

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

In the Matter of:

JOINT APPLICATION OF LOUISVILLE GAS AND)	
ELECTRIC COMPANY AND KENTUCKY UTILITIES)	
COMPANY FOR REVIEW, MODIFICATION, AND)	CASE NO.
CONTINUATION OF EXISTING, AND ADDITION OF)	2014-00003
NEW, DEMAND-SIDE MANAGEMENT AND ENERGY)	
EFFICIENCY PROGRAMS)	

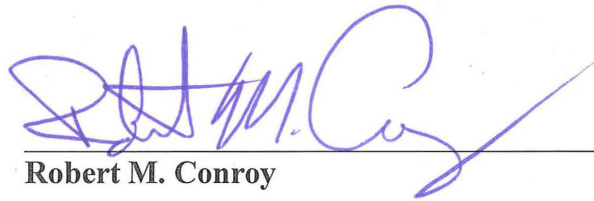
**RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
AND KENTUCKY UTILITIES COMPANY
TO WALLACE MCMULLEN AND SIERRA CLUB'S INITIAL REQUEST FOR
INFORMATION
DATED FEBRUARY 17, 2014**

FILED: MARCH 12, 2014


VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Robert M. Conroy**, being duly sworn, deposes and says that he is Director - Rates for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.


Robert M. Conroy

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 3rd day of March 2014.


Notary Public (SEAL)

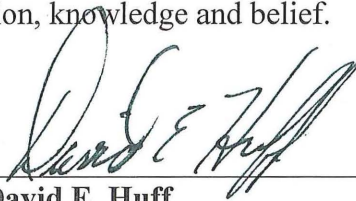
My Commission Expires:

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

VERIFICATION

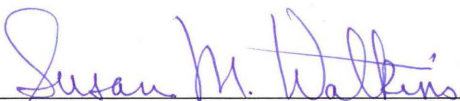
COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **David E. Huff**, being duly sworn, deposes and says that he is Director of Customer Energy Efficiency & Smart Grid Strategy for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and that the answers contained therein are true and correct to the best of his information, knowledge and belief.



David E. Huff

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 3rd day of March 2014.

 (SEAL)

Notary Public

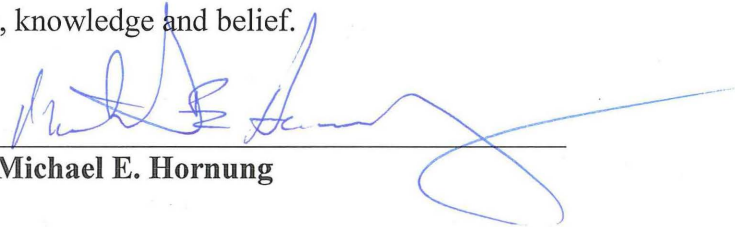
My Commission Expires:

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

VERIFICATION


COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Michael E. Hornung**, being duly sworn, deposes and says that he is Manager of Energy Efficiency Planning & Development for LG&E and KU Services Company, and that he has personal knowledge of the matters set forth in the responses for which he is identified as the witness, and the answers contained therein are true and correct to the best of his information, knowledge and belief.



Michael E. Hornung

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 3rd day of March 2014.



Notary Public (SEAL)

My Commission Expires:

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

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014**

Case No. 2014-00003

Question No. 1

Witness: Robert M. Conroy

- Q-1. Produce all discovery responses to any other party in this proceeding.
- A-1. All responses are electronically filed with the Kentucky Public Service Commission in accordance with the electronic filing procedures set forth in 807 KAR 5:001, Section 8 and all parties of record receive notice of such electronic filing.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

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Case No. 2014-00003

Question No. 2

Witness: Michael E. Hornung

- Q-2. Refer to the Application, page 9, paragraph 18. With regards to the projected cumulative energy and demand savings of 1.6 million MWh and 500 MW, respectively, by 2018 referenced therein:
- a. Express the 1.6 million MWh in energy savings as a percentage of forecasted 2018 retails sales.
 - b. Explain how the projected amount of cumulative energy and demand savings by 2018 in the Proposed DSM/EE Program Plan compares with the Company respectively, by 2018 referenced therein: and savings by 2018 as contained in the Program Plan approved by the Commission in Case No. 2011-00134. If this is represented in the tables presented on page 3 of the Direct Testimony of Michael Hornung, stating so is a sufficient response.
 - c. Explain how the projected amount of incremental energy and demand savings in 2015-2018 in the Proposed DSM/EE Program Plan compares with the Company's projections of incremental energy and demand savings in 2015- 2018 as contained in the Program Plan approved by the Commission in Case No. 2011-00134.
- A-2.
- a. 4.70% reflects 1,624,929 MWh of cumulative energy savings as a percentage of 2018 retail sales of 34,692,935 MWh.
 - b. This is represented on page 13 of the Direct Testimony of Michael E. Hornung.
 - c. Page 15 of Exhibit MEH-1 of Direct Testimony of Michael E. Hornung outlines the comparison of Commission Case No. 2011-00134 to Case No. 2014-00003 energy and demand savings.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Case No. 2014-00003

Question No. 3

Witness: Michael E. Hornung

- Q-3. Refer to the Direct Testimony of Michael Hornung at page 4 line 22 to page 5 line 3. With regards to the 650 GWh of cumulative energy savings referenced therein:
- a. Express 650 GWh in cumulative energy savings as a percentage of retail sales (through Nov. 2013).
 - b. Identify over what time period such savings has been achieved.
 - c. For each year of that time period, identify the incremental energy savings achieved in MWH and as a percentage of retail sales.
 - d. For each year of that time period, identify the Companies' spending on energy efficiency.
- A-3.
- a. The 650 GWh in cumulative energy savings as a percentage of retail sales through November 2013 is 0.16%.
 - b. The 650 GWh of energy savings is cumulative of both Companies' DSM/EE efforts since 1994.
 - c. Please see attachment.
 - d. Please see attachment.

(c)

Percentage of Energy Savings to Retail Sales	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013*	Total
GWh	7	3	5	6	7	6	5	7	44	118	155	121	167	650
Retail Sales	29,843	31,347	30,986	31,895	33,282	32,639	34,301	33,273	31,665	34,276	32,803	32,794	30,096	419,203
Percentage of Retail Sales	0.024%	0.009%	0.016%	0.017%	0.020%	0.019%	0.014%	0.020%	0.140%	0.344%	0.473%	0.369%	0.555%	0.16%

(d)

Actual Expense (\$000's)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013*	Total
DSM/EE Programs	\$2,184	\$4,058	\$6,758	\$7,768	\$7,747	\$8,461	\$8,989	\$10,630	\$21,489	\$22,024	\$24,802	\$27,555	\$35,171	\$187,636

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Question No. 4

Witness: Michael E. Hornung

- Q-4. Refer to the Direct Testimony of Michael Hornung at page 4 line 22 to page 5 line 3. With regards to the cumulative demand reduction of 331MW referenced therein:
- a. Identify the cumulative percent demand reduction that the Companies have achieved through November 2013.
 - b. Identify over what time period the 331 MW in demand reduction has been achieved
 - c. For each year of that time period, identify the percent of incremental demand reduction achieved.
 - d. State whether the 331MW cumulative demand reduction is only from energy efficiency programs, or whether it also includes the impact of demand response programs.
 - e. Identify the level of cumulative demand reduction the Companies have achieved through demand response programs through November 2013.
- A-4.
- a. The 331 MW in cumulative demand reduction as a percentage of retail sales through November 2013 is 5.14%.
 - b. From 2001 through November 2013.
 - c. Please see attachment.
 - d. The 331 MW reduction includes both energy efficiency and demand response programs. The demand response programs account for 208 MW while the energy efficiency programs make up the remaining 123 MW.
 - e. The Companies have achieved a total of 205 MW demand reduction through November 2013 from its demand response programs since 2001.

(c)

Percentage Demand Reduction per Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013*
Demand Reduced from DSM/EE Programs	3	9	24	24	31	22	11	9	20	29	42	41	65
Total Demand	6,221	6,513	6,393	6,223	6,833	6,863	7,132	6,357	6,555	7,175	6,756	6,856	6,434
Percent of Total Demand	0.05%	0.14%	0.38%	0.38%	0.46%	0.32%	0.16%	0.13%	0.31%	0.40%	0.62%	0.60%	1.01%

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014**

Case No. 2014-00003

Question No. 5

Witness: Michael E. Hornung

- Q-5. Refer to the Direct Testimony of Michael Hornung at page 7 lines 19 to 20. Identify each of the recommendations presented in the Program Review that have not been incorporated in the Proposed DSM/EE Program Plan. For each such recommendation, explain why it was not incorporated.
- A-5. Please refer to KPSC 1-37 through KPSC 1-42.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Case No. 2014-00003

Question No. 6

Witness: Michael E. Hornung

Q-6. Refer to the Direct Testimony of Michael Hornung at page 13. With regards to the projected incremental energy savings identified therein for each of the years 2015 through 2018, express the savings for each year as a percentage of retail sales.

A-6.

Year	Incremental Energy Savings (MWh)	Retail Sales (MWh)	Savings as % of Retail Sales
2015	196,115	34,096,431	0.575%
2016	196,678	34,269,878	0.574%
2017	199,165	34,420,725	0.579%
2018	200,261	34,692,935	0.577%

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014**

Case No. 2014-00003

Question No. 7

Witness: Michael E. Hornung

Q-7. Refer to the Direct Testimony of Michael Hornung at page 13. With regards to the projected incremental demand reduction identified therein for each of the years 2015 through 2018, identify the incremental percent demand reduction for each of those years.

