-
8		owned utilities in the region. The J.D. Power electric study focuses on power quality and
9		reliability, price, billing and payment, corporate citizenship, communications, and
10		customer service.
11		Environmental Stewardship
11 12	Q.	Environmental Stewardship Please describe LG&E's and KU's initiatives that allow customers to reduce their
11 12 13	Q.	Environmental Stewardship Please describe LG&E's and KU's initiatives that allow customers to reduce their environmental impact.
11 12 13 14	Q. A.	Environmental Stewardship Please describe LG&E's and KU's initiatives that allow customers to reduce their environmental impact. As the public's concern in protecting the environment continues to grow, the Companies
11 12 13 14 15	Q. A.	Environmental Stewardship Please describe LG&E's and KU's initiatives that allow customers to reduce their environmental impact. As the public's concern in protecting the environment continues to grow, the Companies have developed several initiatives that facilitate our customers' interest. Among the
 11 12 13 14 15 16 	Q. A.	Environmental Stewardship Please describe LG&E's and KU's initiatives that allow customers to reduce their environmental impact. As the public's concern in protecting the environment continues to grow, the Companies have developed several initiatives that facilitate our customers' interest. Among the initiatives is the Green Energy Program ⁵ , which allows customers to offset their carbon
 11 12 13 14 15 16 17 	Q. A.	Environmental Stewardship Please describe LG&E's and KU's initiatives that allow customers to reduce their environmental impact. As the public's concern in protecting the environment continues to grow, the Companies have developed several initiatives that facilitate our customers' interest. Among the initiatives is the Green Energy Program ⁵ , which allows customers to offset their carbon impact through the purchase of renewable energy certificates or "green tags." Residential
 11 12 13 14 15 16 17 18 	Q. A.	Environmental Stewardship Please describe LG&E's and KU's initiatives that allow customers to reduce their environmental impact. As the public's concern in protecting the environment continues to grow, the Companies have developed several initiatives that facilitate our customers' interest. Among the initiatives is the Green Energy Program ⁵ , which allows customers to offset their carbon impact through the purchase of renewable energy certificates or "green tags." Residential and commercial customers can voluntarily participate; there are currently over 1,100
 11 12 13 14 15 16 17 18 19 	Q. A.	Environmental Stewardship Please describe LG&E's and KU's initiatives that allow customers to reduce their environmental impact. As the public's concern in protecting the environment continues to grow, the Companies have developed several initiatives that facilitate our customers' interest. Among the initiatives is the Green Energy Program ⁵ , which allows customers to offset their carbon impact through the purchase of renewable energy certificates or "green tags." Residential and commercial customers can voluntarily participate; there are currently over 1,100 LG&E and 650 KU customers participating in the program.
 11 12 13 14 15 16 17 18 19 20 	Q. A.	Environmental Stewardship Please describe LG&E's and KU's initiatives that allow customers to reduce their environmental impact. As the public's concern in protecting the environment continues to grow, the Companies have developed several initiatives that facilitate our customers' interest. Among the initiatives is the Green Energy Program ⁵ , which allows customers to offset their carbon impact through the purchase of renewable energy certificates or "green tags." Residential and commercial customers can voluntarily participate; there are currently over 1,100 LG&E and 650 KU customers participating in the program. The Companies have implemented a portfolio of Demand-Side Management

21 Energy Efficiency programs for residential and commercial customers. For example, for

⁵ On November 30, 2009, LG&E and KU petitioned the Commission for an order approving limited modifications to the Companies' Green Energy programs, including transferring the responsibility for purchasing renewable energy credits from the current vendor to the Companies themselves. The Commission is currently reviewing this request in Case No 2009-00467.

a \$25 fee, LG&E and KU will perform an on-site Residential Energy Audit, which 1 2 determines where energy is being used in the household and the most cost-effective ways to save. In 2009, over 650 on-site audits were completed for LG&E residential customers 3 and about 400 such audits were completed for KU residential customers. Beginning in 4 5 September 2009, customers can also participate at no fee in an on-line residential audit, in which the customer accesses the tool through the E.ON U.S. website and enters 6 7 information about the home and usage habits. The tool then utilizes the customer's actual historical energy usage and compiles a detailed report outlining the areas in which energy 8 9 savings are possible.

