COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC JOINT APPLICATION OF KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY AND SITE COMPATIBILITY CERTIFICATES AND APPROVAL OF A DEMAND SIDE MANAGEMENT PLAN AND APPROVAL OF FOSSIL FUEL-FIRED GENERATING UNIT RETIREMENTS	**)**	**CASE NO. 2022-00402**

POST-HEARING REPLY BRIEF OF KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY

Dated: October 4, 2023

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I. Introduction: The Time to Act Is *Now*.

Abraham Lincoln once said, "You cannot escape the responsibility of tomorrow by evading it today."[1] The responsibility of tomorrow facing the Commission in this proceeding is how to ensure continuing reliable and lowest reasonable cost service to current and future customers when the means of having done so to date—largely via coal-fired generation—are increasingly uneconomical due to ever-tightening environmental regulations and aging assets. That those regulations are tightening and will continue to do so cannot be seriously disputed; increasingly restrictive NOx regulations and greenhouse gas emission restrictions are not going away. Thus, the question before the Commission is whether the Companies' proposed diverse portfolio of gas-fired, solar, battery, and demand-side resources is a reasonable and prudent means of achieving reliable, low-cost service for customers in an uncertain world. In particular, the two proposed natural gas combined-cycle ("NGCC") units are the key elements in the Companies' proposed replacement portfolio for ensuring ongoing reliable, low-cost service for decades to come, particularly with over 3,200 MW of additional coal retirements on the horizon in coming years. And as the record of evidence shows, any delay in proceeding with both proposed NGCC units will result only in higher costs for customers due to increased national and international demand for gas-fired units (and could result in the inability to obtain the units at all), as well as the inability to take advantage of limited available gas pipeline capacity and environmental permit offsets. Therefore, the Commission must not accept certain intervenors' invitation to "escape the responsibility of tomorrow by evading it today"; rather, the time to act to approve all of the Companies' proposals, particularly both NGCC units, is *now*.

[1] Lincoln reportedly made this remark in a speech in Clinton, Illinois on September 2, 1858.

II. The Parties' Briefs Confirm the Prudence of the Companies' Proposed Supply- and Demand-Side Resource Portfolio.

With the submission of the briefs, the final positions of the parties are clear and unsurprising, and they demonstrate—both in their support and their opposition—the fundamental prudence of the Companies' proposed supply- and demand-side portfolio. Indeed, in this case *who* is on which side of each issue is equally as telling as what each party is saying.

On one side of the spectrum, the Attorney General and the Kentucky Coal Association ("Status Quo Parties") oppose all seven of the Companies' proposed fossil-fuel retirements and all of the Companies' NGCC, solar, and battery storage proposals. Instead, they support doing nothing, maintaining the status quo by continuing to operate the Companies' coal units effectively indefinitely. The Kentucky *Coal* Association's motive for these positions is obvious.[2] Whatever the Attorney General's interest, it cannot be reliable, lowest reasonable cost service because the Companies have shown that their proposed portfolio is both lower cost and more reliable than the Status Quo Parties' proposal.[3]

On the other side are the Anti-Fossil Fuel Parties: Joint Intervenors, Sierra Club, and Lexington-Fayette Urban County Government and Louisville/Jefferson County Metro Government ("Cities"). Those parties, consistent with their publicly stated anti-fossil fuel positions,[4] univocally support retiring all seven fossil fuel-fired units the Companies have proposed to retire,[5] and they oppose both of the Companies' proposed natural gas combined-cycle ("NGCC") units.[6] Consistent with their opposition to any fossil fuel, they all support the

[2] *See* Rebuttal Testimony of Lonnie E. Bellar at 2.
[3] *See, e.g.*, Companies' Response to Joint Intervenors' Post Hearing Request for Information No. 1; *Electronic Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company for Approval of Seven Fossil Fuel-Fired Generating Unit Retirements*, Case No. 2023-00122, Direct Testimony of Lonnie E. Bellar, Exhibit SB4-1 at 14 (Table 5) and 18 (Table 7) (Ky. PSC filed May 10, 2023).
[4] *See* Rebuttal Testimony of Lonnie E. Bellar at 2.
[5] Joint Intervenors Brief at 2; Sierra Club Brief at 115; LFUCG/Louisville Metro Brief at 3.
[6] Joint Intervenors Brief at 2; Sierra Club Brief at 115; LFUCG/Louisville Metro Brief at 6.