A-7.

Year	Incremental Demand Savings (MW)	Combined System Peak Load (MW)	Incremental as % of Combined System Peak
2015	59	7,426	0.795%
2016	57	7,509	0.759%
2017	58	7,597	0.763%
2018	58	7,696	0.754%

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club’s Initial Request for Information
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Question No. 8

Witness: Michael E. Hornung / Counsel

- Q-8. Refer to the Direct Testimony of Michael Hornung at page 14. With regards to the annual portfolio budget identified therein:
- a. Explain why the budget for 2015 proposed in the present filing is approximately \$3.6 million less than the budget approved for 2015 in case number 2011-00134
 - b. Identify what percent of the Companies’ annual revenue for each of the years 2015 through 2018 is the total portfolio budget for each of those years in the proposed 2015-2018 Program Plan.

A-8.

- a. Funds from Year 4 of Case No. 2011-00134 will be used in 2014 for the following programs: Residential High Efficiency Lighting, Residential New Construction, Residential and Commercial HVAC Diagnostic and Tune-Up and Dealer Referral Network. Additionally, the Companies are requesting additional funds for 2015 for the following programs: Residential Incentives, Customer Education & Public Information, and Commercial Load Management. A summary of the variance in Year 4 costs of Case No. 2011-00134 compared to proposed 2015 costs in Case No. 2014-00003 can be found below.

	Case #2011-00134 Year 4 Costs	Proposed 2015 costs per Case #2014-00003	Variance
Residential Incentives	\$2,683,275	\$4,108,275	\$1,425,000
Customer Education & Public Information	\$3,866,156	\$4,043,146	\$176,990
Commercial Load Management	\$647,286	\$1,576,604	\$929,318
Residential High Efficiency Lighting	\$3,543,481	-	(\$3,543,481)
Residential New Construction	\$1,401,685	-	(\$1,401,685)
Residential HVAC Diagnostic and Tune-Up	\$537,642	-	(\$537,642)
Commercial HVAC Diagnostic and Tune-Up	\$512,048	-	(\$512,048)
Dealer Referral Network	\$163,346	-	(\$163,346)
Total	\$13,354,919	\$9,728,025	(\$3,626,894)

- b. The Companies object to this request as irrelevant. The Companies do not set DSM rates based on percentages of internal budgets for total utility operations, and do not establish budgets for DSM programs to be certain percentages of total utility budgets. The Companies do not propose or refrain from proposing DSM programs or modifications thereto based on total utility budgets. And the relationship between the proposed DSM budgets for 2015-18 and the Companies' internal budgets for total utility operations for those years bears no relation at all to any of the statutory criteria the Commission must consider when evaluating DSM proposals. The requested information is therefore completely irrelevant to the matters under consideration in this proceeding.

The Commission has sustained utilities' objections to requests for utility budgets when the requested information will have no bearing on relevant matters in a proceeding. *See, e.g., In the Matter of: Adjustment of Gas and Electric Rates of Louisville Gas and Electric Company*, Case No. 90-158, Order at 3 (Sept. 21, 1990) ("Inquiries into LG&E's budgeting process, and the basis for projecting revenues and expenses, are all highly complex areas that bear no relevancy to the task in this rate case – the normalization of an historic test year and the analysis of known and measurable pro forma adjustments."). Although the Companies' DSM rates are annually based in part on projected program expenditures, those projections simply are not established as percentages of the Companies' internal budgets for total utility operations, and are therefore equally as irrelevant to this proceeding as budgets were to evaluating an historic test year in Case No. 90-158.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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**Response to Wallace McMullen and Sierra Club's Initial Request for Information
February 17, 2014**

Case No. 2014-00003

Question No. 9

Witness: Michael E. Hornung

Q-9. Refer to the Direct Testimony of Michael Hornung at page 19. With regards to the Commercial Conservation/Commercial Incentives Program, for each year since program approval in Case No. 2011-00134, please state how many on-site commercial audits were completed.

A-9.

	2012	2013
On-site Commercial Audits Completed	888	845

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Question No. 10

Witness: Michael E. Hornung

- Q-10. Refer to the Direct Testimony of Michael Hornung at page 22, line 5 through page 23, line 10. With regards to the addition of a multi-family property incentive tier structure:
- a. Please quantify the projected energy saving in the multi-family environment in each year, 2015-2018.
 - b. Please provide a breakdown of participation in each year (2015-2018) by single family and multi-family customers.
 - c. Please explain why the proposed program modification will not result in additional energy or demand reductions.
- A-10.
- a. There are no assumptions made on the breakout of projected energy savings in the multi-family environment versus the single-family environment.
 - b. There are no participation breakdown assumptions on single-family versus multi-family customers.
 - c. With the new modifications proposed, the average savings expected for a customer were not changed. In the original proposal, each customer was expected to achieve an additional 13% in weighted-average energy savings. This percentage was maintained in the new tier structure to keep the total incentive and participant costs consistent.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Case No. 2014-00003

Question No. 11

Witness: Michael E. Hornung

- Q-11. Refer to Exhibit MEH-1, at page 8. Explain how the reference therein that “available energy efficiency will be exhausted by 2020 given current technologies” is consistent with the statement at page 6 lines 17-19 of the Direct Testimony of Michael Hornung that the Companies are “on track to exhaust their achievable energy efficiency potential by 2018.”
- A-11. The potential study did not incorporate 2013 actual DSM/EE performance due to timing and length of the work process. In the potential study on page 46, Table 38 indicates that 1,060,217 MWh of discretionary electric potential is projected for the 20-year study and is projected to be exhausted by 2020. 2013 DSM/EE actual performance exceeded targets and the potential indicated in the study is expected to be exhausted sooner.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Question No. 12

Witness: Michael E. Hornung

Q-12. Refer to Exhibit MEH-1 at page 12. With regards to the DSMore modeling carried out for the Proposed DSM/EE Program Plan:

- a. Produce the DSMore modeling files, include all inputs and outputs, and workpapers (in machine-readable format with formulas intact) for all DSM modeling
- b. Identify the assumed value for each of following costs used in the DSMore modeling and specify the unit of its measure (e.g., \$/MWh, \$/MW, \$/ton, etc.):
 - i. Marginal energy cost
 - ii. Marginal generation capacity cost
 - iii. Marginal transmission & distribution capacity cost
 - iv. Fossil fuel cost
 - v. Environmental capacity cost
 - vi. Carbon price
 - vii. SO₂ allowance price
 - viii. NO_x allowance price

A-12.

- a. The Companies do not own the DSMore model, but rather use it under license. Therefore, they cannot provide the DSMore model itself in response to this request.

Please see the Companies' responses to KPSC 1-31 and 1-33, which contain the program-specific inputs and outputs of the DSMore modeling.

- b. The values used in the DSMore modeling are as follows.
 - i. Please see attachment. Avoided energy costs are represented in \$/kWh.
 - ii. Avoided capacity cost used in the energy efficiency potential study was \$100/kW-yr.
 - iii. Transmission and distribution capacity costs are pieces of avoided energy costs used in the model and are not available as separate values.

- iv. Coal prices are a piece of avoided energy costs used in the model and are not available as a separate value. Please see attachment for natural gas prices in \$/Therm.
- v. The Company does not utilize an “Environmental Capacity Cost”.
- vi. The carbon price imbedded within the avoided energy costs is \$0.
- vii. The SO₂ price imbedded within the avoided energy costs is \$1/ton.
- viii. The NO_x prices imbedded within the avoided energy costs \$50/ton for annual allowances and \$20/ton for ozone allowances. Ozone allowance prices are incremental to annual allowance prices during the ozone season.

Avoided Energy Costs
\$/kWh

	Winter				Spring			
	Weekday		Weekend		Weekday		Weekend	
	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak
2014	\$0.0272	\$0.0294	\$0.0271	\$0.0283	\$0.0274	\$0.0313	\$0.0265	\$0.0292
2015	\$0.0296	\$0.0321	\$0.0295	\$0.0304	\$0.0290	\$0.0344	\$0.0274	\$0.0308
2016	\$0.0317	\$0.0346	\$0.0312	\$0.0328	\$0.0313	\$0.0360	\$0.0300	\$0.0333
2017	\$0.0338	\$0.0360	\$0.0336	\$0.0345	\$0.0331	\$0.0376	\$0.0320	\$0.0354
2018	\$0.0351	\$0.0370	\$0.0345	\$0.0357	\$0.0335	\$0.0377	\$0.0323	\$0.0355
2019	\$0.0350	\$0.0369	\$0.0350	\$0.0357	\$0.0335	\$0.0384	\$0.0319	\$0.0360
2020	\$0.0368	\$0.0385	\$0.0367	\$0.0372	\$0.0348	\$0.0398	\$0.0339	\$0.0367
2021	\$0.0381	\$0.0393	\$0.0383	\$0.0389	\$0.0368	\$0.0419	\$0.0363	\$0.0388
2022	\$0.0398	\$0.0413	\$0.0396	\$0.0402	\$0.0389	\$0.0430	\$0.0384	\$0.0402
2023	\$0.0396	\$0.0418	\$0.0394	\$0.0405	\$0.0388	\$0.0433	\$0.0383	\$0.0401
2024	\$0.0407	\$0.0434	\$0.0402	\$0.0412	\$0.0399	\$0.0450	\$0.0394	\$0.0415
2025	\$0.0425	\$0.0455	\$0.0420	\$0.0432	\$0.0418	\$0.0459	\$0.0407	\$0.0426
2026	\$0.0455	\$0.0478	\$0.0449	\$0.0459	\$0.0447	\$0.0482	\$0.0442	\$0.0458
2027	\$0.0468	\$0.0493	\$0.0466	\$0.0476	\$0.0456	\$0.0495	\$0.0449	\$0.0471
2028	\$0.0513	\$0.0522	\$0.0510	\$0.0523	\$0.0501	\$0.0541	\$0.0497	\$0.0517
2029	\$0.0521	\$0.0542	\$0.0518	\$0.0531	\$0.0510	\$0.0552	\$0.0505	\$0.0525
2030	\$0.0550	\$0.0567	\$0.0546	\$0.0555	\$0.0538	\$0.0576	\$0.0533	\$0.0553
2031	\$0.0559	\$0.0582	\$0.0555	\$0.0571	\$0.0553	\$0.0608	\$0.0543	\$0.0562
2032	\$0.0562	\$0.0605	\$0.0554	\$0.0570	\$0.0550	\$0.0594	\$0.0540	\$0.0565
2033	\$0.0576	\$0.0614	\$0.0568	\$0.0594	\$0.0566	\$0.0621	\$0.0556	\$0.0584

