COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

JOINT APPLICATION OF LOUISVILLE GAS AND	**)**	
ELECTRIC COMPANY AND KENTUCKY UTILITIES	**)**	**CASE NO.**
COMPANY FOR THE REVIEW AND MODIFICATION	**)**	**2015-00398**
OF THE SCHOOL ENERGY MANAGEMENT PROGRAM	**)**	

JOINT RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
AND KENTUCKY UTILITIES COMPANY
TO
COMMISSION STAFF'S
FIRST REQUEST FOR INFORMATION

DATED FEBRUARY 15, 2016

FILED: February 29, 2016

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
David E. Huff

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 29th day of February 2016.

Susan M. Watkins (SEAL)
Notary Public

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
AND KENTUCKY UTILITIES COMPANY

Joint Response to Commission Staff's
First Request for Information Dated February 15, 2016

Case No. 2015-00398

Question No. 1

Witness: David E. Huff

Q-1. Refer to the Energy Management Program FY2015 Annual Report to Kentucky Utilities ("Report") filed with the Commission on September 11, 2015, by the Kentucky School Boards Association ("KSBA") in compliance with the Commission's Order in Case No. 2013-00067.[1]

a. State whether the demand and energy reductions shown on page 3 of the Report include schools and school districts that are not participating in the School Energy Management Program ("SEMP").

b. Explain why the target 100 percent goal has not been achieved in the KU service territory.

c. Refer to page 25 of the Report. The number of participating districts for KU is shown as 53, but 51 districts are listed on page 17 of the Report. Confirm that the number of participating districts is 51 instead of 53, and explain why fewer districts are participating in FY2015 than in FY2014.[2]

d. Explain how funds are distributed among the participating schools and school districts and whether certain projects, schools, or districts have priority.

A-1 (a. – d.) The report is produced by the KSBA. LGE or KU does not have detailed knowledge of the underlying data used to produce the report. However, to be responsive to the Commissions questions KSBA was asked to provide responses to these questions. The responses received from the KSBA are attached.

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[1] Case No. 2013-00067, Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for the Review and Approval of a Two-Year Demand-Side Management Program Related to School Energy Management and Associated Cost Recovery (PSC Ky. Apr. 30, 2013).

[2] Page 11 of the first Energy Management Program Annual Report to Kentucky Utilities Company filed August 15, 2014, in Case No. 2013-00067 provides a list of 53 participating school districts.

KENTUCKY SCHOOL BOARDS ASSOCIATION
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KSBA Website: www.ksba.org

February 24, 2016

Mr. David Huff
Director Energy Efficiency and Smart Grid Strategies
220 West Main Street
Louisville, KY 40202

David,

Below please find clarification with regard to information provided in KSBA's School Energy Manager Program FY2015 Annual Report.

The demand and energy reductions provided in the report are only for LGE or KU served schools/accounts receiving funding support for their energy manager.

Eighty-four districts receive electric service at least in-part from either LGE or KU. As this is a voluntary program some districts have chosen to not participate. In FY2014 and FY2015, fifty-three (53) districts participated. Two districts were inadvertently omitted from the list on page 17 of the Report. Three districts who participated in FY2014 chose to not participate in FY2015, but three new districts came on board. In the current school year (FY2016) there are fifty-four (54) districts currently participating and three (3) others are in the process of replacing their shared energy manager who has taken another position.

Several factors come into consideration as to whether districts participate. First, all but a hand-full of Kentucky's public schools are too small to support a full-time position. Success of the SEMP model of fostering partnerships has proven to be more productive than the old model of assigning energy management to another employee who already has a full plate and must deal with shuffling priorities. The ability to partner in the services and cost of an energy manager, a full-time energy specialist, with neighboring districts facilitates access to the energy manager. However, some districts are remotely located relative to other districts making the partnership option impractical. In the current year SEMP is testing a potential solution wherein a floating energy manager is serving isolated districts. Second, the energy manager is a non-classroom position making it difficult for a board of education to prioritize the position over a teaching position given current tight budget situations. Third, some districts only have one to two LGE-KU K-12 accounts making it impractical to justify dealing with the performance requirements for receipt of the funding. Fourth, some districts have opted to engage in performance contracts with a third-party.

Regardless of whether a district chooses to receive energy manager matching funds they are able to participate in SEMP professional development offerings. In FY2014 11 districts not receiving funding attended training sessions and 9 in FY2015.