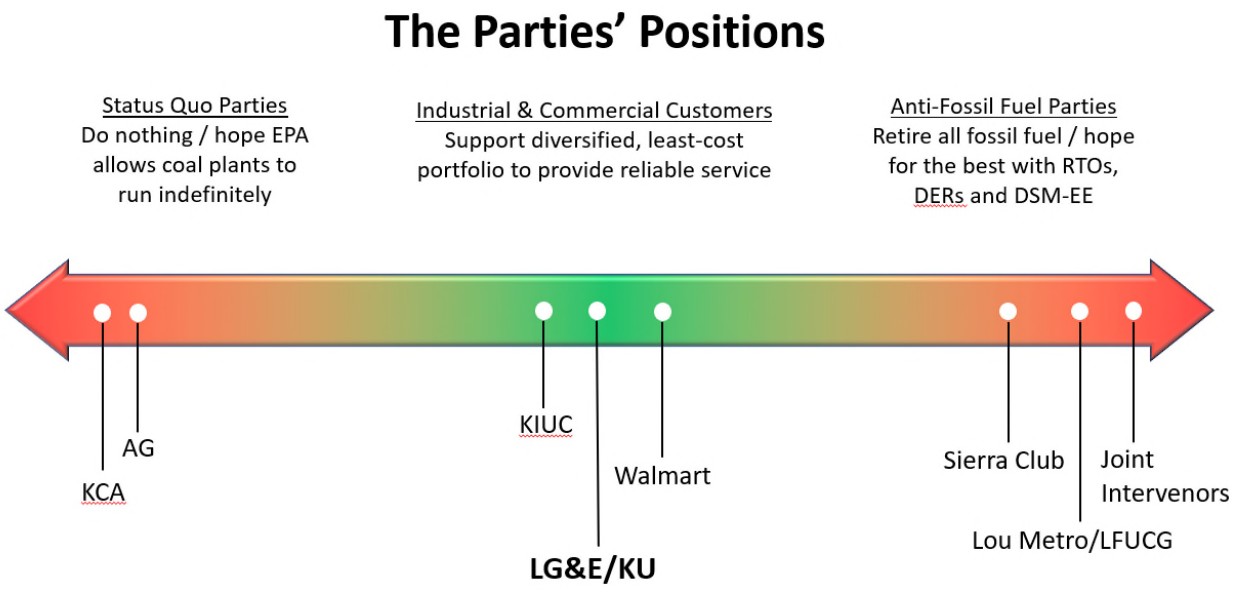
Companies' proposed solar PPAs and owned solar,[7] and the Cities and Sierra Club support the proposed Brown Battery Energy Storage System ("Brown BESS"),[8] though the Joint Intervenors oppose it.[9] To address the significant energy gap and reliability problem this incomplete portfolio would create,[10] Sierra Club and the Cities propose to rely on neighboring systems,[11] whereas the Joint Intervenors propose that the Companies be required to reanalyze an indeterminate combination of resources to include additional DSM-EE, distributed energy resources, additional storage resources, and hybrid solar and storage resources.[12]

Again unsurprisingly, *none* of the Status Quo Parties or Anti-Fossil Fuel Parties has modeled either the reliability or the complete cost of *any* of their proposals. In their view, it is sufficient simply to cast stones, take no responsibility, and walk away. It is not a serious or constructive approach. Worse, several of these intervenors' briefs actively undermine the record of evidence with outright misstatements or mischaracterizations of important facts, which the Companies correct herein.

In stark contrast stand the Kentucky Industrial Utility Customers, Inc. ("KIUC") and Walmart. KIUC represents some of the Companies' largest customers, and Walmart *is* one of the Companies' largest customers. All are large employers in the Commonwealth. They are industrial and commercial customers who pay large bills for the Companies' service and have a vested interest in reliable, low-cost service to help keep tens of thousands of Kentuckians employed and to be able to continue to invest in the Commonwealth for decades to come. And these sophisticated parties who have collectively invested billions of dollars in facilities in the Commonwealth support

[7] Joint Intervenors Brief at 1-2; Sierra Club Brief at 115; LFUCG/Louisville Metro Brief at 7-8.
[8] Sierra Club Brief at 115; LFUCG/Louisville Metro Brief at 7-8.
[9] Joint Intervenors Brief at 2.
[10] *See* Rebuttal Testimony of David S. Sinclair, Exhibit DSS-2 at 8-10.
[11] Sierra Club Brief at 92-107; LFUCG/Louisville Metro Brief at 6-7.
[12] Joint Intervenors Brief at 2.

nearly all of the Companies' proposals in this proceeding, including both of the Companies' proposed NGCC units, both of the Companies' owned solar facilities, and the Companies' solar PPAs.[13]



As the Commission considers the various supply-side arguments advanced in this proceeding, it should also bear in mind that even if it approves all four of the coal unit retirements proposed in this proceeding, the Companies will still have about 3,200 MW of coal capacity with an increasingly uncertain future as carbon constraints and other environmental requirements tighten over time.[14] Built in the early 1970s, Mill Creek Units 1 and 2 and Brown 3 are at the end of their economic lives. Thus, proceeding with both proposed NGCC units now could easily prove to be more beneficial than the Companies have modeled, and the Commission can confidently approve both of the proposed NGCC units as consistent with reliable, low-cost service.