	Summer				Autumn			
	Weekday		Weekend		Weekday		Weekend	
	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak	Off-peak	Peak
2014	\$0.0270	\$0.0321	\$0.0268	\$0.0296	\$0.0284	\$0.0310	\$0.0278	\$0.0292
2015	\$0.0290	\$0.0362	\$0.0277	\$0.0319	\$0.0301	\$0.0336	\$0.0292	\$0.0314
2016	\$0.0321	\$0.0377	\$0.0304	\$0.0346	\$0.0324	\$0.0352	\$0.0315	\$0.0336
2017	\$0.0337	\$0.0392	\$0.0319	\$0.0360	\$0.0339	\$0.0360	\$0.0336	\$0.0350
2018	\$0.0333	\$0.0394	\$0.0321	\$0.0362	\$0.0338	\$0.0366	\$0.0335	\$0.0352
2019	\$0.0340	\$0.0403	\$0.0329	\$0.0372	\$0.0361	\$0.0384	\$0.0357	\$0.0372
2020	\$0.0356	\$0.0426	\$0.0346	\$0.0386	\$0.0364	\$0.0386	\$0.0364	\$0.0372
2021	\$0.0375	\$0.0444	\$0.0370	\$0.0399	\$0.0389	\$0.0415	\$0.0381	\$0.0396
2022	\$0.0391	\$0.0469	\$0.0388	\$0.0418	\$0.0397	\$0.0417	\$0.0398	\$0.0405
2023	\$0.0394	\$0.0480	\$0.0388	\$0.0426	\$0.0398	\$0.0433	\$0.0394	\$0.0410
2024	\$0.0408	\$0.0510	\$0.0399	\$0.0438	\$0.0407	\$0.0436	\$0.0404	\$0.0420
2025	\$0.0423	\$0.0497	\$0.0417	\$0.0446	\$0.0426	\$0.0466	\$0.0421	\$0.0443
2026	\$0.0453	\$0.0529	\$0.0447	\$0.0473	\$0.0455	\$0.0478	\$0.0449	\$0.0466
2027	\$0.0464	\$0.0542	\$0.0459	\$0.0491	\$0.0469	\$0.0512	\$0.0466	\$0.0492
2028	\$0.0508	\$0.0599	\$0.0506	\$0.0536	\$0.0511	\$0.0542	\$0.0507	\$0.0527
2029	\$0.0518	\$0.0626	\$0.0510	\$0.0544	\$0.0522	\$0.0556	\$0.0512	\$0.0532
2030	\$0.0547	\$0.0660	\$0.0542	\$0.0597	\$0.0551	\$0.0580	\$0.0547	\$0.0560
2031	\$0.0558	\$0.0670	\$0.0552	\$0.0596	\$0.0564	\$0.0600	\$0.0558	\$0.0578
2032	\$0.0565	\$0.0654	\$0.0551	\$0.0594	\$0.0563	\$0.0600	\$0.0559	\$0.0582
2033	\$0.0577	\$0.0680	\$0.0571	\$0.0608	\$0.0584	\$0.0639	\$0.0558	\$0.0592

Natural Gas Prices
\$/Therm

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2014	\$0.451	\$0.449	\$0.442	\$0.426	\$0.428	\$0.431	\$0.434	\$0.436	\$0.437	\$0.440	\$0.449	\$0.469
2015	\$0.472	\$0.470	\$0.463	\$0.447	\$0.448	\$0.451	\$0.455	\$0.457	\$0.457	\$0.461	\$0.471	\$0.491
2016	\$0.477	\$0.475	\$0.468	\$0.451	\$0.453	\$0.456	\$0.460	\$0.462	\$0.462	\$0.466	\$0.476	\$0.496
2017	\$0.489	\$0.487	\$0.480	\$0.463	\$0.465	\$0.468	\$0.472	\$0.474	\$0.474	\$0.478	\$0.488	\$0.509
2018	\$0.504	\$0.502	\$0.494	\$0.477	\$0.479	\$0.481	\$0.486	\$0.488	\$0.488	\$0.492	\$0.502	\$0.524
2019	\$0.527	\$0.525	\$0.517	\$0.499	\$0.501	\$0.504	\$0.508	\$0.511	\$0.511	\$0.515	\$0.526	\$0.548
2020	\$0.551	\$0.548	\$0.540	\$0.521	\$0.523	\$0.526	\$0.531	\$0.533	\$0.534	\$0.538	\$0.549	\$0.573
2021	\$0.590	\$0.587	\$0.578	\$0.558	\$0.560	\$0.563	\$0.568	\$0.571	\$0.571	\$0.576	\$0.588	\$0.613
2022	\$0.636	\$0.633	\$0.623	\$0.601	\$0.604	\$0.607	\$0.613	\$0.615	\$0.616	\$0.621	\$0.634	\$0.661
2023	\$0.672	\$0.670	\$0.659	\$0.636	\$0.639	\$0.643	\$0.648	\$0.651	\$0.651	\$0.657	\$0.671	\$0.699
2024	\$0.703	\$0.700	\$0.690	\$0.665	\$0.668	\$0.672	\$0.678	\$0.681	\$0.681	\$0.687	\$0.701	\$0.731
2025	\$0.739	\$0.736	\$0.725	\$0.699	\$0.702	\$0.706	\$0.712	\$0.715	\$0.716	\$0.722	\$0.737	\$0.768
2026	\$0.772	\$0.769	\$0.758	\$0.731	\$0.734	\$0.738	\$0.745	\$0.748	\$0.748	\$0.755	\$0.771	\$0.803
2027	\$0.810	\$0.807	\$0.795	\$0.767	\$0.770	\$0.774	\$0.781	\$0.785	\$0.785	\$0.792	\$0.808	\$0.843
2028	\$0.840	\$0.836	\$0.824	\$0.795	\$0.798	\$0.803	\$0.810	\$0.813	\$0.814	\$0.821	\$0.838	\$0.874
2029	\$0.876	\$0.872	\$0.859	\$0.828	\$0.832	\$0.837	\$0.844	\$0.848	\$0.848	\$0.855	\$0.873	\$0.911
2030	\$0.914	\$0.911	\$0.897	\$0.865	\$0.869	\$0.874	\$0.882	\$0.885	\$0.886	\$0.893	\$0.912	\$0.951
2031	\$0.955	\$0.951	\$0.937	\$0.904	\$0.908	\$0.913	\$0.921	\$0.925	\$0.926	\$0.933	\$0.953	\$0.994
2032	\$1.002	\$0.998	\$0.983	\$0.948	\$0.952	\$0.958	\$0.966	\$0.971	\$0.971	\$0.979	\$1.000	\$1.043
2033	\$1.041	\$1.037	\$1.021	\$0.985	\$0.989	\$0.995	\$1.004	\$1.008	\$1.009	\$1.017	\$1.039	\$1.083

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014**

Case No. 2014-00003

Question No. 13

Witness: Michael E. Hornung

Q-13. Refer to Exhibit MEH-1 at page 12. For each of the Companies' existing DSM programs, produce the Companies' most recent EM&V report or assessment.