Finally, funds are distributed on the ratio of LGE-KU K-12 served schools to total district K-12 schools and are directed for use in only LGE-KU served facilities. In FY2014 SEMP matched fifty percent of the energy manager's salary and twenty-five percent in FY2015. The districts are responsible for benefits, a significant portion of which are paid by the Kentucky Department of Education, travel and office expense. Some funds were not used in the prior two years because all districts did not participate, some salaries were less than estimated or inter-period vacancies occurred are being used in the current FY2016 pursuant to the Order in Cases 2014-371 and 372 to facilitate continuation of the program.

Regards,

Ron

Ron Willhite

Director KSBA-SEMP

LOUISVILLE GAS AND ELECTRIC COMPANY
AND KENTUCKY UTILITIES COMPANY

Joint Response to Commission Staff's
First Request for Information Dated February 15, 2016

Case No. 2015-00398

Question No. 2

Witness: David E. Huff

Q-2. Refer to the Application, page 6, paragraph 8.4. Refer to the Total Resource Cost ("TRC") Test column, which shows that the cost/benefit result for SEMP as a whole, or "Program Total," has a value of 1.00.

a. Provide the TRC Test calculation for the Program Total cost/benefit result.

b. Explain whether the 0.94 TRC cost/benefit result for the Energy Managers component of the SEMP is expected to improve.

A-2.

a. Column (A) in the table below shows the total of the four columns to the right
Column (B) is from the Application, Appendix B, page 7, TRC Test, first column
Column (C) is from the Application, Appendix B, page 5, TRC Test, first column
Column (D) is from the Application, Appendix B, page 3, TRC Test, first column
Column (E) is from the Application, Appendix B, page 1, TRC Test, first column

	A	B	C	D	E
TRC Test	Total Program	KU Energy Managers	LGE Energy Managers	KU EE Projects	LGE EE Projects
Avoided Electric Production	$1,991,098	$832,640	$586,393	$371,380	$200,685
Avoided Electric Production Adders	$0	$0	$0	$0	$0
Avoided Electric Capacity	$1,163,235	$382,323	$318,947	$290,911	$171,054
Avoided T&D Electric	$0	$0	$0	$0	$0
Avoided Ancillary	$0	$0	$0	$0	$0
Avoided Gas Production	$0	$0	$0	$0	$0
Avoided Gas Capacity	$0	$0	$0	$0	$0
Total	$3,154,331	$1,214,962	$905,340	$662,291	$371,738
Administration Costs	$2,704,956	$1,237,772	$556,998	$582,519	$327,667
Implementation / Participation Costs	$0	$0	$0	$0	$0
Other / Miscellaneous Costs	$0	$0	$0	$0	$0
Total	$2,704,956	$1,237,772	$556,998	$582,519	$327,667
Reduced Arrears	$0	$0	$0	$0	$0
Participant Costs (net)	$460,462	$349,588	$110,874	$0	$0
Participant Tax Credits (net)	$0	$0	$0	$0	$0

Total Benefit	$3,154,331	$1,214,962	$905,340	$662,291	$371,738
/ Total Cost	$3,165,418	$1,587,360	$667,872	$582,519	$327,667
TRC Score	1.00	0.77	1.36	1.14	1.13

b. The 0.94 TRC is the combined TRC for Energy Managers (columns B and C in the table above)[3] and is the weighted average of the KU and LGE Energy Managers. The TRC score for the Energy Managers component was calculated using information provided by KSBA in their 2015 annual reports as a basis for energy demand, and costs for 2016-2018. The numbers were reviewed with KSBA for validation. It is unknown if greater benefits can be achieved by the KU Energy Managers and/or a lower cost to improve the TRC.

[3] A TRC of 0.94 is calculated from the total benefit and cost of columns B and C in the table above. ($1,214,962 + 905,340) divided by ($1,587360 + $667,872)

LOUISVILLE GAS AND ELECTRIC COMPANY
AND KENTUCKY UTILITIES COMPANY

Joint Response to Commission Staff's
First Request for Information Dated February 15, 2016

Case No.2015-00398

Question No. 3

Witness: David E. Huff

Q-3. Refer to the Application, page 7, paragraph 8.6, specifically the Annual Reductions table, and Appendix A. Reconcile the total annual reductions in energy and demand resulting from both Energy Managers and Energy Efficiency Projects ("EE Projects") with the sums of the Companies' energy and demand savings for Energy Managers and EE Projects in Appendix A.

