COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of: APPLICATION OF KENTUCKY UTILITIES COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC RATES	:	CASE NO., 2018-00294
In the Matter of: APPLICATION OF LOUISVILLE GAS AND ELECTRIC COMPANY FOR AN ADJUSTMENT OF ITS ELECTRIC AND GAS RATES	:	CASE NO. 2018-00295

KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.
RESPONSE TO COMMISSION STAFF'S INITIAL DATA REQUESTS

WITNESS/RESPONDENT RESPONSIBLE: Lane Kollen

QUESTION No. 1
Refer to the Direct Testimony of Lane Kollen (Kollen Testimony), page 25. Fully explain why the error in accumulated depreciation should only reduce equity capitalization.

RESPONSE:
As stated at lines 1-2 of the referenced testimony, the failure to reflect the depreciation expense for the ash ponds had the effect of overstating earnings for the 22-month period. The absence of depreciation expense on the ash ponds increased earnings. The increase in earnings increased the retained earnings component of common equity. The increase in earnings did not change the debt components of capitalization.

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QUESTION No. 2
Refer to the Kollen Testimony at 26-28. Confirm that including the additional revenues in the forecasted test year would only affect the required revenue requirement increase and not the total revenue requirement.

RESPONSE:
Confirmed, assuming no increase in fixed costs to serve the load.

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WITNESS/RESPONDENT RESPONSIBLE: Lane Kollen

QUESTION No. 3
Refer to the Kollen Testimony, page 52, lines 19-20.

a. Confirm that the 30-year Treasury yield can change between now and the publication of the final order in the instant case.
b. If 1 a. above is confirmed, explain whether KIUC will support an adjustment, whether an increase or decrease, to reflect the most current 30-year Treasury yield.

RESPONSE:

a. Confirmed.
b. KIUC agrees that the most current 30-year Treasury yield should be used to calculate the forecast cost of the new debt issue, assuming that it remains 30-year debt.

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WITNESS/RESPONDENT RESPONSIBLE: Lane Kollen

QUESTION No. 4
Refer to the Kollen Testimony, page 53, line 5. Confirm that KIUC supports Kentucky Utilities Company's proposed credit spread of 1.25 percent. If this cannot be confirmed, explain why.

RESPONSE:
KIUC neither supports nor opposes the proposed credit spread of 1.25%. Mr. Kollen simply accepted it for purposes of this case. He did not study or address the proposed credit spread, although he notes that the proposed spread ostensibly was consistent with actual credit spreads on prior debt issuances (refer to discovery responses included as Exhibit___(LK-29).

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WITNESS/RESPONDENT RESPONSIBLE: Lane Kollen

QUESTION No. 5
Refer to the Kollen Testimony, page 55, lines 1-3. Provide any updates to the average authorized electric return on equity in general rate cases as they become available.

RESPONSE:
Mr. Kollen relied on source documents provided by the Companies in response to discovery. Mr. Kollen will provide any updates that become available to him.

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WITNESS/RESPONDENT RESPONSIBLE: Stephen J. Baron

QUESTION No. 6
Refer to the Direct Testimony of Stephen J. Baron (Baron Testimony), page 14, Table 1 and page 15, Table 2. Provide similar tables with a further breakdown within each TIER of each rate class's Rate of Return.

RESPONSE:
The rate of return for each rate class using the KIUC 12 CP methodology for LG&E and KU is shown in the last column of Mr. Baron's Exhibits SJB-5 and SJB-6.

Summaries are shown below:

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KU Rates of Return by Class at Present Rates

	12 CP		LOLP	
	ROR	Relative ROR	ROR	Relative ROR
Residential	2.96%	0.53	3.03%	0.54
General Service	12.40%	2.22	11.31%	2.03
All Electric Schools	3.72%	0.67	6.70%	1.20
Power Service	11.20%	2.01	11.18%	2.00
Power Service	14.48%	2.59	15.22%	2.73
Time of Day	6.21%	1.11	6.15%	1.10
Time of Day	4.46%	0.80	4.50%	0.81
Retail Transmission Service	5.58%	1.00	5.77%	1.03
Fluctuating Load Service	4.86%	0.87	5.05%	0.90
Outdoor Lighting	9.86%	1.77	10.48%	1.88
Lighting Energy	14.81%	2.65	21.30%	3.82
Traffic Energy	14.75%	2.64	16.53%	2.96
Outdoor Sports Lighting	7.49%	1.34	9.47%	1.70
Electric Vehicle Charging	-9.39%	(1.68)	-9.39%	(1.68)
Solar Share	-2.75%	(0.49)	-2.75%	(0.49)
Total System	5.58%	1.00	5.58%	1.00

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LG&E Rates of Return by Class at Present Rates

	12 CP		LOLP	
	ROR	Relative ROR	ROR	Relative ROR
Residential	3.37%	0.50	2.69%	0.40
General Service	11.79%	1.75	11.74%	1.74
Rate PS	11.56%	1.72	12.70%	1.89
Rate PS	12.40%	1.84	14.44%	2.15
Rate TOD	8.96%	1.33	9.52%	1.42
Rate TOD	8.19%	1.22	9.50%	1.41
Rate RTS	9.06%	1.35	12.57%	1.87
Special Contract	4.35%	0.65	6.82%	1.01
Street Lighting	6.98%	1.04	7.49%	1.11
Street Lighting	11.93%	1.77	18.96%	2.82
Traffic Street Lighting	13.39%	1.99	16.64%	2.47
Outdoor Sports Lighting	12.34%	1.83	12.65%	1.88
Electric Vehicle Charging	-7.48%	(1.11)	-7.48%	(1.11)
Solar Share	5.02%	0.75	5.02%	0.75
Business Solar	6.97%	1.04	6.97%	1.04
Total System	6.73%	1.00	6.73%	1.00