A-13. Please see the response to KPSC 1-24.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014**

Case No. 2014-00003

Question No. 14

Witness: Michael E. Hornung

- Q-14. Refer to Exhibit MEH-1 at page 21. Explain why the small commercial program goals were reduced to allow for increased focus on the large commercial program, rather than increasing the focus on both the small and large commercial programs.
- A-14. The small commercial program has been available since 2001 and has produced approximately 4 MW of demand reduction. Small commercial customers can still participate in the program as it has historically been available. The large commercial program has provided 10 MW of demand reduction in two years of operation. Due to the success of the program in the short timeframe, more focus will be placed on the large commercial program.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014**

Case No. 2014-00003

Question No. 15

Witness: Michael E. Hornung

- Q-15. Refer to Exhibit MEH-1 at pages 52-3. With regards to the proposal to allow the Residential High Efficiency Lighting program to expire:
- a. Identify and produce all studies, analyses, or documents regarding whether the Residential High Efficiency Lighting could provide additional cost-effective energy savings beyond 2014
 - b. Identify and produce all studies, analyses, or documents supporting the Companies' proposal to allow the Residential High Efficiency Lighting program to expire.
 - c. Referring to page 52, please identify the date(s) when the evaluation of the direct mail and coupon methods was conducted. Please state whether the Company has explored other marketing approaches for CFLs since that time. If so, please identify such approaches.
 - d. Identify the residential socket saturation rate for CFLs in LG&E and KU's service territories.
- A-15.
- a. Please see the response to KPSC 1-24.
 - b. Please see Exhibit MEH-2, page 17 in the Direct Testimony of Michael E. Hornung in this proceeding.
 - c. The direct mail and coupon methods were used and evaluated in 2010. Since then, the Companies have explored and implemented the following marketing approaches: a customer "opt-in" feature for future CFL campaigns; more robust Residential High Efficiency Lighting webpage; inclusion in social media; and exposure through the Companies' television-based mass-media efforts.
 - d. Based on a residential-customer survey conducted by Navigant, saturation levels for homes with roughly 40 sockets are approximately 20 and 15 percent for LG&E and KU, respectively.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014**

Case No. 2014-00003

Question No. 16

Witness: Michael E. Hornung

- Q-16. With regards to the selection of the Cadmus Group as the consultant who performed the Potential Study and the Program Review:
- a. Explain the process used to select the Cadmus Group
 - b. Produce any request for proposals that the Companies issued
 - c. Produce any proposals received in response to such request for proposals
 - d. Produce any contract between Cadmus Group and the Companies for the work leading to the Potential Study and Program Review
 - e. Explain what the role of EHI Consultants was in the Potential Study and Program Review
- A-16.
- a. A request for proposal ("RFP") was issued to nine companies on May 25, 2012. The RFP responses were evaluated by a team designated by the Companies' management team. The team scored RFP responses based on pricing, evaluation process, reporting, experience, and references. After review and the team reached an agreement, an award recommendation was prepared and presented to senior management for approval.
 - b. Please see attachment.
 - c. Please see attachments. The information requested is confidential and proprietary, and is being provided under seal pursuant to a petition for confidential treatment.
 - d. Please see attachment. The information requested is confidential and proprietary, and is being provided under seal pursuant to a petition for confidential treatment.
 - e. EHI Consultants was selected by Cadmus Group to survey residential customers. Residential customers were randomly selected and to assess awareness, perceptions,

factors affecting program participation, equipment in home, and other household information.



PPL companies

LG&E AND KU SERVICES COMPANY

Request for Proposal

#3447

Energy Efficiency Potential Study

CONFIDENTIAL INFORMATION

This document, including any exhibits or attachments, is solely for use by employees of LG&E and KU Services Company and affiliates and those employees or agents of suppliers invited to submit Proposals with a need to know. Not to be disclosed to or used by any other person without the express written consent of LG&E and KU Services Company

Issued By:

**LG&E and KU Services Company
820 West Broadway
Louisville, Kentucky 40202**

Issue Date:

May 25, 2012

Proposal Due Date:

June 22, 2012

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Enclosure: Black Address Label

Attachment A	Conditions of Bid
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Attachment E	Bid Clarifications and Exceptions
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Exhibit 1	Sample Contract
Exhibit 2	Company Administrative Services Agreement and Contractor Code of Business Conduct

1 INTRODUCTION

1.1 Corporate Overview

LG&E and KU Energy LLC, headquartered in Louisville, Ky., is a diversified energy services company that is a member of the PPL (NYSE: PPL) family of companies. LG&E and KU Energy LLC owns and operates Louisville Gas and Electric Company (LG&E), a regulated utility that serves approximately 321,000 natural gas and 397,000 electric customers in Louisville and 16 surrounding counties, and Kentucky Utilities Company (KU), a regulated electric utility in Lexington, Ky., that serves approximately 546,000 customers in 77 Kentucky counties and five counties in Virginia. LG&E and KU Services Company, a subsidiary of LG&E and KU Energy LLC provides support functions for LG&E and KU. *More information is available at www.lge-ku.com and www.pplweb.com.*

1.2 RFP Goals and Project Overview

Louisville Gas and Electric Company (“LG&E”) and Kentucky Utilities Company (“KU”) (collectively “Company”) are seeking proposals from a third-party contractor for technical and analytical consulting services to provide an **Energy Efficiency Potential Study** to Company.

The goal of this Request for Proposal (RFP) is to offer a contract to a bidder(s) that can best meet or exceed the requirements of the scope of work at the highest quality standards and at the most competitive price.

The study objective is to develop a comprehensive quantitative assessment of energy efficiency potential in Company’s service territory. The study should consider the technical, economic, achievable, programmatic, and naturally occurring energy efficiency potential for 2014-2033 and focus on all residential and commercial electric and natural gas metered customers. The study should provide details for LG&E and KU energy efficiency potential separately and collectively.

1.3 Timetable

The following scheduled events are tentative for this bid. Company reserves the right to change the schedule at any time without notice.

May 25, 2012	RFP Issued
June 14, 2012	All questions due via email by 5:00 pm EST
June 18, 2012	All questions answered and provided to all participants
June 19, 2012	Conference call to address responses to bidder questions
June 22, 2012	Proposal returned by 5:00 pm EST

The successful bidder(s) shall be required to provide all services described in Section 2.

1.4 Confidentiality

This RFP is confidential and for the sole use of each bidder's preparation of a Proposal. By bidder's acceptance hereof, supplier agrees:

- Not to disclose, copy or distribute this RFP in whole or in part to persons other than bidder's employees and agents who are authorized by nature of their duties to receive such information
- To return any Company confidential or proprietary materials upon Company's request.
- Not to use any information in this RFP or any other materials related to the business affairs or procedures of Company and of its affiliates for bidder's advantage, other than in performance of this RFP
- Bidders who intend to use subcontractors will be required to have such subcontractors execute non-disclosure agreements prior to work being done by subcontractor
- Bidders who seek to negotiate possible sub-contract arrangements with Company's existing subcontractors will be held accountable for any breach of the non-disclosure agreements that they have signed with Company

1.5 Disclaimer

This RFP is not an offer to enter into a contract but is merely a request for the bidder to submit information. Expenses incurred in responding to this request are the responsibility of the bidder. All materials submitted become the property of Company. Company reserves the right to modify, reject or use without limitation any or all of the ideas from submitted information. Company reserves the right to discontinue the RFP process at any time for any reason whatsoever. The bidder's response to this RFP may become part of the final purchase order if awarded. Wherever there is a conflict between bidder's responses to this RFP and the terms and conditions contained in any purchase order subsequently entered into by the parties, the terms and conditions of the purchase order shall prevail. Company has no obligation to disclose the results of the RFP process or to disclose why particular bidder(s) were selected to participate in the contract process.

1.6 Duration of Offer

Proposals must be valid for a minimum of 90 days following the submission of this RFP.

1.7 Response Instructions

All Proposals must contain a table of contents delineating responses to each section. Proposals must be organized to include all responses including attachments as outlined in Section 3. Each section of your response must contain all items in the sequence identified. An authorized official must sign Proposals. The Proposal must also provide the names, titles, phone numbers, and email addresses of those individuals with authority to negotiate and contractually bind the company. Company may use this information to obtain clarification of information provided. Please provide:

1. Notify Company immediately if you are unable to open the RFP contents or they appear incomplete.
2. All responses to this RFP must correspond with the sequence outlined in section 3, which includes attachments.
3. Three (3) hard copies, unbound and one (1) electronic copy (in a format that can be edited, on CD-ROM, and in a MS Office application (Word/Excel/PowerPoint)) of the response in the sequence outlined shall be submitted. With the exception of insurance certificates, .PDF files are not acceptable. Please keep the number of files on the electronic copy to a minimum, preferably only one (1) for ease of distribution to the evaluation committee. Where practical, please combine files from the same application into one file (i.e. all MSWord files can be combined into one).
4. You may submit additional information in a separate document, which you feel, may help Company evaluate your Proposal; however, it is understood that such information is not a replacement for any component of this RFP.
5. Fax and Emailed responses will not be accepted.
6. No advance notification of Award will be given.

Responses to the RFP must be received no later than June 22, 2012 by 5:00 PM EST to be considered. Three (3) hard copies (unbound) and one (1) electronic copy on CD-Rom shall be sent to:

Tony Moir
Sourcing Leader
LG&E and KU Services Company
820 West Broadway
Louisville, Kentucky 40202
502-627-3428
Tony.moir@lge-ku.com

If your Proposal is hand carried, it must be delivered to the first floor (8th Street) mailroom, Broadway Office Complex at 820 West Broadway, Louisville, Kentucky 40202. Late Proposals will be rejected.

Your Proposal must be returned in a sealed envelope or container. The attached black and white label must be used for returning your Proposal to Company. If bidder chooses not to respond or submits an incomplete Proposal, bidder will be disqualified from consideration.

Upon review and evaluation of proposals, one or more bidders may be asked to make an on-site presentation. Further details will be communicated at a later date.

1.8 Disqualification

Under no circumstances (except those noted above) are respondents to contact any Company employee with regards to this RFP or any of the information contained herein. Respondents are strictly forbidden from visiting Company locations for any information specific to the account. Violations of this provision will subject the respondent to immediate disqualification.

