Kent W. Blake
Director
State Regulation and Rates

LG&E Energy LLC
220 West Main Street
Louisville, Kentucky 40202
502-627-2573
502-217-2442 FAX
kent.blake@lgeenergy.com

August 19, 2005

VIA HAND DELIVERY

Ms. Elizabeth O'Donnell
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602-0615

RE: The 2005 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company
Case No: 2005-00162

Dear Ms. O'Donnell:

Enclosed please find and accept for filing the original and seven (7) copies of the Response of Louisville Gas and Electric Company and Kentucky Utilities Company to the Commission Staff's Supplemental Data Request dated July 29, 2005, in the above referenced matter.

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

Sincerely,

Kent W Blake

Kent W. Blake

Enclosures

cc: Parties of Record

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

The 2005 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company	)))	Case No. 2005-00162

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY
TO THE COMMISSION STAFF'S
SUPPLEMENTAL DATA REQUEST
DATED JULY 29, 2005

FILED: AUGUST 19, 2005

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

CASE NO. 2005-00162

Response to the Commission Staff's Supplemental Data Request
Dated July 29, 2005

Question No. 1

Responding Witness: Irv Hurst / Keith Yocum

Q-1. Refer to the response to Item 8 of the Commission Staff's June 16, 2005 data request ("Staff's First Request") and Exhibits DSM-3 and -5 of the DSM Analysis contained in Volume III of LG&E/KU's Integrated Resource Plan ("IRP").

a. The response states why LG&E/KU chose 2.4 as the cut-off point for measures identified in Exhibit DSM-3 in the preliminary DSM qualitative screening analysis, but does not explain how 2.4 was selected versus another point, such as 2.3 or 2.5. Explain how 2.4 was selected as the cut-off point.

b. The measures that passed the qualitative screen were included in the Phase I quantitative screening process, the results of which are summarized in Exhibit DSM-5.

(1) In performing the quantitative screen, what dollar amounts were assigned to the kw and kWh reductions?

(2) Describe how these amounts were derived.

(3) Identify and quantify the specific components of the costs, including fuel costs and environmental compliance costs.

A-1. a. During the qualitative screening process, LG&E/KU rated each measure based upon four major attributes: customer acceptance, technical reliability, cost effectiveness of conservation and cost effectiveness of peak demand reduction. Each attribute was assigned a weighting based upon its relative importance. The weighting of attributes was assigned prior to any review of measures and the decision to reduce the cutoff from 2.65 from the last IRP to 2.4 was based upon DSM and Marketing personnel expertise combined with KPSC Staff recommendations from the 2002 IRP to include more measures in the quantitative screening process.

Lowering the threshold from 2.65 to 2.4 resulted in a 35% increase (from 20 to 27) in measures moving to the quantitative step.

b.

(1)

	Average of Hourly Marginal Cost ($/mWh)	Levelized Avoioded Capacity Cost ($/kw-yr)
		41.73
2005	18.93	
2006	19.80	
2007	21.01	
2008	22.37	
2009	22.01	
2010	21.74	
2011	23.06	
2012	24.50	
2013	25.36	
2014	27.07	
2015	28.06	
2016	29.02	
2017	30.82	
2018	31.28	
2019	33.90	

(2) The marginal costs shown above reflect averages of hourly costs from the 2004 avoided cost for LG&E/KU base case scenarios. Full hourly data (8760 hours/year) was utilized in DSManager to evaluate measures.

The avoided capacity cost savings utilized in the DSM analysis was based upon the cost of a simple cycle combustion turbine.

(3) The Company uses Global Energy's Prosym production cost model for determining the hourly marginal costs. The hour-by-hour results include fuel, variable O&M, and environmental costs. The model does not disseminate the components of the marginal cost. These values would vary on an hour-by-hour basis.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

CASE NO. 2005-00162

Response to the Commission Staff's Supplemental Data Request
Dated July 29, 2005

Question No. 2

Responding Witness: Keith Yocum

Q-2. Refer to the response to Item 1(b) of this request and the Annual Average Fuel Forecast shown on page 27 of 44 of the NOx Compliance Analysis contained in Volume III of the IRP.

a. For each of the coal quality categories shown on page 27 of 44, provide a comparison of LG&E/KU's actual fuel cost for January through July of 2005 and the 2005 fuel cost included in the forecast.

b. For the gas and oil categories shown on page 27 of 44, provide a comparison of LG&E/KU's actual fuel cost for January through July of 2005 and the 2005 fuel cost included in the forecast.