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WITNESS/RESPONDENT RESPONSIBLE: Stephen J. Baron

QUESTION No. 7
Refer to the Baron Testimony, page 18, lines 7-15.

a. Explain why there were no adjustments made to the 12 coincident peak (12 CP) cost-of-service study (COSS).
b. Provide how the impact of the perceived benefits not reported in Rate FLS can be quantified and imputed into a COSS.

RESPONSE:

a. Mr. Baron did not perform a specific analysis to measure the impact of the FLS curtailment provisions, and therefore there was no adjustment made to reflect this in his cost of service analysis. Mr. Baron does believe that the impact of the FLS curtailment provisions, if reasonably measured, would increase the reported FLS rate of return at present rates.

b. There are likely a number of methods that could be used to estimate the system benefits of the FLS curtailment provisions. KU, in response to KIUC 1-25 stated as follows:

LG&E/KU currently responds to generation contingencies, such as unplanned outages or derates, in the first 15 minutes by 1) deploying spinning reserves, 2) if needed, calling on the FLS curtailment provision to remove the uncertainty of fluctuating load during an ensuing 10-minute period, 3) if needed, deploying quick start combustion turbines, and 4) if needed, invoking ARS.

The Company then stated that without FLS (step 2), they would move to step 3. Following this scenario, Mr. Baron has developed an estimate of the annual benefit of FLS curtailment by assuming that one of the Trimble County CTs would start-up, in lieu of curtailing the FLS load.

Based on the Company's response to KIUC 1-23, there were 67 FLS curtailments during the 22-month period January 1, 2017 through December 1, 2018. This produces an average of 3.05 curtailments per month, or 36.6 per year. Based on the data provided in response to KIUC 1-23, the average FLS load on line at the time of each curtailment was 76.6 mW. One measure of the annual benefit of FLS curtailment can be estimated by assuming that a CT would otherwise have to start-up and run for 10 minutes, if the FLS

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load was not available to curtail on 5 minutes notice.

The annual avoided cost would therefore be comprised of two components; 1) the production cost of running the CT for ten minutes times 36.6 curtailment events at a load of 76.6 mW, and 2) the cost of 36.6 CT start-ups. To estimate this benefit, Mr. Baron relied on the 2017 average production cost of a Trimble County CT and an estimate of the cost per start-up for a large CT using data from an April 2012 National Renewable Energy Laboratory Report: Power Plant Cycling Costs. The Table below summarizes this benefit, which amounts to $632,614 per year.

Estimate of FLS Annual Curtailment Benefit

1	$/mWh		65	(Trimble County CT cost - 2017 FERC Form 1)
2	Avg mW		76.6	
3	Hours/event		0.17	
4	Events/year		36.55	
5	Cost		30,345	
6	CT Start-up Cost	$	103	/mW (Table 1.1 NREL Study - Large CT median start-up costs)
7	mW		160.0	(Trimble County CT)
8	Startups/year		36.55	
9	Cost		602,269	
10	Total	$	632,614	(Line 5 + Line 9)

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WITNESS/RESPONDENT RESPONSIBLE: Stephen J. Baron

QUESTION No. 8
Refer to page 8 of the Direct Testimony of James T. Selecky on behalf of the Department of Defense and all other Federal Executive Agencies (DOD/FEA). Mr. Selecky recommends using the six CP (6 CP) methodology to allocate the fixed production costs.

a. State the opinion of KIUC regarding the 6 CP methodology.
b. State whether KIUC believes the 6 CP methodology would produce a COSS that could be used to allocate the revenue increase.
c. State whether KIUC supports the DOD/FEA's proposed COSS.

RESPONSE:

a. The 6 CP method is a reasonable measure of cost responsibility. It is recognized in the NARUC manual and is used by Appalachian Power Company in Virginia (an AEP Affiliate) and previously by East Kentucky Cooperative.

b. The results of the 6 CP study are a valid consideration when starting the public policy process of setting rates, along with important considerations of economic development. As I discussed in my testimony, the Kentucky industrial manufacturing sector is very energy intensive and competitive electric rates for that sector are essential for achieving a prosperous state economy that benefits residential customers and the commercial establishments that service them. The 6 CP study provides further, strong support for the TIER approach used to allocate the revenue increase to rate classes that the Companies propose and that KIUC is recommending, with modifications to reflect the termination of the TCJA surcredits. The results of the 6 CP method confirm the reasonableness of my recommendation.

c. KIUC continues to support the 12 CP study that was filed in this case. KIUC does not object to a 6 CP cost of service study, but does not agree with the DOD/FEA's proposed revenue allocation. KIUC believes that both the 12 PCP cost studies and the 6 CP cost studies support KIUC's proposed revenue allocation based on a TIER approach that incorporates the termination of the TCJA surcredits into the Companies' proposed TIER revenue allocation methodology.