An evaluation committee will perform the evaluation of Proposals. During this time, Company may initiate discussions with bidder for the purpose of clarifying aspects of the Proposals; however, Proposals may be evaluated without such discussions. Bidder shall not initiate discussions.

1.9 Inquiries

Please direct all RFP, technical, business, and contract questions to Tony Moir at tony.moir@lge-ku.com by 5:00 p.m. EST on June 14, 2012. Specific details on Company's strategies will not be disclosed. Clarifications, changes to this RFP along with answers to questions in reference to this RFP submitted by the deadline noted above will be published and distributed to all bidders invited to participate on or about June 22, 2012.

2 Business Objective

Company desires to obtain services of a private bidder(s) (hereinafter referred to as "Contractor") to provide the services (hereinafter referred to as the "Work") outlined in this RFP. It should be noted that the information contained in this section, "Business Objective and Scope of Work/Safety Requirements," along with any attachments or exhibits and the bidders response to this RFP will serve as the basis for Company's expectations regarding the Work and the subsequent contract between Company and the successful bidder. Items listed below are not inclusive, but may be modified or provisions added at Company's discretion. Contractor will be notified of any procedural changes and will be allowed sufficient time for implementation. However, all items listed in this section will be required and in place upon contract execution.

2.1 Scope of Work

Company is seeking technical and analytical consulting services to develop a comprehensive and quantitative assessment of the technical, economic, achievable, programmatic, and naturally occurring energy efficiency potential in Company's service territory. The study should focus on all electric and natural gas metered customers for the residential and commercial, and classes. The study should provide details for LG&E and KU energy efficiency potential separately and collectively. Please price the electric and natural gas studies separately. Your proposal should specifically address how the following tasks would be performed if awarded a contract:

- 2.1.1 Contractor should describe how they will collect market data in Company's service territory. Contractor should also describe all data anticipated to be collected.
- 2.1.2 Contractor will be required to understand customer trends and decision-making in Company's service territory. Discuss the customer data collection process and identify methods that will be used to obtain data.
- 2.1.3 Contractor will be required to develop a 20-year baseline (business as usual) forecast.
 - a. Identify anything that may influence the baseline estimate.

- b. Provide data and assumptions used to develop baseline forecast. It is expected that appliance saturation rates will be part of the data provided.
- 2.1.4 Contractor should identify expectations of data required from Company customer databases, forecasts, or any other data source.
- 2.1.5 Contractor should identify any software or data system that will be used to perform the study.
- a. Provide an overview and describe capabilities.
 - b. Provide where software or data systems have been accepted in a regulatory environment.
- 2.1.6 Contractor should describe how energy efficiency potential is measured, assessed, and communicated for the following: technical, economic, achievable, programmatic, and naturally occurring energy efficiency potential.
- a. Define technical, economic, achievable, programmatic, and naturally occurring energy efficiency potential.
 - b. Describe your research methodology for each of the items described in 2.1.6a.
 - c. How do you estimate costs, savings, and program useful life?
 - d. What data sources are utilized?
- 2.1.7 Contractor should define “wasted energy”. Describe how it will be measured and incorporated into the study.
- 2.1.8 Contractor will be required to emphasize the remaining expected potential of Company’s existing energy efficiency programs and identify any opportunities for improvement.
- 2.1.9 Contractor will be required to develop energy efficiency potential supply curves by program that clearly display the incremental cost of increasing energy efficiency efforts for each year of the study for residential, commercial customers. Curves should also be provided in aggregate for all customers.
- 2.1.10 Contractor will be required to provide a detailed plan identifying recommended energy savings measures and programs.
- a. Identify market size and penetration levels necessary to achieve recommended energy savings.
 - b. Identify any market barriers for recommended measures and programs.
 - c. Identify best practices for recommended measures and programs.
 - d. Provide details for estimated costs to market and offer programs to customers.
 - e. Define resource requirements of Company to implement programs.
 - f. Provide detailed budgets for each program and expenditures.
 - g. Provide technical data to support savings attributed to programs.
 - h. Provide cost-effectiveness evaluations for each recommended program.

- 2.1.11 Contractor will be required to provide a hard copy draft, and final copy, of the detailed plan noted in 2.1.10. The final copy of the detailed plan should clearly communicate the study results.
- a. A draft report(s) will be provided to Company for review and comments prior to issuing final report.
 - b. Describe your approach to clearly communicate the results.
 - b. Provide an outline or table of contents for the proposed final report for study.
- 2.1.12 On mutually agreeable dates, Contractor will be required to do up to five on-site presentations of the detailed plan in Kentucky. Selected sites are at Company's discretion. Three weeks prior to the presentation, Company will be provided the draft copy of the presentation materials for review and comments.
- 2.1.13 Contractor should identify the format for delivering data to Company when the study is complete.
- 2.1.14 Contractor should provide a detailed timeline for completion of the study. The timeline should contain milestones and duration between each milestone.
- 2.1.15 Contractor and Company will have regularly scheduled status update meeting at a frequency to be determined. In addition to overall study progress, status meeting should include sharing and review of data and report when applicable.
- 2.1.16 If requested by Company, Contractor shall provide expert witness testimony to the Kentucky Public Service Commission. Testimony may be written or in-person depending on the situation. Describe your experience in working with state commissions and various other stakeholders. Price this option separately.

2.2 Customer Satisfaction

The Company has a strategy to increase LG&E and KU customer satisfaction by enhancing the customer experience through respectful relationships, timely solutions, and exceptional service. As such the Company will require its vendors to assist in the continued commitment to workforce and public safety, and the expansion of relationships with customers by delivering positive customer experiences that create value and build trust.

2.3 Contractor Certification and Contract Terms and Conditions

The successful Contractor(s) will be required to complete the Company's Contractor Certification process prior to the Contract being awarded. The process requires the completion and submittal of the following documents:

- Contractor Information Sheet
- W-9
- Company Administrative Service Agreement

- Company Contractor/Subcontractor Safety Policy

Submittal of these forms with your response is NOT a RFP requirement.

However, failure to complete and submit the forms during the Contractor Certification process will result in the successful bidder not being awarded the contract.

The **Company Administrative Services Agreement and Contractor Code of Business Conduct** are attached hereto as **Exhibit No. 4** and incorporated herein by reference.

Any exceptions to the Scope of Work, Administrative Services Agreement, Contractor Code of Business Conduct, or any other part of this RFP or document referenced herein must be noted in a separate attachment entitled "**Bid Clarifications and/or Exceptions**". See Section 3.7 below. If no exceptions are specifically stated, none will be considered at time of award.

The successful Bidder will be required to adhere to all Company procedures related to security and admittance to Company facilities.

3 Proposal Requirements

Respondents to this RFP should include the following information in their proposal.

3.1 Project Team

Identify all key personnel who will be involved with this project. Provide specific individuals' names, their title, a resume describing their background and experience, and their area and levels of responsibility.

3.2 Proposed Solution

Provide a detailed description of services for the proposed solution to meet Company's business objective as described in Section 2.

3.3 Conditions of Bid

In submitting a response to this RFP, respondent acknowledges and accepts the following conditions by initialing each sub-paragraph in Attachment A.

3.4 Bidder Contact Information

In Attachment B, please provide contact information of the authorized person making this Proposal and any alternate person with like such authority whom Company should contact in the event of questions or clarifications.

3.5 Company Profile

Briefly complete your company profile information as listed in Attachment C and include a copy of your current insurance certificate. Also provide a separate Attachment C and insurance certificate for each subcontractor included in your Proposal.

3.6 Support for Minority and Women-Owned Businesses

It is Company policy to promote and increase participation of MBE and WBE's in its purchasing and contractual business. Maximum practicable opportunity shall be given to MBE and WBE's to participate as Company contractors, but in order to achieve this goal Company encourages additional opportunities for MBE and WBE's by requiring participation plans from bidders who are not MBE or WBE firms. In Attachment D, please indicate which business classification your company falls into. A description of each business classification is provided. If your firm intends to use minority sub-contractors or bidders in the performance of this work, please indicate so in the space provided labeled Tier 2 MBE or WBE. Please indicate a value or percentage of your Proposal price that your firm would spend with each Tier 2 MBE or WBE firm listed.

3.7 Bid Clarifications and/or Exceptions

Your Proposal shall conform to in all respects with the applicable specifications, terms and conditions referred to in this RFP. Submission of a Proposal constitutes your company's commitment that it can provide the products and/or services in this RFP. Any deviations from or exceptions to this RFP and the attached terms and conditions shall be clearly stated in your Proposal using the form titled "BID CLARIFICATIONS AND/OR EXCEPTIONS" in Attachment E. If there are not such exceptions, please state so. An award will not take place until there are executed terms and conditions between the parties. Any exceptions taken after announcing the award will not be considered.

Exceptions taken to the Administrative Services Agreement will impact the evaluation of your bid response.

3.8 Pricing

Prospective contractors shall submit pricing as described in Section 2.0 above. **Summarize your pricing proposal in Attachment F, "PRICING SUMMARIES"**. The bid price shall be firm for the duration of this contract. The bid price(s) shall include all cost to bidder, including taxes (if applicable) and profit. The winning bidder(s) will be required to meet Company contractor certification requirements.

Prospective contractors are invited to submit other pricing options for consideration by the Evaluation Committee. Alternative pricing should be noted as such. All final pricing agreed to in the contract will be based on an understanding of how all costs are derived.

