COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2021 JOINT INTEGRATED RESOURCE PLAN OF LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY	**)** **)** **)** **)**	**CASE NO. 2021-00393**

RESPONSE OF LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY TO SIERRA CLUB'S POST-HEARING REQUEST FOR INFORMATION DATED JULY 18, 2022

FILED: AUGUST 8, 2022

VERIFICATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF JEFFERSON)

The undersigned, **Lonnie E. Bellar**, being duly sworn, deposes and says that he is Chief Operating Officer for Louisville Gas and Electric Company and Kentucky Utilities Company and an employee of 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.

Lonnie E. Bellar

Subscribed and sworn to before me, a Notary Public in and before said County and State, this 3rd day of August 2022.

BETTY LYNN BRINLY NOTARY PUBLIC STATE AT LARGE, KY. ID KYNP52213 MY COMMISSION EXPIRES 6/21/2026

Notary Public

Notary Public ID No. KYNP52213

My Commission Expires:

June 21, 2026

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Post-Hearing Request for Information
Dated July 18, 2022

Case No. 2021-00393

Question No. 1

Responding Witness: Lonnie E. Bellar

Q-1. In 2011, this Commission found that the cost per KWh of OVEC's generation compared quite favorably to the Company's generation costs.

a) Is the same true today?

b) Which LG&E/KU units generate electricity that cost $[redacted]/MWh or more? Please produce all documents that confirm your answer.

c) Please provide the total operating costs per MWh for all of the coal fired and gas fired operating units operated by LG&E/KU.

A-1. Certain information included in the responses below is confidential and is being provided under seal subject to the terms of the confidentiality petition filed with the Commission in this proceeding regarding the same subject matter on February 11, 2022, particularly with regard to the request for confidential protection for the Companies' response to Sierra Club 1-17 and its subparts.

a) Yes. The Companies routinely economically dispatch OVEC to serve native load customers. The Companies typically economically dispatch OVEC after their own coal units and Cane Run 7 but before Brown Unit 3 and the Companies' simple-cycle combustion turbines.

Another point of comparison is to the Companies' production costs as presented in their 2020 rate cases. For example, as shown in Exhibit WSS-2 (a copy of which is attached for reference), the total Rate RS generation cost on a per kWh basis for KU is $75.36/MWh and $80.89/MWh for LG&E. The total cost of OVEC on a per MWh basis value cited by Sierra Club is lower than those values and consists of comparable components.

In addition, as the Companies demonstrated in their comments filed in this proceeding, only NGCC without CCS could consistently produce the same production profile as OVEC at a lower LCOE than OVEC itself:

Table 4: LCOE ($/MWh)

Generation Resource	Generation Profile				
	Dispatchable			Non-Dispatchable	
	NGCC 85% Capacity Factor	Coal 58% Capacity Factor	SCCT 9% Capacity Factor	Solar 26% Capacity Factor	Wind 28% Capacity Factor
Renewable Portfolio 1	310	360	562	28	533
Renewable Portfolio 2	183	246	522	28	43
NGCC	35-52	43-60	187-204	77-94	73-90
NGCC with CCS	63-82	81-101	390-409	153-172	145-164
SCCT	42-68	49-75	162-188	75-101	72-98
OVEC[55]	48-49	56-61	198-259	89-105	84-100

This is consistent with the Companies' economic dispatch of OVEC typically after its NGCC unit and most (if not all) of its coal units but before dispatching most CT units.

Moreover, OVEC's current energy component charges and near-term projected energy component charges shown in the confidential attachment 11 to the Companies' response to SC 1-17, which attachment Sierra Club discussed at the hearing in this proceeding, are actually ***significantly lower*** than the projected energy component charges for the same years when the Commission approved extending the ICPA in 2011. The Companies provided a projection of OVEC costs for 2010 through 2040 in response to PSC 1-10 in Case Nos. 2011-00099 and 2011-00100, which is attached hereto for reference.[1] The table below compares the OVEC energy component charges projected for the years 2022-2026 in those cases and those cited by Sierra Club in this proceeding:

Comparison of OVEC Energy Component Projections (2011 vs. 2021)

Over Five-Year Period 2022 - 2026

Case No.	2022 ($/MWh)	2023 ($/MWh)	2024 ($/MWh)	2025 ($/MWh)	2026 ($/MWh)
2011-0099 & 2011-00100	37.64	38.77	39.93	41.13	42.36
2021-00393	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

Likewise, OVEC's projected total costs per MWh are actually ***lower*** than projected in 2011 when spread over the same number of MWh. For example,

[1] The projections were confidential at the time but are now sufficiently dated that they do not need to remain confidential.

using 8,750,000 MWh, which ties to the $[redacted]/MWh value cited by Sierra Club in part b of this request for the year 20[redacted]e 2011 projected total OVEC billable cost for 2022 over 8,750,000 MWh would have been much higher: $121.26/MWh. In other words, OVEC is significantly more economical today than the Companies projected in 2011 when the Commission approved extending the ICPA.