[13] KIUC Brief at 2; Walmart Brief at 2.
[14] *See, e.g.*, Companies' Response to Joint Intervenors' Second Request for Information No. 60(a), Updated Exhibit SAW-1 at 50.

Finally, it is noteworthy that all parties support the Companies' proposed Demand-Side Management and Energy Efficiency ("DSM-EE") programs, albeit with certain revisions.[15] The Joint Intervenors further argue that the Commission should impose a number of additional DSM-EE requirements and take into account non-energy benefits, all of which the Commission should ignore because they are outside the law. That notwithstanding, it is a rare and notable point of universal agreement that all parties agree that the Commission should approve the full suite of DSM-EE programs the Companies have proposed.

III. KIUC and Walmart Support Nearly All of the Companies' Proposals, with Only Two Areas of Disagreement.

The single most compelling and important development in the various intervenors' briefs is KIUC's and Walmart's support for both of the Companies' proposed NGCC units.[16] KIUC's members and Walmart have enormous investments in the Commonwealth, and they pay large bills to the Companies for service. Thus, they have vested interests in the Companies providing low-cost, reliable service for decades to come. Their support for both NGCCs—including KIUC's acknowledgment of the increased cost of the NGCC Engineering, Procurement, and Construction ("EPC") bids received in response to the Companies' recent request for proposals ("RFP")—is a fact that the Commission should afford tremendous weight.

These large customers' support for both NGCCs is well founded. As the Companies' post-hearing data responses showed, even accounting for the EPC RFP responses for the NGCC units, the Companies' proposed resource portfolio is hundreds of millions of dollars lower cost on a PVRR basis than continuing to pour resources into aging coal units—even on assumptions that are

[15] The AG and the Joint Intervenors oppose increasing the qualifying income level for low-income programs from 200% of the Federal Poverty Level to 300% of the Federal Poverty Level. AG Brief at 38-39; Joint Intervenors Brief at 21-28.
[16] KIUC Brief at 1-6 and 8-9; Walmart Brief at 1-2, 6-14, and 21.

quite favorable to coal units.[17] The Companies' evidence further shows that on reasonable assumptions about future carbon costs, including carbon costs consistent with the Commission's assumptions built into the Companies' current NMS-2 net metering rates, the Companies' proposed resource portfolio is lower cost than only a single NGCC (or no NGCCs) across a large majority of future fuel scenarios.[18] Moreover, even assuming *zero* CO_2 cost and *zero* incremental future environmental compliance cost for coal units—a very favorable set of assumptions for coal units—implementing only one NGCC unit is economical only in a minority of scenarios modeled in response to Commission Staff's PHDR 20, and it results in serious reliability concerns unless one further assumes that all solar PPA facilities come to fruition. Thus, in addition to being lowest reasonable cost, constructing *both* proposed NGCC units will help the Companies maintain excellent reliability and resilience.[19] And as KIUC notes in its brief, there is nothing operationally inconsistent about retiring all units the Companies have proposed to retire except Ghent Unit 2 while adding both of the proposed NGCCs.[20] In short, adding both NGCCs unquestionably satisfies CPCN requirements and the requirements of Senate Bill 4, as KIUC and Walmart have recognized.

In addition, as KIUC also explicitly stated in its brief, RTOs are saying that they will continue to need thermal resources like the proposed NGCCs for the foreseeable future.[21] Indeed, PJM and MISO have expressly stated that "there may also be a need to build dispatchable resources *such as new natural gas combustion turbines* in the coming years to ensure that grid reliability is

[17] *See* Companies' Response to Joint Intervenors' Post-Hearing Request for Information, No. 1; Companies Brief at 21-22.
[18] Consider, for example, the fuel price and CO_2 results in Table 13 of the updated Exhibit SAW-1 at page 32 (Companies' Response to Joint Intervenors' Second Request for Information No.60(a), Updated Exhibit SAW-1 at 32) with the added capital costs for the two NGCC units provided in the Companies' Response to Joint Intervenors' Post-Hearing Request for Information, No. 1.
[19] *See, e.g.*, Exhibit SB4-1 at 14 (Table 5), 16 (Table 6), and 18 (Table 7).
[20] KIUC Brief at 1-6, 8-9, and 11-16.
[21] *Id.* at 14.