Company reserves the right to accept other than the lowest quotation and to accept or reject any quotation in whole or in part, or to reject all quotations with or without notice or reasons, and if no quotation is accepted, to abandon the work or to have the work performed in such other manner as Company may elect. Company makes no guarantee or promise as to the amount of work to be performed under the proposed Contract, nor does it convey an exclusive right to the Contractor to perform work of the type or nature set forth in the proposed Contract.

4 References

Please list at least three (3) references (utility) that currently use your services and/or products in the same or similar basis as is proposed to Company and three (3) past references of existing firms that previously have used your services and /or products in the same or similar basis as is proposed by Company. Contact names and phone numbers must be included. Also, please indicate the length of the relationship, date of service commencement, and what services or products are supplied to the customer.

5 Other Services

5.1 Alternative Processes and Methods

Please provide any relevant information regarding recommendations to deliver services/products as detailed herein in a different manner than is specified. Clearly demonstrate the quantity of the benefit derived and limitations from alternate solutions as proposed either in functionality, service level, or cost savings.

5.2 Additional Services

Please provide detail on any additional or unique services provided by your organization. Generic information without detail will be excluded from the analysis. Any fees associated with any extraordinary services should be clearly listed separately as an appendix to your proposal.

Summary of required bid package submission to Company:

All proposals must include the following to be considered complete:

- A. The scope of services bidder will provide to meet Company Business Objective in Section 2.
- B. A timeline and schedule of tasks needed to complete the normal course of Work.
- C. Participation, or any requirements, of Company
- D. All items in Section 3 including all pricing options, fees, and expenses you wish Company to consider.

LG&E and KU Request for Proposal # 3447

E. References as requested in Section 4.0 above.

Enclosure: Black Address Label

IMPORTANT NOTICE TO BIDDER

It is imperative that this label be posted on the envelope or box submitting your proposal.

CONFIDENTIAL
SEALED BID
DO NOT OPEN

RFP: 3447
Closing Date:

From: _____
Bidder's Company Name

**TO:
TONY MOIR
CORPORATE SUPPLY CHAIN
LG&E and KU SERVICES COMPANY
820 WEST BROADWAY
LOUISVILLE KY 40202**

**Attachment A
CONDITIONS OF BID**

In submitting a response to this RFP, respondent acknowledges and accepts the following conditions, and makes the following representations. **Please initial (blue ink) each sub-paragraph in each box below in your response.**

- A-1 **Ownership of Proposals** – All Proposals in response to this RFP are to be the sole property of Company, Louisville, Kentucky.
- A-2 **Oral Contracts** – Any alleged oral Contracts or arrangements made by a respondent with any employee of Company will be superseded by the written Contract.
- A-3 **Amending or Canceling Request**- Company reserves the right to amend or cancel this RFP, at any time, if it is in the best interest of Company
- A-4 **Rejection for Default or Misrepresentation** – Company reserves the right to reject the Proposal of any bidder that is in default of any prior contract or for misrepresentation.
- A-5 **Clerical Errors in Awards** – Company reserves the right to correct inaccurate awards resulting from its clerical errors.
- A-6 **Rejection of Qualified Proposals** – Proposals are subject to rejection in whole or in part if they limit or modify any of the terms and/or specifications of the RFP.
- A-7 **Presentation of Supporting Evidence** – If requested, respondent(s) shall present evidence of experience, ability and financial standing necessary to satisfactorily meet the requirements set forth in the RFP or those implied in the Proposal.
- A-8 **Consistency in Submissions** – The hardcopy submission of the Proposal will prevail in the case of a discrepancy between the electronic and hardcopy version of the documents.
- A-9 **Changes to Proposals** – No additions or other changes to the original Proposal will be allowed after submittal. While changes are not permitted, clarification at the request of Company may be required at the sole expense of the respondent.
- A-10 **Collusion** – In submitting a Proposal, the respondent implicitly states that the Proposal is not made in connection with any competing respondent submitting a separate response to the RFP, and is in all respects fair and without collusion or fraud.
- A-11 **Costs** – Company shall not be liable for any cost incurred by the respondent in the preparation of this RFP.
- A-12 **Subcontractors** – The use of subcontractors must be clearly identified and explained in the Proposal. The prime contractor shall be wholly responsible for the performance of the contract in its entirety whether or not subcontractors are used. Subcontractors shall be bound by the terms and conditions of any Contract with the respondent. The prime contractor shall indemnify and hold Company harmless from any and all activities related to the services provided by the subcontractor(s) under this contract.
- A-13 **Legal Compliance** – In submitting a Proposal, the respondent warrants that it is legally authorized to do business in the state of Kentucky, is in compliance with all applicable laws and regulations, is not prohibited from doing business with Company by law, order, regulation, or otherwise, and the person submitting the Proposal on behalf of the bidder is authorized by the bidder to bind it to the terms of the Proposal.

Attachment B
BIDDER INFORMATION

- A. BIDDER'S COMPANY NAME _____
- B. BIDDER'S MAILING ADDRESS _____

- C. BIDDER'S PHYSICAL ADDRESS(if different from above)_____
- _____
- D. PRIMARY CONTACT NAME _____
- E. TELEPHONE NUMBER _____
- F. ALTERNATE PHONE NUMBER _____
- G. FAX NUMBER _____
- H. EMAIL ADDRESS _____
- I. RFP #

Attachment C COMPANY PROFILE

In five (5) pages or less, provide the following general information about your company.

- C-1 Name of company
- C-2 Address of company (primary place of business)
- C-3 Telephone number
- C-4 Dun & Bradstreet number
- C-5 Tax identification number
- C-6 Age of company
- C-7 Size of company, including the number of employees
- C-8 Year and state of incorporation, if relevant
- C-9 Provide a current Certificate of Insurance
- C-10 Recent or pending mergers, acquisitions or IPO's
- C-11 Number of specifically relevant comparable accounts in which directly comparable services are provided, with a summary of the term of the account, the services provided, and the size of the account
- C-12 Concise description of any business partners that may be providing support services as part of this RFP. This information should include the same information requested in Attachment B. Please clearly define the nature of the relationship (i.e. reseller, subcontractor, subsidiary, parent, unrelated joint bidder, etc.).

Note: An Attachment C must also be provided for each subcontractor included in your Proposal.

Attachment D BUSINESS CLASSIFICATION

Identify which category(s) your company falls into (see below for classification definitions). Attach any certificates verifying your company as a Small Business, Small Disadvantaged Business, Minority Business Enterprise (MBE), Woman-Owned Business Enterprise (WBE), Disabled-Owned Business, or Veteran-Owned Business.

- _____ Large Business – Over 500 people or dominant in field
 _____ Small Business – Less than 500 people and not dominant in field
 _____ Small Disadvantaged Business – Less than 500 people, not dominant in field and meeting criteria below
 _____ Minority Business Enterprise
 _____ Woman-Owned Business Enterprise
 _____ Disabled Owned Business
 _____ Veteran Owned Business

Tier 2 (Suppliers and Subcontractor) Use of MBE or MBE Firms

Company Name	Percentage or Value of Proposal
_____	_____
_____	_____

BUSINESS CLASSIFICATION DESCRIPTIONS

- A) Small Business – Defined as a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on government contracts, and qualified as a small business under the criteria and size standards in 13 CFR Part 121 (see 19.102). Such a concern is "not dominant in its field of operation" when it does not exercise a controlling or major influence on a national basis in a kind of business activity in which a number of business concerns are primarily engaged. In determining whether dominance exists, consideration shall be given to all appropriate factors, including volume of business, number of employees, financial resources, competitive status or position, ownership or control of materials, processes, patents, license agreements, facilities, sales territory, and nature of business activity.
- B) Small Disadvantaged Business – Defined as a small business concern that is at least 51 percent unconditionally owned by one or more individuals who are both socially and economically disadvantaged, or a publicly owned business that has at least 51 percent of its stock unconditionally owned by one or more socially and economically disadvantaged individuals and that has its management and daily business controlled by one or more such individuals, This term also means small business concern that is at least 51 percent unconditionally owned by an economically disadvantaged Indian tribe or Native Hawaiian Organization, or a publicly owned by one of these entities, that has its management and daily business controlled by members of an economically disadvantaged Indian tribe or Native Hawaiian Organization, and that meets the requirements of 13 CFR 124.

- C) Minority Business Enterprise – Defined as a for profit enterprise, regardless of size, physically located in the United States or its trust territories, which is owned, operated and controlled by minority group members. "Minority group members:" are U.S. citizens who are African-American, Hispanic American, Native American, Asian-Pacific American, and Asian-Indian American. "Ownership" by minority individuals means business is at least 51% owned by such individuals or, in the case of a publicly owned business, at least 51% of the stock is owned by one or more such individuals. Further, the management and daily business operations are controlled by those minority group members.
- D) Woman-Owned Business – Defined as a business that is at least 51% owned by a woman or women who also control and operate it. "Control" in this context means being actively involved in the day-to-day management.
- E) Large Business – Defined as more than 500 employees

Attachment E
BID CLARIFICATIONS AND/OR EXCEPTIONS

1. Bidder offers the following clarifications and/or exceptions taken to any requirement or provision of this RFP and any proposed modifications or replacement language for each clarification or exception (If none, so state.):

Bidder understands that unless itemized above, no other clarifications or exceptions to this Request for Proposal are taken by the Bidder.

Attachment F PRICING SUMMARIES

Please provide a summary of your pricing proposal for all services related to the delivery of your solution.

Pricing should include all costs to Company. Provide a breakdown of all costs, and the total cost.