Therefore, both relative to the projections on which the Commission approved the ICPA extension in 2011 and compared to current costs, OVEC remains a cost-effective energy source for the Companies' customers.

b) The Companies' Haefling CTs have fuel costs greater than $[redacted]/MWh. See IRP Vol. I Tables 8-6 and 8-7. Also, as the attachment to par[redacted]elow shows, a number of the Companies' CTs have average production costs greater than $[redacted]/MWh.

But the requested comparison is unreasonable and misleading; it asks the Companies to compare the average cost of OVEC (i.e., spreading all OVEC costs, fixed and otherwise spread over a relatively small number of MWh) to the cost of the Companies' units to "generate electricity," which is a purely variable cost that excludes capital cost and fixed O&M cost. That is an apples-to-oranges comparison at best. Even comparing the Companies' average production costs to the average cost of OVEC is not truly apples-to-apples because it includes OVEC costs not included in the Companies' average production cost calculations.

A more apt comparison is the one presented in the response to part a. above, namely comparing the Companies' total generation cost on a per kWh (or MWh) basis to OVEC's total cost on the same energy basis. Such a comparison shows OVEC to be an economical component of the Companies' total generation mix.

c) See attachment provided in Excel format for the variable (fuel) and production (variable and fixed operating and maintenance) costs per MWh by generating coal fired and gas fired units and Company.[2] OVEC's comparable costs are $[redacted] per MWh for variable-only costs and a range between $[redacted] and $[redacted] per MWh including fixed operating and maintenance costs, using the range of energy generation assumed in OVEC's forecast shown in Attachment 11 to SC 1-17.

[2] Figures provided exclude the associated capital costs including depreciation and the return on capital.

Exhibit WSS-2

Cost Components for
Residential Service Rate RS

Kentucky Utilities Company

Unit Cost of Service Based on the Cost of Service Study
For the 12 Months Ended June 30, 2022

