PPL companies

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RECEIVED
JUL 14 2011
PUBLIC SERVICE COMMISSION

Mr. Jeff DeRouen
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40601

July 14, 2011

RE: ***The 2011 Joint Integrated Resouce Plan of Louisville Gas and Electric Company and Kentucky Utilities Company* – Case No. 2011-00140**

Dear Mr. DeRouen:

Please find enclosed and accept for filing the original and ten (10) copies of the response of Louisville Gas and Electric Company and Kentucky Utilities Company to the Commision Staff's Second Information Request dated June 29, 2011, in the above-referenced matter.

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

Sincerely,

Rick E. Lovekamp

Rick E. Lovekamp

cc: Parties of Record

COMMONWEALTH OF KENTUCKY

RECEIVED
JUL 14 2011
PUBLIC SERVICE
COMMISSION

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

THE 2011 JOINT INTEGRATED RESOURCE PLAN	**)**
OF LOUISVILLE GAS AND ELECTRIC COMPANY	**) CASE NO.**
AND KENTUCKY UTILITIES COMPANY	**) 2011-00140**

RESPONSE OF
LOUISVILLE GAS AND ELECTRIC COMPANY
AND
KENTUCKY UTILITIES COMPANY
TO THE COMMISSION STAFF'S SECOND INFORMATION REQUEST
DATED JUNE 29, 2011

FILED: July 14, 2011

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

Michael E. Hornung

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 14th day of July 2011.

Tammy J. Elzy (SEAL)

Notary Public

My Commission Expires:

November 9, 2014

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

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

Charles R. Schram
Charles R. Schram

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 14th day of July 2011.

Tammy J. Elzy (SEAL)
Notary Public

My Commission Expires:

November 9, 2014

VERIFICATION

COMMONWEALTH OF KENTUCKY)
) SS:
COUNTY OF JEFFERSON)

The undersigned, **Shannon L. Charnas**, being duly sworn, deposes and says that she is Director – Accounting and Regulatory Reporting for LG&E and KU Services Company, and that she has personal knowledge of the matters set forth in the responses for which she is identified as the witness, and the answers contained therein are true and correct to the best of her information, knowledge and belief.

Shannon L Charnas
Shannon L. Charnas

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 14th day of July 2011.

Tammy J. Elzy (SEAL)
Notary Public

My Commission Expires:

November 9, 2014

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request
Dated June 29, 2011

Case No. 2011-00140

Question No. 1

Witness: Michael E. Hornung

Q-1. Refer to Volume 1, page 8-111, Table 8.(5)(c)-I1 of the IRP. Explain whether there are any costs recovered through the Demand-Side Management ("DSM'') surcharges for those programs with a Total Resource Cost Test result of 0.00 other than program costs.

A-1. The programs with a Total Resource Cost Test result of 0.00 represent programs that the Companies are not accrediting any benefits within the TRC calculation (Customer Education & Public Information, Dealer Referral Network, Residential Responsive Pricing, and Program Development & Administration). The cost of these programs is included within the Total Resource Cost Test result for the combined DSM portfolio score of 3.01. The Companies' expenses and allowable incentive are recovered through the Demand-Side Management surcharge for these programs which have a Total Resource Cost of 0.00 but support the overall portfolio of program offerings. The Companies have requested the Commission's approval for the programs with a status of Revised or New.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request
Dated June 29, 2011

Case No. 2011-00140

Question No. 2

Witness: Charles R. Schram / Shannon L. Charnas

Q-2. Refer to the response to Item 1 of Commission Staff's first information request ("Staffs First Request"). Describe the change in methodology in accounting for Company Use that occurred in 2009, and explain why there was such a decrease in Company Use as a result of the change.

A-2. Please see the revised response to Question No. 1 of the Commission Staff's First Information Request dated May 26, 2011.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request Dated June 29, 2011

Case No. 2011-00140

Question No. 3

Witness: Michael E. Hornung

Q-3. Refer to the response to Item 4 of Staff's First Request.

a. The projected LG&E energy reduction for 2008 was 62,583 MWh while the actual energy reduction was 3,996 MWh. Explain the disparity between the actual and projected reductions.

b. The projected KU energy reduction for 2008 was 63,038 MWh while the actual energy reduction was 3,312 MWh. Explain the disparity between the actual and projected reductions.

c. The projected KU energy reduction for 2009 was 61,678 MWh while the actual energy reduction was 4,510 MWh. Explain the disparity between the actual and projected reductions.

d. Explain why, for every peak demand reduction except for LG&E in 2010, the actual peak reductions were considerably short of projected peak reductions.

A-3. a. On March 31, 2008, the Commission issued an order in Case No. 2007-00319 approving the Companies current portfolio of energy efficiency programs. The lower actual demand and energy savings in 2008 and 2009 were primarily attributable to the significant investment in time and resources to initiate operations and the obtaining of program participants, resulting in a disparity between projected and actual results.