A-3.

The total annual reductions in energy and demand from both Energy Managers and Energy Efficiency Projects ("EE Projects") in the Annual Reductions table on page 7, paragraph 8.6 represents sales at the meter. The reductions shown in Appendix A are based on energy requirements before transmission and distribution line losses. It is appropriate to use the sales at the meter when calculating the "Lost Sales" calculation as this "net" savings has been historically used to calculate lost sales in previous DSM cases and results in lower lost sales amounts than if the values in Appendix A were used.

LOUISVILLE GAS AND ELECTRIC COMPANY
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Joint Response to Commission Staff's
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Case No.2015-00398

Question No. 4

Witness: David E. Huff

Q- 4. Refer to the Application, Appendix B, pages 5 and 7.

a. Explain the differences in the cost/benefit test results for LG&E's and KU's Energy Managers programs, and why the KU results are all less than 1.0.

b. State whether KU's Energy Managers cost/benefit test results are expected to improve.

A-4.

a. Energy and demand benefit for LG&E participants exceeds the cost resulting in TRC greater than 1.0. For KU, the energy and demand benefit are less than the cost for the Energy Managers Program, resulting in a TRC less than 1.0. KU projects energy and demand benefits exceed costs resulting in a TRC greater than 1.0. Please see the response to Q-2a and Q-1 of this data request for more detail.

b. It is unknown if KSBA Energy Managers can increase benefits and/or reduce costs to improve the TRC. KU has some unique challenges as described in Ron Willhite's letter provided in response to Q-1 of this data request. KSBA is using a new approach of a "floating energy manager" to attempt to improve participation, lower costs, and increase benefits.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND KENTUCKY UTILITIES COMPANY

Joint Response to Commission Staff's
First Request for Information Dated February 15, 2016

Case No.2015-00398

Question No. 5

Witness: David E. Huff

Q-5. Refer to the Application, Appendix A; Appendix C, page 6 of 13; and Appendix D, page 6 of 13.

a. The sum of the Total Energy Savings for each company is 4,021,422 kWh, with a total of 8,042,844 kWh for both. Explain why the energy savings is identical for the two companies in calculating the DSM Revenues from Lost Sales.

b. Reconcile these Total Energy Savings with the Energy Savings in Appendix A for the Companies' EE Projects and Energy Managers.

A-5.

a. The Total Energy Savings calculation in the filing incorrectly used a 50-50 split between LG&E and KU. The table below shows the updated calculation that reflects the energy savings from Appendix A, pages 1, 4, 7 and 8 less line losses as more fully described in A-3 of this data request.

LG&E Originally Files at 50/50 Split

		Cost Recovery Component (DCR)	Lost Sales Component (DRLS)	Incentive Component (DSMI)	Capital Cost Recovery Component (DCCR)	Balance Adj Component (DBA)	DSM Recovery Component (DSMRC)	
Residential Service, Volunteer Fire Dept., & Residential Time-of-Day Energy and Demand	RS, VFD, RTOD-Energy & RTOD-Demand	0.000	0.000	0.000	0.000	0.000	0.000	¢/kWh
General Service	GS	0.015	0.010	0.001	0.000	0.000	0.026	¢/kWh
Commercial Service under Power Service	PS	0.007	0.004	0.000	0.000	0.000	0.011	¢/kWh
Time-of-Day - Primary & Secondary	TODP & TODS	0.004	0.002	0.000	0.000	0.000	0.006	¢/kWh

LG&E Adjusted 43% Split

		Cost Recovery Component (DCR)	Lost Sales Component (DRLS)	Incentive Component (DSMI)	Capital Cost Recovery Component (DCCR)	Balance Adj Component (DBA)	DSM Recovery Component (DSMRC)	
Residential Service, Volunteer Fire Dept., & Residential Time-of-Day Energy and Demand	RS, VFD, RTOD-Energy & RTOD-Demand	0.000	0.000	0.000	0.000	0.000	0.000	¢/kWh
General Service	GS	0.015	0.008	0.001	0.000	0.000	0.024	¢/kWh
Commercial Service under Power Service	PS	0.007	0.003	0.000	0.000	0.000	0.010	¢/kWh
Time-of-Day - Primary & Secondary	TODP & TODS	0.004	0.002	0.000	0.000	0.000	0.006	¢/kWh