Rate RS

Description	Amount	Production		Transmission	Distribution		Customer Service Expenses	Total
		Demand-Related	Energy-Related	Demand-Related	Demand-Related	Customer-Related	Customer-Related	
(1) Rate Base	$ 2,457,262,896	$ 1,219,918,258	$ 27,493,896	$ 377,164,232	$ 304,728,690	$ 521,584,458	$ 6,373,362	$ 2,457,262,896
(2) Rate Base Adjustments	$ -	-	-	-	-	-	-	$ -
(3) Rate Base as Adjusted	$ 2,457,262,896	$ 1,219,918,258	$ 27,493,896	$ 377,164,232	$ 304,728,690	$ 521,584,458	$ 6,373,362	$ 2,457,262,896
(4) Rate of Return	4.74%	4.74%	4.74%	4.74%	4.74%	4.74%	4.74%	
(5) Return	$ 116,464,860	$ 57,819,458	$ 1,303,105	$ 17,876,142	$ 14,442,974	$ 24,721,108	$ 302,073	$ 116,464,860
(6) Interest Expenses	$ 51,506,086	$ 25,570,408	$ 576,293	$ 7,905,647	$ 6,387,344	$ 10,932,804	$ 133,590	$ 51,506,086
(7) Net Income	$ 64,958,773	$ 32,249,050	$ 726,813	$ 9,970,494	$ 8,055,630	$ 13,788,304	$ 168,483	$ 64,958,773
(8) Income Taxes	$ 20,618,122	$ 10,235,951	$ 230,693	$ 3,164,667	$ 2,556,883	$ 4,376,452	$ 53,477	$ 20,618,122
(9) Operation and Maintenance Expenses	$ 369,164,547	$ 54,624,948	$ 191,795,621	$ 25,536,905	$ 17,160,390	$ 37,627,884	$ 42,418,799	$ 369,164,547
(10) Depreciation Expenses	$ 164,107,492	$ 118,364,937	$ -	$ 15,509,606	$ 11,180,449	$ 19,052,501	$ -	$ 164,107,492
(11) Other Taxes	$ 23,280,695	$ 12,676,971	$ -	$ 3,123,044	$ 2,765,995	$ 4,714,686	$ -	$ 23,280,695
(12) Curtailable Service Credit	$ 7,647,274	$ 7,647,274						$ 7,647,274
(13) Expense Adjustments - Prod. Demand	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
(14) Expense Adjustments - Energy	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
(15) Expense Adjustments - Trans. Demand	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
(16) Expense Adjustments - Distribution	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
(17) Expense Adjustments - Other	$ 352,093	$ 174,798	$ 3,940	$ 54,043	$ 43,664	$ 74,736	$ 913	$ 352,093
(18) Revenue Adjustments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
(19) Expense Adjustments - Total	$ 352,093	$ 174,798	$ 3,940	$ 54,043	$ 43,664	$ 74,736	$ 913	$ 352,093
(20) Total Cost of Service	$ 701,635,083	$ 261,544,337	$ 193,333,359	$ 65,264,407	$ 48,150,353	$ 90,567,366	$ 42,775,263	$ 701,635,083
(21) Less: Misc Revenue - Prod Demand	$ (583,332)	$ (583,332)	$ -	$ -	$ -	$ -	$ -	$ (583,332)
(22) Less: Misc Revenue - Energy	$ (3,060,544)	$ -	$ (3,060,544)	$ -	$ -	$ -	$ -	$ (3,060,544)
(23) Less: Misc Revenue - Transmission	$ (11,743,851)	$ -	$ -	$ (11,743,851)	$ -	$ -	$ -	$ (11,743,851)
(24) Less: Misc Revenue - Other	$ (6,488,247)	$ (3,221,117)	$ (72,596)	$ (995,878)	$ (804,617)	$ (1,377,211)	$ (16,828)	$ (6,488,247)
(25) Less: Misc Revenue - Total	$ (21,875,974)	$ (3,804,449)	$ (3,133,140)	$ (12,739,729)	$ (804,617)	$ (1,377,211)	$ (16,828)	$ (21,875,974)
(26) Net Cost of Service	$ 679,759,110	$ 257,739,888	$ 190,200,219	$ 52,524,678	$ 47,345,737	$ 89,190,155	$ 42,758,434	$ 679,759,110
(27) Billing Units		5,943,619,831	5,943,619,831	5,943,619,831	5,943,619,831	5,308,105	5,308,105	
(28) Unit Costs		0.043364127	0.032000738	0.008837153	0.007965808	$ 0.55	$ 0.26	$ 0.82

Customer Cost	$ 0.82
Infrastructure Energy Cost	$ 0.06017
Variable Energy Cost	$ 0.03200

Louisville Gas and Electric Company

Unit Cost of Service Based on the Cost of Service Study
For the 12 Months Ended June 30, 2022