For each resource to be used in performing the work (i.e. Project Manager, Analyst, etc.), provide the job title, unit rate for that skill set, estimated number of hours of work and a subtotal per skill set.

Provide an estimate of travel and per diem expenses

SAMPLE
CONTRACT

This Contract (hereinafter referred to as this "Contract") is entered into, effective as of , 2012, between LG&E and KU Services Company (hereinafter referred to as "Company."), whose principal place of business is 220 West Main Street, Louisville, Kentucky 40202, and
Contractor

The parties hereto agree as follows:

1.0 GENERAL

Contractor shall perform an Energy Efficiency Potential Study for Company and Affiliates, as more specifically described in Articles 2.0 and 3.0 hereof (hereinafter referred to as the "Work") and Company shall compensate the Contractor for the Work, under all the terms and conditions hereof.

Contractor shall provide Company technical and analytical consulting services to develop a comprehensive and quantitative assessment of the technical, economic, achievable, programmatic, and naturally occurring energy efficiency potential in Company's service territory. The study will focus on all electric and natural gas metered customers for the residential and commercial classes. The study should provide details for LG&E and KU energy efficiency potential separately and collectively.

2.0 DESCRIPTION OF WORK

- 2.1 Except as otherwise expressly provided herein, Contractor shall supply all labor, supervision, materials, equipment and tools, and warehousing, and shall pay all expenses, necessary or appropriate in the performance of the Work.
- 2.2 NO MATERIALS CONTAINING ASBESTOS SHALL BE SUPPLIED OR USED IN THE PERFORMANCE OF WORK.
- 2.3 Without limitation, Contractor shall meet all requirements set forth in the Lead Construction Standard 29 CFR 1926.62.
- 2.4 Contractor shall supply MSDS-Material Safety Data Sheets for all materials used in the performance of the Work.
- 2.5 The Work shall include but not be limited to the following:
 - 2.5.1 Contractor shall collect market data in Company's service territory so that Contractor can understand customer trends and decision-making in Company's service territory.

- 2.5.2 Contractor will be required to develop a 20-year baseline (business as usual) forecast and will:
- a. Identify anything that may influence the baseline estimate.
 - b. Reconcile to Company's load forecast end-use energy efficiency improvement assumptions.
- 2.5.3 Contractor will identify what data is required from Company customer databases, forecasts, or any other data source.
- 2.5.4 Contractor shall, in reporting to Company, emphasize the remaining expected potential of Company's existing energy efficiency programs and identify any opportunities for improvement.
- 2.5.5 Contractor will be required to develop energy efficiency potential supply curves by program that clearly display the incremental cost of increasing energy efficiency efforts for each year of the study for residential and commercial customers. Curves should also be provided in aggregate for all customers.
- 2.5.6 Contractor will be required to provide a detailed plan identifying recommended energy savings measures and programs.
- a. Identify market size and penetration levels necessary to achieve recommended energy savings,
 - b. Identify any market barriers for recommended measures and programs.
 - c. Identify best practices for recommended measures and programs.
 - d. Provide details for estimated costs to market and offer programs to customers.
 - e. Define resource requirements of Company to implement programs.
 - f. Provide detailed budgets for each program and expenditures.
 - g. Provide technical data to support savings attributed to programs.
 - h. Provide cost-effectiveness evaluations for each recommended program.
- 2.5.7 Contractor will be required to provide a hard copy draft, and final copy, of the detailed plan noted in 2.1.10. The final copy of the detailed plan should clearly communicate the study results.
- a. The draft(s) copy shall be provided to Company for their review and comments prior to a final report being provided or presented by Contractor.
- 2.5.8 On mutually agreeable dates, Contractor shall be required to do up to five (5) on-site presentations of the detailed plan in Kentucky. Selected sites are at the Company's discretion. Three weeks prior to the presentation

Company will be provided the draft copy of the presentation materials for review and comments.

2.5.9 Contractor shall deliver data to Company in a format agreeable to both parties.

2.5.10 If requested by Company, Contractor shall provide expert witness testimony to the Kentucky Public Service Commission. Testimony may be written or in-person depending on the situation.

3.0 REPORTING REQUIREMENTS

3.1 Contractor shall participate in regularly scheduled meetings and provide status reports to Company. In addition to overall study progress and timeline review, status meeting should include sharing and review of data and report when applicable.

3.2 Contractor should provide a detailed timeline for completion of the study. The timeline should contain milestones and duration between each milestone.

3.3 Contractor shall develop and provide a draft and final copy of a detailed plan based on the results of the study. The draft copy shall be a hard copy and provided to Company for review and comments before a final hard copy of the plan is produced. The draft copy is to be provided to Company three (3) weeks in advance of Contractor presenting the plan during an on-site presentation to be held in Louisville, KY at a Company facility.

4.0 EXHIBITS AND ATTACHMENTS

All Work shall be performed in strict accordance with the following specifications, exhibits and drawings which are incorporated herein by reference.

4.1	Exhibit No.	Title
	<u>Exhibit No. 1</u>	Timeline

6.0 TERM

This Contract shall become effective, 2012 and continue until , 2012, unless terminated earlier pursuant to the Article titled "Term and Termination" set forth in the General Services Agreement. Unless otherwise specified, Company makes no promise or guarantee as to the amount of Work to be performed under this Contract, nor does it convey an exclusive right to the Contractor to perform Work of the type or nature set forth in this Contract.

7.0 PERFORMANCE SCHEDULE

- 7.1 Contractor shall commence performance of the Work on , 2012 and shall complete Work not later than , 2012.
- 7.2 Contractor shall not assign or subcontract out any material portion of the work except under extenuating circumstances, which requires advanced written approval by Company. Contractor shall notify Company of its intent to use subcontractors in performance of Work at least forty-eight (48) hours prior to start of Work. See the Article titled "Assignment of Agreement; Subcontracting" in the General Services Agreement.
- 7.3 The performance under this Agreement shall be subject to periodic review by Company or another firm designated by Company for Contractor compliance.

8.0 ADMINISTRATIVE SERVICES AGREEMENT

- 8.1 The terms and conditions set forth in the Administrative Services Agreement and Contractor Code of Business Conduct that are attached hereto, (herein referred to as the "Administrative Services Agreement") are hereby incorporated by reference as fully set forth herein. In the event of a conflict between the terms and conditions of the Administrative Services Agreement and those of this Contract, the terms and conditions of the Administrative Services Agreement shall prevail.
- 8.2 Company will maintain ownership of all data. Customer data is considered confidential and cannot be shared without prior Company authorization.
- 8.3 Customer Satisfaction

The Company has a strategy to increase LG&E and KU customer satisfaction by enhancing the customer experience through respectful relationships, timely solutions, and exceptional service. As such the Company will require its vendors to assist in the continued commitment to workforce and public safety, and the expansion of relationships with customers by delivering positive customer experiences that create value and build trust.

9.0 COMPENSATION

- 9.1 Full compensation to Contractor for full and complete performance by Contractor of the Work, compliance with all terms and conditions of this Contract and for Contractor's payment of all obligations incurred in, or applicable to, performance of the Work (hereinafter referred to as the "Contract Price") shall be the following:

TBD

9.2 PRICING FOR CHANGES IN SCOPE OF WORK

By mutual agreement between Company and Contractor, adjustments to the Contract Price for changes in the Scope or Description of Work shall be on a unit price basis.

9.3 SPECIAL INVOICING INSTRUCTIONS

9.3.1 See the Article titled "Invoices and Effect of Payment" in the General Services Agreement

9.3.2 All invoices shall include a Contract Number. Invoices for Work shall include Contract/Purchase Order Number and a separate invoice provided for each utility. All invoices shall be prepared in one original and distributed as follows:

Original: LG&E and KU Services Company
Attention: Program Manager
P.O. Box 32020
Louisville, Kentucky 40232

10.0 CONTRACTUAL NOTICES

See the Article titled "Miscellaneous" in the General Services Agreement for provisions governing contractual notices.

10.1 Company's address: LG&E and KU Services Company.
Attention: Manager, Corporate Purchasing
820 West Broadway
Louisville, Kentucky 40202
502-627-3646 (FAX)

Copy to: LG&E and KU Services Company
Attention: Manager, Energy Efficiency Operations
P.O. Box 32020
Louisville, Kentucky 40232

10.2 Contractor's
Address:

11.0 ENTIRE AGREEMENT

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

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

LG&E and KU SERVICES COMPANY

BY: _____

TITLE: _____

DATE: _____

CONTRACTOR

BY: _____

TITLE: _____

DATE: _____

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014

Case No. 2014-00003

Question No. 17

Witness: David E. Huff / Michael E. Hornung

- Q-17. Refer to page 1 of the Potential Study (Exhibit MEH-3).
- a. Explain why the Potential Study did not evaluate the DSM potential for the industrial sector.
 - b. Identify what percentage of each of LG&E and KU's load is from the industrial sector.
 - c. State whether LG&E or KU offer or intend to offer any DSM programs for the industrial sector.
 - i. If so, identify each such program
 - ii. If not, explain why not
 - d. State whether any of LG&E or KU's individual industrial customers with energy intensive processes implement DSM programs.
 - i. If so, identify each such program and their estimated energy savings per year.
 - e. State whether LG&E and/or KU have carried out or reviewed any assessment of the DSM potential for their industrial customers.
 - i. If so, produce such assessment
 - ii. If not, explain why not.
- A-17.
- a. Customer experience is a top priority for the Companies. The Companies routinely work with our DSM Advisory group for residential and commercial programs; however, because KRS 278.285(3) provides for exclusion of industrial customers, the companies have not pursued DSM programing for the industrial sector.
 - b. The industrial sector is approximately 30% of the Companies' annual energy sales.