Variance

		Cost Recovery Component (DCR)	Lost Sales Component (DRLS)	Incentive Component (DSMI)	Capital Cost Recovery Component (DCCR)	Balance Adj Component (DBA)	DSM Recovery Component (DSMRC)	
Residential Service, Volunteer Fire Dept., & Residential Time-of-Day Energy and Demand	RS, VFD, RTOD-Energy & RTOD-Demand	0.000	0.000	0.000	0.000	0.000	0.000	¢/kWh
General Service	GS	0.000	(0.002)	0.000	0.000	0.000	(0.002)	¢/kWh
Commercial Service under Power Service	PS	0.000	(0.001)	0.000	0.000	0.000	(0.001)	¢/kWh
Time-of-Day - Primary & Secondary	TODP & TODS	0.000	0.000	0.000	0.000	0.000	0.000	¢/kWh

KU Originally Files at 50/50 Split

Rate Schedule		Cost Recovery Component (DCR)	Lost Sales Component (DRLS)	Incentive Component (DSMI)	Capital Cost Recovery Component (DCCR)	Balance Adj Component (DBA)	DSM Recovery Component (DSMRC)	
Residential Service, Residential Time-of-Day Energy, Residential Time-of-Day Demand & Volunteer Fire Dept.,	RS, RTOD-Energy RTOD-Demand & VFD	0.000	0.000	0.000	0.000	0.000	0.000	¢/kWh
General Service	GS	0.026	0.008	0.001	0.000	0.000	0.035	¢/kWh
All Electric Schools	AES	0.010	0.002	0.000	0.000	0.000	0.012	¢/kWh
Power Service, Time-of-Day Service - Primary & Secondary	PS, TODP, & TODS	0.011	0.002	0.001	0.000	0.000	0.014	¢/kWh

KU Adjusted 57% Split

Rate Schedule		Cost Recovery Component (DCR)	Lost Sales Component (DRLS)	Incentive Component (DSMI)	Capital Cost Recovery Component (DCCR)	Balance Adj Component (DBA)	DSM Recovery Component (DSMRC)	
Residential Service, Residential Time-of-Day Energy, Residential Time-of-Day Demand & Volunteer Fire Dept.,	RS, RTOD-Energy RTOD-Demand & VFD	0.000	0.000	0.000	0.000	0.000	0.000	¢/kWh
General Service	GS	0.026	0.009	0.001	0.000	0.000	0.036	¢/kWh
All Electric Schools	AES	0.010	0.003	0.000	0.000	0.000	0.013	¢/kWh
Power Service, Time-of-Day Service - Primary & Secondary	PS, TODP, & TODS	0.011	0.003	0.001	0.000	0.000	0.015	¢/kWh

Variance

Rate Schedule		Cost Recovery Component (DCR)	Lost Sales Component (DRLS)	Incentive Component (DSMI)	Capital Cost Recovery Component (DCCR)	Balance Adj Component (DBA)	DSM Recovery Component (DSMRC)	
Residential Service, Residential Time-of-Day Energy, Residential Time-of-Day Demand & Volunteer Fire Dept.,	RS, RTOD-Energy RTOD-Demand & VFD	0.000	0.000	0.000	0.000	0.000	0.000	¢/kWh
General Service	GS	0.000	0.001	0.000	0.000	0.000	0.001	¢/kWh
All Electric Schools	AES	0.000	0.001	0.000	0.000	0.000	0.001	¢/kWh
Power Service, Time-of-Day Service - Primary & Secondary	PS, TODP, & TODS	0.000	0.001	0.000	0.000	0.000	0.001	¢/kWh

Below are updated pages for Appendix C page 6 and Appendix D page 6 reflecting the energy from Appendix A. Please note that updated tariffs will be provided upon approval of program.