LG&E and KU also perform on-site Commercial Audits at no fee for eligible customers. In 2009, over 350 on-site commercial audits were completed for LG&E and over 400 on-site commercial audits were completed for KU customers. Along with a written report providing the details of the recommended energy conservation measures, the customer is also informed of Commercial Rebate Incentives available from LG&E and KU applicable to those recommended measures in the areas of lighting, refrigeration/cooling and pumps/motors.

17 The Companies also allow residential and small commercial customers to help 18 reduce system electric demand through the Demand Conservation direct load control 19 program. Customers can presently choose to have a control device placed on their central 20 air conditioning unit or heat pump. If customers elect to have a control device installed, 21 the Companies credit their monthly utility bill \$5 per month per air conditioner or heat 22 pump during the four summer months (June through September).⁶ Customers may also

⁶ Until recently customers also had the option of utilizing a free programmable thermostat which included a load control function. While customers using the programmable thermostat did not receive a bill credit, the thermostat,

choose to have a control device placed on their electric water heater and pool pump. The
 Companies credit their monthly utility bill \$2 per month during the four summer months
 for each of those devices. During 2009, approximately 69,000 LG&E and 48,000 KU
 customers participated in the Demand Conservation program.

5 Also, LG&E continues its use of the Responsive Pricing and Smart Metering Pilot Program, which is a three-year pilot program approved by the Commission in 2007. 6 7 Implementation began in January 2008 and continues through December 2010. The program allows 2,000 customers served under Residential and General Service Rates to 8 better understand and control their electricity usage through various types of equipment. 9 10 such as Smart Meters and programmable thermostats that can automatically reduce 11 electricity usage during peak hours. Also, In-Home Energy Use Displays and Time of 12 Use Rate allow customers to see, in real time, their electricity usage which provides 13 customers with the information necessary to better understand their energy consumption. 14 LG&E files annual reports to update the Commission on the status of the pilot program, 15 the most recent of which was filed on April 1, 2009. The next annual report will be filed 16 with the Commission on April 1, 2010. 17

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LG&E and KU also offer a high-efficiency lighting program to residential electric customers. The purpose of the program is to reduce energy use and demand by gaining customer acceptance and usage of high-efficiency lighting, primarily compact fluorescent

when programmed, would allow the customer to better manage energy consumption. In December 2009 the Companies halted installation of those programmable thermostats while they investigated a potential safety concern with the devices. Then, during the week of January 18, 2010, the Companies began replacing the existing programmable thermostats in customers' buildings as a proactive measure, even as the investigation into the thermostats continued. The replacement thermostats do not contain load control capabilities, but those affected customers will have the option to continue in the Demand Conservation program through installation of a control device on their air conditioning unit or heat pump. The Companies are currently investigating other options for reinstituting programmable thermostats with load control functionality as part of their Demand Conservation programs in the future.

light bulbs ("CFLs"). The program uses a combination of customer education, store and
 manufacturer coupons, and direct mail delivery of CFLs.

Also in place is an HVAC diagnostic and tune-up program targeted to residential 3 and small commercial customers. This program educates customers about the energy 4 efficiency gains possible when the HVAC unit is well-tuned and maintained, encourages 5 6 customers to conduct regular maintenance on the unit, provides a diagnostic inspection at a small fee to the customer, and then provides a network of qualified dealers who are 7 available to perform a tune-up if needed also for a small fee. These HVAC dealers, along 8 9 with dealers in the areas of lighting, insulation, windows, doors, duct work, motors, and pumps are also maintained on a Dealer Referral Network provided on the E.ON U.S. 10 website available to all customers. This list has been developed to provide additional 11 12 resources to customers who seek to make energy efficiency improvements but are not sure what dealers perform the type of work needed. 13

The Companies have taken significant steps toward improving the energy 14 15 efficiency of new homes being built in their service territories through the offering of a 16 New Residential ENERGY STAR Construction program. This program educates 17 builders and home buyers on the energy savings potential with building above required 18 building code to the ENERGY STAR level. The program also provides training and certification opportunities to Home Energy Rating System ("HERS") Raters, who are 19 needed to certify the efficiency of the newly built homes and provides incentives to offset 20 21 the cost associated with building to the ENERGY STAR level.

All of these energy efficiency programs are supported through a Customer Education and Public Information program, which seeks to educate consumers about the

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need for energy efficiency and provide meaningful tools by which to accomplish the goal of using energy more wisely.