A-2. a. The attached table shows the monthly forecasted cost of coal and the actual average monthly coal cost for January 2005- July 2005. Due to the accounting books not being closed for the month of July, some actual July 2005 costs have been estimated.

b. The attached table shows the monthly forecasted cost of oil and gas and the actual monthly cost for January 2005-July 2005. Due to the accounting books not being closed for the month of July, some actual July 2005 costs have been estimated.

Average Fuel Cost

(cents/mmBtu)

		Brown				Ghent 1	Ghent 2-4			Gr River	Tyrone 3	Cane Run	Mill Creek	Trimble			HAEF
	SO2 content->	0.9 #	1.20#	2.75 #	6.36#	6.10#	0.9#	1.20#	6.10#	4.56#	1.80#	6.05#	6.09#	6.50#	Oil	Gas	Gas**
Forecast Annual Avg	2005	133	222	177	137	126	87	185	126	135	208	130	122	133	717	673	748
Forecasted Monthly Avg Fuel Cost (Included in Annual Avg Above)	Jan '05	131	221	176	136	113	81	179	113	129	194	120	117	118	778	767	842
	Feb '05	134	223	178	138	114	84	182	114	132	198	124	119	124	773	761	836
	Mar 05	134	223	179	138	120	85	183	120	134	202	127	120	129	753	740	815
	Apr '05	130	220	175	135	124	87	185	124	135	205	129	121	132	728	654	729
	May '05	127	216	172	132	128	87	185	128	136	207	131	122	134	704	636	711
	Jun '05	130	219	175	134	130	88	186	130	136	209	132	122	136	685	637	712
	Jul '05	131	221	176	136	130	91	189	130	137	211	134	122	137	680	639	714
Actual Monthly Avg Fuel Cost	Jan '05	n/a	n/a	183	n/a	120	141	201	n/a	138	255	119	123	133	715	768	n/a
	Feb '05	n/a	n/a	186	n/a	129	141	197	n/a	138	241	120	127	131	910	791	n/a
	Mar 05	n/a	n/a	190	n/a	132	141	199	n/a	139	242	120	129	136	925	807	n/a
	Apr '05	n/a	n/a	189	n/a	136	141	189	n/a	144	224	123	129	138	1032	847	453
	May '05	n/a	n/a	187	n/a	136	142	189	n/a	147	197	126	130	139	888	604	n/a
	Jun '05	n/a	n/a	185	n/a	136	143	188	n/a	148	208	129	129	140	991	818	n/a
	Jul '05 *	n/a	n/a	185	n/a	139	143	188	n/a	148	234	132	127	140	1110	786	n/a

*Some July 2005 coal costs reflect forecast as opposed to actuals as the closing of the accounting books has not yet occurred.

**Haefling was run on oil in April of 2005, and as such, the Actual Monthly Avg cost if not gas but oil.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

CASE NO. 2005-00162

Response to the Commission Staff's Supplemental Data Request
Dated July 29, 2005

Question No. 3

Responding Witness: Keith Yocum

Q-3. Refer to the response to Item 1(b) of this request and the Cost Comparison of Alternative NOx Compliance Plans shown on pages 31-35 of 44 in the NOx Compliance Analysis contained in Volume III of the IRP.

a. Provide a comparison of the average NOx allowance price per ton reported nationally for the first 7 months of 2005 and the forecast 2005 NOx allowance price shown on pages 31-35 of 44.

b. Provide a comparison of the average SO2 allowance price per ton reported nationally for the first 7 months of 2005 and the forecast 2005 SO2 allowance price shown on pages 31-35 of 44.

A-3. a. The following table compares the average 2005 average annual NO_x emissions cost to the monthly national average NO_x allowance price (as reported by Cantor Fitzgerald) for the first 7 months of 2005. Note that both Vintage 2004 and Vintage 2005 prices are shown. The market places less value on Vintage 2004 allowances because of "flow control". Flow control requires surrendering of Vintage Year 2004 allowances on a 2-for-1 basis.