- c. The Companies currently have no plans to offer energy-efficiency programs to the industrial sector as sufficient interest is not present to make programming economical.
- d. The Companies have continual discussions with their industrial customers to understand their energy needs for the purposes of system and reliability planning. Through these discussions customers have shared their implemented and planned energy efficiency projects. As these conversations were not for the purpose of identifying energy efficiency projects, the Companies have not tracked the specifics associated with these efforts.
- e. The Companies have not carried out or reviewed any assessment regarding industrial energy-efficiency potential.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014**

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Question No. 18

Witness: Michael E. Hornung

Q-18. Refer to page 1 of the Potential Study (Exhibit MEH-3). With regards to the secondary long-term avoided cost data used in the analysis, identify for each year of the analysis the:

- a. Energy cost
- b. Capacity cost
- c. Transmission & distribution capacity cost
- d. Coal price
- e. Natural gas price
- f. Carbon price
- g. SO₂ allowance price
- h. NO_x allowance price
- i. Any other value incorporated into the avoided cost calculation

A-18. Please see the response to Question No. 12.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Question No. 19

Witness: Michael E. Hornung

Q-19. Refer to page 1 of the Potential Study (Exhibit MEH-3). With regards to the secondary long-term avoided cost data used in the analysis, please describe the source of such data and how the Company vetted such data.

A-19. Please see the response to Question No. 12.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Question No. 20

Witness: Michael E. Hornung

- Q-20. Refer to page 1 of the Potential Study (Exhibit MEH-3). Identify all “budgetary constraints and market barriers” assumed in deriving the portion of economic potential assumed to be reasonably achievable in the course of the planning horizon.
- A-20. “[B]udgetary constraints and market barriers that may impede customers’ participation in utility programs” are, regarding “budgetary constraints,” referring to customers’ willingness and ability to invest in energy-efficiency measures and, regarding “market barriers,” referring to energy-efficiency measures’ availability and costs. For example, any energy-efficiency measure incentive is capped at the Companies’ avoided cost of capacity (\$100/kW-year), as it would be otherwise more economical to serve energy from supply-side resources.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
Dated February 17, 2014**

Case No. 2014-00003

Question No. 21

Witness: Michael E. Hornung

Q-21. Produce any workpaper, source document, and, in machine readable format with formulas intact, modeling files (including modeling input and output files) used in determining the energy efficiency technical potential, economic potential, or achievable potential identified in the Potential Study.

A-21. Please see the response to Question 12a.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

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Question No. 22

Witness: Michael E. Hornung

- Q-22. Refer to page 4 of the Potential Study. Produce the Frontiers of Efficiency article referenced in footnote 5.
- A-22. The "Frontiers of Efficiency" article can be found online at the following web address: <http://www.fortnightly.com/fortnightly/2011/04/frontiers-efficiency>. A paid subscription is required to download and print the article.

**LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

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Question No. 23

Witness: Michael E. Hornung

Q-23. Refer to page 8 of the Potential Study.

a. With regards to the statement that Cadmus' analysis "is based solely on proven, commercially available technology and current market costs," confirm whether:

i. Cadmus' analysis assumed no advancement in commercially available energy efficiency technologies over the next 20 years

1. If so, explain why and identify any basis for such assumption
2. If not, explain what the quoted language means

ii. Cadmus' analysis assumed no change in the costs of such technologies over the next 20 years.

1. If so, explain why and identify any basis for such assumptions
2. If not, explain what the quoted language means

b. Explain why declines in cost of existing energy efficiency technologies and the emergence of new technologies may provide only "small opportunities for additional savings"

A-23.

a. i. Cadmus's analysis assumed no advancement in commercially available technologies over the next 20 years. Including technologies that might be commercially available in the next 20 years introduces significant uncertainty to the estimates of energy-efficiency potential. Only measures with proven and well-documented savings, costs, and applicability are included. Not only are data on emerging technologies often incomplete and difficult to verify, but forecasts of how costs and savings for these technologies may change is subject to significant uncertainty.

ii. Cadmus's analysis assumed no change in the nominal costs of such technologies over the next 20 years. Cost forecasts for individual measures are often speculative

and introduce considerable uncertainty to energy-efficiency-potential estimates. While on average, the *nominal* cost of EE technologies have decreased over the long-run, there is considerable variation in real costs across measures. Also, Cadmus does not incorporate inflation when assessing measure cost-effectiveness. For the lack of better data, in its analysis Cadmus has assumed that reduction in measure cost will likely be offset by inflation.

- b. As discussed in the response to Question 23a.ii, on average, decreases in real costs are largely offset by inflation. Cadmus uses nominal costs, which do not include adjustments for inflation. Inflation would negate much of the opportunity created by declining real costs.

Emerging technologies must overcome larger market barriers to adoption. These barriers include higher costs, lower customer awareness, and lower market availability. Due to these barriers, over the short- and medium-run emerging technologies have small savings relative to proven technologies. Over the long-run, more stringent building codes and equipment standards are also likely to lower the baseline energy consumption in end-uses affected by emerging technologies, which further reduces savings from such technologies.

**LOUISVILLE GAS AND ELECTRIC COMPANY
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Question No. 24

Witness: Michael E. Hornung

Q-24. Refer to page 16 of the Potential Study. Identify how long the Cadmus study assumed it would take to achieve “complete compliance” with the EISA backstop provision, and explain the basis for that assumption.

A-24. Cadmus assumes that after 2020 light bulbs that fail to meet the EISA backstop provision must be replaced with an EISA compliant bulb at the end of their effective use life. The number of bulbs that turnover in a given year equals 1 divided by the baseline technology’s measure life. The table below demonstrates an example of this turnover and replacement.

Year	2019	2020	2021	2022	2023	2024	2025	2026	2027
Existing Stock	1,000	500	250	125	63	31	16	8	4
New Standard	0	500	750	875	938	969	984	992	996
Percent Turned Over	0%	50%	75%	88%	94%	97%	98%	99%	100%

The baseline (EISA 2014 compliant bulb) measure life is 2 years, which means 50% of bulbs turnover in a given year. While the “average” bulb will turnover in two years, there will be bulbs that have lifetimes higher than this average. Nearly 100% of bulbs will turnover within eight years of the adoption of the 2020 EISA backstop provision.

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Question No. 25

Witness: Michael E. Hornung

- Q-25. Refer to page 43 of the Potential Study. With regards to the maximum incentive assumed for each measure:
- a. Explain why the avoided cost of capacity and, therefore, the maximum one-time incentive that the Companies could offer, was capped at \$100/kW-year
 - b. Identify what level, in dollars per kW-year, of incentive would be needed on average to achieve an incentive amount covering 75% of the measures’ incremental cost.
- A-25. a. The avoided capacity cost of \$100/kW-year is based on deferring the next generating unit. Using a value greater than \$100/kW-year in the analysis would not be economical from a long-term planning perspective.
- b. The incentive required to cover 75% of a measure’s incremental cost (in \$/kW terms) depends on both a measure’s incremental cost and its expected demand savings. Measures with higher demand savings and lower incremental costs will require lower incentives. The table below demonstrates the average incentive required to cover 75% of the incremental cost of measures, expressed in dollars per kW.

Average Incentive Required to Cover 75% of Incremental Cost (weighted by potential demand savings)

End Use Group	\$/kW with 75% Incentive	Percent of Total Demand Savings
Plug Load	\$450	5%
Cooking	\$1,041	0%
Cooling	\$252	55%
Appliance	\$647	1%
Heat Pump	\$588	10%
Lighting	\$980	13%
Refrigeration	\$809	5%
Ventilation and Circulation	\$684	9%
Water Heat	\$298	1%
Pool Pump	\$236	1%
Weighted Average	\$461	

**.LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY**

**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Question No. 26

Witness: Michael E. Hornung

- Q-26. Refer to page 44 of the Potential Study. State whether the achievable energy savings levels identified in Table 35 are in addition to the levels of energy savings that the Companies' bulbs that that turnover in a given year equals
- A-26. The EE Potential Study was completed in 2013; therefore, 2013 actuals were not included. See response to Question No.11 for more information.

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**Response to Wallace McMullen and Sierra Club's Initial Request for Information
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Question No. 27

Witness: Michael E. Hornung

Q-27. Refer to page 44 of the Potential Study. With regards to the achievable demand reductions identified in Table 36:

- a. State whether the demand reduction levels identified therein are in addition to levels of demand reduction that the Companies' DSM efforts have already achieved through 2013.
- b. State whether the potential for demand response programs, as opposed to only energy efficiency programs, are included in the demand reduction levels identified in Table 36.
 - i. If so, identify what amount of the demand reduction levels identified in Table 36 are due to demand response programs.
 - ii. If not, produce any analysis of the potential for demand response in the LG&E and/or KU service territories.

A-27. a. The EE Potential Study was completed in 2013; therefore, 2013 actuals were not included. Please refer to the response to Question No. 11 for more information.

- b. Table 36 includes only demand savings from energy-efficiency measures. It does not account for any potential demand savings from demand response.
 - ii. Please see response to Question No. 4 regarding the impact of demand response programs.