The three years since the approval of these programs has granted insight into the challenges and obstacles associated with taking a program achieving approximately 4,000 Mwh per year for 2001 through 2007 (KPSC Case No. 2000-459) to a more aggressive program approved in Case No. 2007-00319. The time associated with the contractual procurement efforts, the economic downturn that impacted commercial customers' economic ability to participate within the DSM programs and the removal of approximately 14MW of demand associated with the T-stat removal primarily in 2009. As a result of the lessons learned and input from the DSM Advisory Group, the Companies filed with the Commission in early 2011 its Demand Side Management/Energy Efficiency ("DSM/EE") Program Plan to further increase energy and demand savings for the Companies. Upon approval recover the energy and demand lost in the early years of program initiation and, the Companies DSM/EE portfolio of programs will operate through December 31, 2017 and allow the Companies to achieve 500MW of demand reduction by 2018. In 2010, LG&E was able to meet projected demand savings due to the full implementation of the Commercial Rebate program.

b. Please refer to the response to Question No. 3a.

c. Please refer to the response to Question No. 3a.

d. Please refer to the response to Question No. 3a. for an explanation of the disparity between the actual and projected reductions in years 2008-2009 for LG&E and KU.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request
Dated June 29, 2011

Case No. 2011-00140

Question No. 4

Witness: Charles R. Schram

Q-4. Refer to the response to Item 10 of Staff's First Request. Explain whether joining a Regional Transmission Organization would affect a Contingency Reserve Sharing Group ("CRSG") participant's membership in the CRSG for reserve sharing purposes.

A-4. It is the Companies' understanding that a participant in a CRSG would likely terminate its membership in a CRSG upon joining a Regional Transmission Organization that operates a reserve market.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request
Dated June 29, 2011

Case No. 2011-00140

Question No. 5

Witness: Charles R. Schram

Q-5. Refer to the response to Item 21 of Staff's First Request. Explain whether the change described in the response affects only the load forecast.

A-5. The change described in the response to Item 21, regarding average annual "Utility Use and Other" class in 2010, does not affect the load forecast. Usage per customer for this category is a calculated value and was affected due to the manner in which lighting customers were calculated, but overall load was not impacted.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request
Dated June 29, 2011

Case No. 2011-00140

Question No. 6

Witness: Michael E. Hornung

Q-6. Refer to the response to Item 23.c. of Staff's First Request. Explain why the percentage of planned annual DSM expenditures relative to annual electric sales revenue is much larger for LG&E than for KU.

A-6. DSM program participation and costs are split equally among LG&E and KU. The difference in the percentages is a result of KU having more customers than LG&E (516,000 versus 397,000 electric customers).

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request
Dated June 29, 2011

Case No. 2011-00140

Question No. 7

Witness: Charles R. Schram

Q-7. Refer to the response to Item 24 of Staff's First Request. Explain how the discount rate of 7.77 percent was derived.

A-7. The 7.77 percent discount rate was calculated as the weighted average cost of capital using the total electric capitalization and the average debt rate applicable to KU and LG&E collectively at the end of 2009 and the 10.63 percent return on equity that shall apply to the Environmental Cost Recovery mechanism as specified in the 2009 rate case (Case Nos. 2009-00548 and 2009-00549). The calculation of this discount rate is shown in the following table.

	Electric Capitalization *($000)*	Percent of Total Capitalization	Cost Rate	Weighted Average Cost Rate
Short-Term Debt	248,375	4.14%	0.737%	0.03%
Long-Term Debt	2,544,883	42.43%	4.865%	2.06%
Common Equity	3,204,706	53.43%	10.63%	5.68%
Total	**5,997,964**	**100.00%**		**7.77%**

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request
Dated June 29, 2011

Case No. 2011-00140

Question No. 8

Witness: Michael E. Hornung / Charles R. Schram

Q-8. Refer to the response to Item 29.b. of Staff's First Request. Provide the values used for the environmental costs and explain how they were determined.

A-8. Please refer to the table below for environmental cost values related to sulfur dioxide and nitrous oxide. Emission allowance price forecasts are developed by the Companies using current market information, and, for longer-term forecasts outside advisory services are used. Due to the different timeframes of development an older forecast was used for the development of the DSM programs, which does not reflect the emission allowance prices used in the Supply Side Technology Alternatives that considers the impact of the anticipated environmental regulations.

Emission Allowance Prices ($/ton)

	SO2	**NOx**	
		Annual	Seasonal
2010	$220	$2,500	$675
2011	$220	$2,500	$675
2012	$321	$2,611	$605
2013	$422	$2,722	$535
2014	$522	$2,833	$464
2015	$535	$2,734	$475
2016	$674	$2,806	$488
2017	$752	$2,878	$500
2018	$842	$2,950	$513
2019	$911	$3,021	$525
2020	$1,035	$3,093	$538
2021	$1,173	$3,171	$551
2022	$1,494	$3,250	$565
2023	$1,560	$3,331	$579
2024	$1,798	$3,414	$594
2025	$1,803	$3,500	$609
2026	$1,808	$3,587	$624
2027	$1,808	$3,677	$639
2028	$1,808	$3,769	$655
2029	$1,808	$3,863	$672
2030	$1,808	$3,960	$689
2031	$1,808	$4,039	$702
2032	$1,808	$4,120	$716
2033	$1,808	$4,202	$731
2034	$1,808	$4,286	$745
2035	$1,808	$4,372	$760