	Year	**NO_x Emissions**
Forecasted Price ($/Ton)	2005	3146

		Vintage 2004	Vintage 2005
Avg National Allowance Cost ($/Allow.)	Jan '05	2347	3544
	Feb '05	2425	3458
	Mar 05	2422	3440
	Apr '05	2300	3115
	May '05	2300	2850
	Jun '05	2009	2168
	Jul '05	2044	2428

b) The following table compares the average 2005 average annual SO_2 emissions cost to the monthly national average SO_2 allowance price for the first 7 months of 2005.

	Year	**SO_2 Emissions**
Forecasted Price ($/Ton)	2005	392
Avg National Allowance Cost ($/Allow.)	Jan '05	700
	Feb '05	657
	Mar 05	696
	Apr '05	831
	May '05	795
	Jun '05	753
	Jul '05	841

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

CASE NO. 2005-00162

Response to the Commission Staff's Supplemental Data Request
Dated July 29, 2005

Question No. 4

Responding Witness: Irv Hurst

Q-4. Refer to the response to Item 9 of the Staff's First Request and Exhibits DSM-3, -5 and -11 of the DSM Analysis contained in Volume III of the IRP.

a. The response indicates that LG&E/KU generally do not favor implementing DSM measures that do not pass the screening process. Is any type of uncertainty analysis performed as part of the screening process or are the screening criteria and assumptions considered "absolutes" with no flexibility and with no means of incorporating uncertainty into the process. Explain the response.

b. Assume the qualitative screening process, the results of which are summarized on Exhibit DSM-3, included the use of a standard deviation with a 95 percent confidence interval. Identify, given this assumption, the additional measures that would have been passed on to the quantitative screening analysis.

A-4. a. LG&E/KU does not perform a formal uncertainty or sensitivity analysis as part of the screening process. However, assumptions are revisited and reviewed for potential measures that come close but do not initially pass the quantitative analysis. The Companies are seeking to implement new programs that provide positive benefits on an ongoing basis. A much more detailed analysis is performed prior to filing, on measures targeted for implementation.

b. The Companies do not believe that application of statistical methods is appropriate in this process as the evaluations are qualitative in nature and not based upon random sampling. Nevertheless, use of the standard deviation provides a 95% confidence level that the mean of the population of measures falls between 2.13 and 2.33. All but two measures above this mean range had already been passed on to the quantitative screening process. Moving back to the lower value of the mean range would have resulted in twenty three additional measures being moved to the next level for quantitative analysis. See attached.

Additional DSM Measures That May Have Been Carried Forward For Quantitative Analysis

	Customer Acceptance 25%	Technical Reliability 15%	Cost Effectiveness of Energy Conservation 25%	Cost Effectiveness of Peak Demand Reduction 35%	Weighted Average	Market Segment
Assume Upper Limit						
Interruptible Rates	1	3	1	4	2.35	C
Desiccant Cooling	2	2	2	3	2.35	C
Assume Lower Limit						
Demand Subscription	2	1	1	4	2.3	C
Refrigeration Case Covers/Doors	2	4	2	2	2.3	C
Chilled Water System Optimization	3	3	3	1	2.3	C
Dual Fuel Heating System	3	4	1	2	2.3	R
Passive Solar Heating (new construction)	3	3	3	1	2.3	R
Water Heater Replacement (elect. to gas)	2	4	2	2	2.3	R
Building Commissioning	2	2	3	2	2.25	C
District Heating and Cooling	2	2	3	2	2.25	C
Thermal Energy Storage (special rate)	2	3	1	3	2.25	C
Strategic Tree Planting	2	2	3	2	2.25	C
Removal of 2nd Refrigerator	2	4	3	1	2.2	R
Removal of 2nd Freezer	2	4	3	1	2.2	R
High Efficiency Outdoor Lighting (retrofit)	2	4	3	1	2.2	R
High Efficiency Outdoor Lighting (new)	2	4	3	1	2.2	R
Air-Air Heat Pump (replacing heat pump)	3	4	2	1	2.2	R
Room Air Conditioner Replacement	3	4	2	1	2.2	R
Water Heater Replacement (elect. to elect.)	4	4	1	1	2.2	R
High Efficiency Fryers	2	3	2	2	2.15	C
Clean CHP/CHRP	2	3	2	2	2.15	C
Window Shading and Films	2	3	2	2	2.15	R
Multi-Family New/Rehab Design Assistance	2	3	2	2	2.15	R