Louisville Gas and Electric - Electric Service
DRLS Summary

Calculation of DRLS Component from Forecast Sales

12-Month Period Beginning January 1, 2016

Forecast Sales kWh	Residential Service RS et al	General Service GS	Power Service PS	Time of Day CTOD et al
January 2016	380,406,580	114,628,718	153,742,981	89,091,557
February 2016	340,027,159	109,410,588	141,165,728	84,287,927
March 2016	308,883,610	105,449,036	135,853,951	84,081,784
April 2016	272,955,175	101,453,171	134,522,106	84,626,332
May 2016	261,994,405	99,654,720	141,874,854	86,229,606
June 2016	376,536,617	116,283,386	161,469,167	92,101,872
July 2016	499,772,463	135,196,311	173,165,669	95,452,646
August 2016	507,578,434	137,290,344	175,544,034	95,368,600
September 2016	448,304,606	130,585,630	175,830,442	96,808,092
October 2016	278,237,294	106,188,157	149,785,603	87,510,560
November 2016	259,067,658	99,369,408	138,858,391	83,758,603
December 2016	321,001,507	106,416,900	145,365,926	87,450,339
Total	4,254,765,508	1,361,926,369	1,827,178,852	1,066,767,918
Total Energy Savings	-	1,882,010	1,198,525	385,413
Non-variable Revenue per kWh	0.0514	0.0606	0.0508	0.0418
Lost Net Revenue	$ -	$ 114,050	$ 60,885	$ 16,110
DRLS Factor in ¢ per kWh	0.000	0.008	0.003	0.002

Kentucky Utilities - Electric Service
DRLS Summary

Calculation of DRLS Component from Forecast Sales

12-Month Period Beginning January 1, 2016

Forecast Sales kWh	Residential Service RS et al	General Service GS	All Electric Schools AES	Power Service (excl. Industrial) PS et al
January 2016	738,060,232	169,068,954	15,784,254	284,785,035
February 2016	669,489,863	160,168,166	15,231,530	271,045,457
March 2016	560,267,955	150,154,159	14,250,121	266,727,625
April 2016	437,008,255	135,901,075	12,688,112	255,668,418
May 2016	338,696,114	121,204,358	11,507,905	266,027,160
June 2016	434,727,607	133,595,620	11,303,208	291,786,546
July 2016	550,346,566	158,026,135	11,731,979	307,146,936
August 2016	564,777,866	165,097,871	11,827,809	311,764,362
September 2016	516,284,980	157,817,586	11,516,799	308,162,228
October 2016	382,053,058	131,233,370	11,289,313	279,643,901
November 2016	411,953,328	126,775,875	12,464,742	263,868,615
December 2016	579,074,580	146,747,475	14,186,608	277,504,367
Total	6,182,740,404	1,755,790,644	153,782,380	3,384,130,650
Total Energy Savings	-	2,441,316	83,299	2,052,280
Non-variable Revenue per kWh	0.0524	0.0651	0.0489	0.0444
Lost Net Revenue	$ -	$ 158,930	$ 4,073	$ 91,121
DRLS Factor in ¢ per kWh	0.000	0.009	0.003	0.003

b. The reductions shown in Appendix A are based on energy requirements before transmission and distribution line losses. The Total Energy Savings used for lost sales is discounted by line losses to get energy savings at the meter. It is appropriate to use the sales at the meter when calculating the "Lost Sales" calculation as this "net" savings has been historically used to calculate lost sales in previous DSM cases and results in lower lost sales amounts than if the values in Appendix A were used.

LOUISVILLE GAS AND ELECTRIC COMPANY
AND KENTUCKY UTILITIES COMPANY

Joint Response to Commission Staff's
First Request for Information Dated February 15, 2016

Case No.2015-00398

Question No. 6

Witness: David E. Huff

Q-6.

a. State whether KSBA has given any indication that the SEMP might be funded in the future by the local school districts that use the energy managers instead of being funded by the Companies' DSM programs.

b. State whether the level of SEMP energy savings is expected to offset the costs of the programs in the future so that they are self-sufficient.

A-6.

a. As noted in the Fiscal Year 2014 report filed in Case No. 2013-00067[4], the KSBA signs a Memorandum of Agreement with each school that wants to participate in the program. A section of the agreement states that KSBA can reimburse schools based on the relationship of LG&E-KU served schools for the cost of the full-time Energy Manager up to 50 percent of the first year and up to 25 percent of the second year. LG&E and KU understand that a goal of the program is to have the positions be fully funded by the schools.

b. See response to part a.

[4] 2014 School Energy Management Program Annual Report to Louisville Gas & Electric, pages 23 and 24.