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request
Dated June 29, 2011

Case No. 2011-00140

Question No. 9

Witness: Charles R. Schram

Q-9. Refer to the response to Item 38.a. (1) of Staff's First Request, which states that LG&E/KU, in conjunction with Black & Veatch, '[d]eveloped capital and operating cost estimates for the least-cost option for installing emission controls at each unit..." and refers to the Direct Testimony of John N. Voyles, Jr. ("Voyles Testimony") in Case Nos. 2011-00161 and 2011-00162. The Voyles Testimony, at page 5, line 17, states "[t]he Companies retained Black and Veatch in May 2010 to assist in providing a rough order-of-magnitude estimate of the air quality compliance expenditures that would be required for each generating unit to meet expected future regulatory requirements." Item 38.a(1) asked, concerning the emissions control equipment that would be required for the Cane Run, Green River, and Tyrone coal units, that LG&E/KU "Identify all sources relied upon, and explain how the estimates were determined, to develop the capital costs" of said equipment. Explain whether the estimates relied on by LG&E/KU to make the decision to retire the Cane Run, Green River and Tyrone coal units are solely from the "rough order-of-magnitude estimate" referenced in the Voyles Testimony or if there are other sources not identified in the response.

A-9. The planning assumptions in the Companies' 2011 Integrated Resource Plan to retire Cane Run, Green River and Tyrone were based on the "rough order-of-magnitude" cost estimates referenced in the Voyles Testimony. Given the operating characteristics, age, and size of the units as well as the controls needed to comply with current environmental regulations, the cost of controls at Green River and Tyrone cannot be justified. Based on current cost estimates and the potential for future environmental control costs, this is also true for Cane Run. However, since a significant reduction in the cost of controls for Cane Run could impact the Companies' ultimate recommendation regarding Cane Run, the Companies began developing more refined cost estimates for Cane Run in July using the recently constructed FGD system at Brown and the 2011 Black & Veatch studies for Ghent, Mill Creek and Brown as a basis. These refined estimates are not completed and were not available for consideration in the Integrated Resource Plan or the Companies' recent ECR filing. Given the short timelines for complying with environmental regulations, the Companies instead focused its engineering resources on refining plans for the stations for which – based on initial cost estimates – new environmental controls are recommended. When more refined estimates for the cost of controls at Cane Run are available, this information will be incorporated in either a subsequent ECR filing or a filing for a Certificate of Convenience and Necessity.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to the Commission Staff's Second Information Request
Dated June 29, 2011

Case No. 2011-00140

Question No. 10

Witness: Charles R. Schram

Q-10. Refer to the response to Item 38.b. on Staff's First Request. The request concerned whether any sensitivity analysis was performed on the capital and operating costs for the emission control equipment required for the Cane Run, Green River and Tyrone coal units in the scenario in which they were not retired.

a. The response refers to the Direct Testimony of Charles R. Schram ("Schram Testimony") in Case Nos. 2011-00161 and 2011-00162 and the "exhaustive sensitivity analysis" the IRP "assumed would be conducted" as part of the Environmental Cost Recovery evaluation in those cases "after key assumptions for the 2011 IRP were finalized." Provide the specific location in the Schram Testimony, or exhibits thereto, where the referenced sensitivity analysis can be found.

b. Exhibit CRS-1 to the Schram Testimony is the 2011 Air Compliance Plan for LG&E/KU. Table 92, on page 46 of Exhibit CRS-1 is a summary of the Present Value Revenue Requirement ("PVRR") analysis of installing environmental controls versus retiring and replacing coal units at the different LG&E/KU generating stations. Of the units that LG&E/KU are planning to retire, Green River 4 has the largest "negative" PVRR difference of $110 million. This difference equals less than 0.4 percent of the total PVRR shown for Green River 4. Explain how LG&E/KU determined that the PVRR analysis results are sufficiently robust to rely upon differences of this magnitude and less, for the other units planned for retirement, to make decisions to retire six existing generating units.

A-10.

a. The following sensitivity analyses were performed as part of the Environmental Cost Recovery evaluation, but were not included in the referenced Schram Testimony. The Companies will plan to supplement this response on or before July 29, 2011 with the mentioned analysis.

1. Fuel Price: The decisions to install new environmental controls were evaluated under various coal and natural gas price scenarios.
2. Future Operation: For each of the units for which controls are recommended, the Companies computed the number of years the units would have to continue to operate to justify the cost of controls.
3. Future Environmental Costs: For each of the units for which controls are recommended, the Companies computed the cost of potential future controls that could be incurred without changing the Companies' current recommendation.

b. The Companies evaluated the decisions to install new environmental controls under various coal and natural gas price scenarios. In evaluating negative differences in PVRR, the Companies primarily compared the difference in PVRR to the cost of controls. The difference in PVRR is roughly equal to the amount the cost of controls would have to decrease to justify installing controls.