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Low Income Customer Initiatives

Q. Do LG&E and KU offer any particular programs to assist low income customers?

5 A. Yes. For many years, the Companies have provided low income customers assistance in 6 addition to the programs and protections required by the Commission's regulations and 7 have worked with various low income customer advocacy groups to support the needs of 8 low income customers.

9 Q. Please describe programs aimed at assistance for low-income customers.

A. In recognition of many customers' difficulties in paying their utility bills LG&E and KU
have developed several initiatives to assist low-income customers. WeCare
(Weatherization, Conservation Advice and Recycling Energy) is an energy efficiency
program designed to create savings for low-income customers through energy education
and implementation of energy conservation measures. All WeCare participants receive
an energy audit of their home and an energy conservation educational session.

16LG&E's and KU's applications to extend the Home Energy Assistance ("HEA")17program for five years were granted by the Commission on September 14, 2008 in Case18No. 2007-00337 and in Case No. 2007-00338. HEA provides hardship assistance to low-19income customers through the collection of 15 cents per residential meter per month. In20order to participate, customers must be enrolled in the federal Low Income Home Energy21Assistance Program.

Additionally, LG&E and KU partner with other organizations to provide additional support. For example, LG&E participates in Community Winterhelp, a non-
profit corporation comprised of community ministries, which provides assistance to low-1 income individuals during the winter season. KU participates in the WinterCare Energy 2 Assistance Fund, a state-wide energy assistance fund supported privately by utilities and 3 community action agencies, that provides assistance to low-income persons with their 4 utility expenses during the winter season. Beginning November 1, 2009, LG&E and KU 5 will match all customer donations to Community Winterhelp and the WinterCare Energy 6 Assistance Fund at a match of \$1 dollar for every \$1 dollar given, which is four times the 7 8 traditional match. The increased match will last through March 31, 2010.

LG&E has also continued its involvement with Project Warm, an independent 9 non-profit organization that draws on community volunteers to "weatherize" the homes 10 11 of low-income, elderly and disabled persons in our service area during the annual "Winter Blitz". To date, more than 3,000 homes have been weatherized. Many LG&E 12 employees and their families participate each year. In addition, weatherization activities 13 also include free workshops designed to instruct customers on how to weatherize their 14 own homes, with all participants receiving a free weatherization kit. The workshops are 15 held in late fall at schools and community centers where our customers in need are 16 17 located in order to provide the weatherizing information before the onset of winter temperatures. Since 2005, KU, in conjunction with the Lexington Community Action 18 Council, has also participated in an annual "Winter Blitz," in which KU employees and 19 their family members weatherize the homes of low-income, elderly and disabled persons 20 in the service area.⁷ 21

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These and other customer offerings are described further in the testimony of Mr.

Wolfram.

⁷ In 2009, the "WinterBlitz" became the "CAC Repair Affair".

1 Q. Please briefly summarize your testimony.

A. Energy Delivery strives to provide excellent customer service while ensuring reliable electric and gas delivery. As a result of the investments that the Companies have made and the significant restoration efforts that were required by the severe weather events that impacted their service areas, the Companies' current rates no longer allow for a reasonable return on their investment. As such, an increase in base rates is needed at this time.

8 Q. Does this conclude your testimony?

9 A. Yes.

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VERIFICATION

COMMONWEALTH OF KENTUCKY) SS:) **COUNTY OF JEFFERSON**

The undersigned, Chris Hermann, being duly sworn, deposes and says that he is Senior Vice President, Energy Delivery for Kentucky Utilities Company and Louisville Gas and Electric Company and an employee of E.ON U.S. Services, Inc., and that he has personal knowledge of the matters set forth in the foregoing testimony, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.

Chris Hermann

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 22^{td} day of 2010.

Jamm f. Ely (SEAL)

My Commission Expires:

November 9, 2010

Appendix A

Chris Hermann Senior Vice President -- Energy Delivery E.ON U.S.

Current Major Accountabilities

- Business strategies and budgets that support E.ON U.S and E.ON financial and best practice targets.
- Natural gas and electric distribution operations focused on network enhancement, operation and maintenance.
- Service restoration and emergency operations that minimize adverse customer impact.
- Retail business and customer service functions, including metering, customer call center and business office operations, marketing, revenue collection and economic development.
- Real estate and right-of-way, facilities management, office services, corporate fleet and critical security operations.
- International electric distribution and gas transmission best practices for E.ON worldwide.