Rate RS

	Description	Amount	Production		Transmission	Distribution		Customer Service Expenses	Total
			Demand-Related	Energy-Related	Demand-Related	Demand-Related	Customer-Related	Customer-Related	
(1)	Rate Base	$ 1,830,420,621	$ 957,680,114	$ 28,168,165	$ 164,114,791	$ 247,962,447	$ 428,194,391	$ 4,300,712	$ 1,830,420,621
(2)	Rate Base Adjustments	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
(3)	Rate Base as Adjusted	$ 1,830,420,621	$ 957,680,114	$ 28,168,165	$ 164,114,791	$ 247,962,447	$ 428,194,391	$ 4,300,712	$ 1,830,420,621
(4)	Rate of Return	2.78%	2.78%	2.78%	2.78%	2.78%	2.78%	2.78%	
(5)	Return	$ 50,858,000	$ 26,609,018	$ 782,649	$ 4,559,908	$ 6,889,604	$ 11,897,326	$ 119,495	$ 50,858,000
(6)	Interest Expenses	$ 40,093,733	$ 20,977,130	$ 616,999	$ 3,594,788	$ 5,431,396	$ 9,379,217	$ 94,203	$ 40,093,733
(7)	Net Income	$ 10,764,267	$ 5,631,888	$ 165,650	$ 965,120	$ 1,458,208	$ 2,518,109	$ 25,291	$ 10,764,267
(8)	Income Taxes	$ 10,344,723	$ 5,412,382	$ 159,194	$ 927,504	$ 1,401,373	$ 2,419,964	$ 24,306	$ 10,344,723
(9)	Operation and Maintenance Expenses	$ 283,536,077	$ 53,383,070	$ 142,877,811	$ 16,306,536	$ 14,564,398	$ 35,738,396	$ 20,665,865	$ 283,536,077
(10)	Depreciation Expenses	141,321,587	101,457,547	-	6,895,148	12,142,048	20,826,845	-	$ 141,321,587
(11)	Other Taxes	22,018,306	12,011,678	-	1,886,754	2,989,992	5,129,882	-	$ 22,018,306
(12)	Curtailable Service Rider	1,177,704	616,178	18,124	105,593	159,541	275,503	2,767	$ 1,177,704
(13)	Expense Adjustments - Prod. Demand	-	-	-	-	-	-	-	$ -
(14)	Expense Adjustments - Energy	-	-	-	-	-	-	-	$ -
(15)	Expense Adjustments - Trans. Demand	-	-	-	-	-	-	-	$ -
(16)	Expense Adjustments - Distribution	-	-	-	-	-	-	-	$ -
(17)	Expense Adjustments - Other	203,392	106,415	3,130	18,236	27,553	47,580	478	$ 203,392
(18)	Revenue Adjustments	-	-	-	-	-	-	-	$ -
(19)	Proforma Adjustments - Total	$ 203,392	$ 106,415	$ 3,130	$ 18,236	$ 27,553	$ 47,580	$ 478	$ 203,392
(20)	Total Cost of Service	$ 509,459,788	$ 199,596,287	$ 143,840,907	$ 30,699,678	$ 38,174,510	$ 76,335,495	$ 20,812,911	$ 509,459,788
(21)	Less: Misc Revenue - Prod Demand	$ (317,551)	$ (317,551)						$ (317,551)
(22)	Less: Misc Revenue - Energy	(12,366,967)	-	(12,366,967)	-	-	-	-	$ (12,366,967)
(23)	Less: Misc Revenue - Transmission	(5,722,158)	-	-	(5,722,158)	-	-	-	$ (5,722,158)
(24)	Less: Misc Revenue - Other	(5,984,316)	(3,131,007)	(92,092)	(536,551)	(810,680)	(1,399,924)	(14,061)	$ (5,984,316)
(25)	Less: Misc Revenue - Total	(24,390,993)	(3,448,559)	(12,459,059)	(6,258,710)	(810,680)	(1,399,924)	(14,061)	$ (24,390,993)
(26)	Net Cost of Service	$ 485,068,795	$ 196,147,729	$ 131,381,848	$ 24,440,968	$ 37,363,830	$ 74,935,571	$ 20,798,850	$ 485,068,795
(27)	Billing Units		4,049,109,440	4,049,109,440	4,049,109,440	4,049,109,440	4,530,684	4,530,684	
(28)	Unit Costs		$ 0.04844	$ 0.03245	$ 0.00604	$ 0.00923	$ 0.54	$ 0.15	$ 0.69

Customer Cost	$ 0.69
Infrastructure Energy Cost	$ 0.06371
Variable Energy Cost	$ 0.03245

Attachments 2 and 3 are being provided in separate files in Excel format.

LOUISVILLE GAS AND ELECTRIC COMPANY
KENTUCKY UTILITIES COMPANY

Response to Sierra Club's Post-Hearing Request for Information
Dated July 18, 2022

Case No. 2021-00393

Question No. 2

Responding Witness: Lonnie E. Bellar

Q-2. In the email chain introduced as SC-Public-5 at the hearing, at the bottom you speak about the repeal of Ohio House Bill 6 and its impact on the subsidies to OVEC. Is OVEC still getting the subsidies from Ohio taxpayers for the operation of its two coal-fired units? Please state the amount of the subsidy.

A-2. The use of the term "subsidy" in the request to describe the Ohio law at issue regarding OVEC is argumentative. In the cited email, the Companies' personnel were using the term to summarize an S&P article that characterized Ohio House Bill 6 as providing "subsidies" for OVEC, not because the Companies agree that OVEC receives "subsidies" in Ohio, much less from all Ohio taxpayers. The portion of Ohio statutory law created by Ohio House Bill 6 to which this request refers continues to provide for the recovery through 2030 of OVEC costs net of market revenues by electric distribution utilities regulated by the Public Utilities Commission of Ohio (not OVEC) from their customers (not taxpayers), *but only to the extent such costs are prudently incurred*:

> The commission shall determine, in the years specified in this division, the prudence and reasonableness of the actions of electric distribution utilities with ownership interests in the legacy generation resource, including their decisions related to offering the contractual commitment into the wholesale markets, and exclude from recovery those costs that the commission determines imprudent and unreasonable.[3]

Recovery of prudently incurred costs is not fairly characterized as a "subsidy."

The Companies do not have the amounts that these Ohio utilities have collected from or returned to their customers.

[3] Ohio Rev. Code Sec. 4928.148(A)(1), available at https://codes.ohio.gov/ohio-revised-code/section-4928.148.