Previous Accountabilities

Chris began his career with Louisville Gas and Electric in 1966 as a college worker, returned for engineering co-op assignments through 1969, then joined LG&E in 1970 as a plant staff engineer. During his company career, Chris also has been responsible for generation, transmission, fuel procurement, plant construction, load dispatch, engineering services, supply chain, and business integration.

Present Civic Activities

- University of Louisville Speed Scientific School
 - o Chair Board Operating Sub-Committee 2009
 - Board of Industrial Advisors Chair 1993-1994
- Kentucky State Parks Foundation
 - o Board Member
 - o Chair Membership Committee
- Metro United Way
 - o Board of Directors
 - o Tocqueville Steering Committee
- Kentucky Chamber of Commerce
 - o Board Member
 - o Executive Committee,
 - o Vice Chair Administration
- Teach Kentucky Mentor

Professional/Trade Memberships

- Southern Gas Association Board Member.
- American Gas Association Board Member, Safety Task Force Board Member and Strategic Planning Committee Member.
- American Society of Mechanical Engineers.

Education

- University of Louisville, B.S. in Mechanical Engineering: 1970
- Duke University, Program for Management Development: 1991
- Harvard University, Program on Negotiations: 1994

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- Edison Electric Institute, Program on Senior Middle Management: 1995-1996
- E.ON Academy Executive Program Leading Corporate Transformation at Harvard University: 2003

Appendix B

Energy Delivery's Safety Awards and Recognition

<u>2009</u>

• Royal Society for the Prevention of Accidents Award for Occupational Safety – Distribution, Retail and Metering.

• Kentucky Gas Association Accident Prevention Award

• National Safety Council's Fleet Awards Program's "Significant Improvement Award" for fleet safety performance in 2009. This award recognizes fleets that have reduced their number of preventable accidents a minimum of 20%.

• Southern Gas Association Safety Achievement Award System, Regulation and Operations for completing 15 years without a lost workday injury.

• The American Gas Association's Leader Accident Prevention Award for achieving a total DART incident rate below the industry average for 2008 in the category of Medium Combination Companies.

• Governor Steve Beshear appointed Ken Sheridan, Manger, Safety and Technical Training, to a second term on the Kentucky Apprenticeship and Training Council.

<u>2008</u>

• Royal Society for the Prevention of Accidents Award for Occupational Safety – Distribution, Retail and Metering.

• Pineville Substation and Maintenance Group worked 250,000 employee hours with no lost time. Governor's award presentation was made by the Deputy Secretary of labor.

• Gas Distribution and Maintenance – Southern Gas Association Safety Award for 500,000 employee hours with no lost time.

• The Center Storage – Southern Gas Association Safety Award for 25 years without a lost time incident.

• Central Substation received EEI Safety Achievement Award for completing more than one million hours without a lost workday.

• 2007 American Gas Association Safety Achievement Award for attaining the lowest DART incident rate among large sized, combination energy companies.

• KGA Accident Prevention Award for companies with more than 150 employees. The award is for the lowest work day rate.

<u>2007</u>

• Royal Society for the Prevention of Accidents (RoSPA) Gold Award for Occupational Safety, Distribution Operations.

• Royal Society for the Prevention of Accidents (RoSPA) Gold Award for Occupational Safety, Retail Business.

• Royal Society for the Prevention of Accidents (RoSPA) Gold Award for Occupational Safety, Retail Metering.

• EEI Award for Substation Field Operations – over 1.4 million hours worked without a lost time injury. The last lost-time injury was logged nearly 50 years ago.

- EEI Award for Retail Metering 2 million hours worked without lost-time incident.
- EEI Award for LG&E Field Service 1 million hours worked without lost-time incident.
- EEI Award for KU Field Service 500,000 work hours without lost-time Incident.
- Earlington Operations completed five years without lost time incident.
- American Gas Association industry leader accident prevention certificate.
- Earlington Substation completed five years without any recordables.

• EEI Safety Achievement Award for Louisville Distribution Control - 250,000 hours without a lost time incident.

• EEI Safety Achievement Award for Downtown Network – 250,000 hours without a lost time incident.

- KGA Accident Prevention Award for Excellence and Safety for 2006.
- MEA Accident Prevent Award Winner.

• Kentucky Governor's Health and Safety for working 250,000 hours without a lost time recordable injury at Muldraugh.

• EEI award for the Pineville SCM – 250,000 hours without a lost time recordable injury.