not jeopardized …."[22] Thus, even if RTO membership becomes clearly beneficial for the Companies' customers in the future, the Companies will be better situated for such membership to have the proposed NGCCs than not to have them, particularly due to their more rapid ramping capability than coal units, which is a capability RTOs have also stated they desire to have.[23]

Finally, as KIUC stated in its brief, the time to move forward with *both* NGCCs is *now*, not later, due to likely future price increases for simple cycle and combined cycle units and even their possible unavailability at any price, as well as limited existing firm gas transportation capacity.[24] Moreover, even if the Commission approves all four of the coal unit retirements proposed in this proceeding, the Companies will still have about 3,200 MW of coal capacity with an increasingly uncertain future as carbon constraints and other environmental requirements tighten over time.[25] Thus, proceeding with both proposed NGCC units now could easily prove to be more beneficial than the Companies have modeled, particularly in a carbon-constrained world and even if the Companies eventually join an RTO.

A. As KIUC Acknowledges, Keeping Ghent Unit 2 in Service Would Add Cost to the Companies' Proposed Portfolio, But It Would Add Reliability in Conjunction with Both of the Companies' Proposed NGCC Units.

Although the Companies are proposing to retire Ghent Unit 2 to reduce costs to customers, the Companies acknowledge that the Commission must weigh that benefit against ensuring

[22] Companies' Hearing Exhibit 1, Joint Comments of ERCOT, MISO, PJM, and SPP to the EPA dated Aug. 8, 2023 at 12 (subject to Companies' Motion to Take Administrative Notice dated Sept. 1, 2023).
[23] Rebuttal Testimony of David S. Sinclair at 3 (quoting PJM Vice President for State and Member Services Asim Haque stating, "We are going to need thermal resources in order to preserve reliability until replacement tech exists to deploy at scale"); see, e.g., Companies' Hearing Exhibit 1, Joint Comments of ERCOT, MISO, PJM, and SPP to the EPA dated Aug. 8, 2023 at 11 ("[I]t is crucial for reliability purposes to maintain certain levels of resources with attributes such as quick start-up and ramping capabilities ….").
[24] KIUC Brief at 4 ("The second possible conclusion is that it is even more important to approve the NGCC CPCNs without delay to lock in delivery and pricing so that the situation does not get worse. The Companies have reached the second conclusion. We agree. Given the world-wide demand for this technology, limited suppliers and stubborn inflation, there is little reason to believe that the market price for NGCCs will go down or that their availability will go up.").
[25] *See, e.g.*, Companies' Response to Joint Intervenors' Second Request for Information No. 60(a), Updated Exhibit SAW-1 at 50.

sufficient capacity resources to provide reliability to their current and future customers in the light of Senate Bill 4, economic development, and public reaction to Winter Storm Elliot. Indeed, Ghent Unit 2 could operate year-round into 2029 without a Selective Catalytic Reduction ("SCR") system under current environmental regulations with ozone season limitations if *both* of the Companies' proposed NGCC units are in service at that time. Choosing not to retire Ghent Unit 2 will increase cost versus the optimal portfolio, which KIUC has acknowledged.[26] It is for the Commission to determine whether the cost to maintain optionality for the unit, including possible future capacity or energy sales as suggested by KIUC, is worth the price.[27]

B. Notwithstanding KIUC's Economics-Based Concerns, Brown BESS Satisfies CPCN Requirements.

Although KIUC opposes Brown BESS as uneconomical, other intervenors—namely Walmart, Louisville Metro, LFUCG, and Sierra Club—support the Companies' request for it. The Companies have established that the system is not wastefully duplicative given its unique operating characteristics (near instant dispatch), help with compliance with proposed EPA greenhouse gas regulations by enabling additional renewable energy penetrations while ensuring reliability, the potential for the Companies to gain invaluable experience with utility-scale battery storage by building and then dispatching the system along with the rest of its generating portfolio, possibly allowing for the eventual retirement of an existing large-frame combustion turbine without thermal replacement.[28] The Commission has recognized that relevant factors that are not strictly economic must be balanced and may support CPCN issuance even if the unit is not the cheapest possible

[26] *See, e.g.*, KIUC Brief at 13.
[27] *See, e.g., Id.* at 15.
[28] Companies Brief at 28-30.

source among other evaluated alternatives.[29] Those factors support approval of the Brown BESS project.

IV. Correcting Certain Intervenors' Misstatements and Mischaracterizations

It is important that the facts of record be clear for the Commission to issue a fully informed final order in this proceeding. To that end, the Companies address below four significant examples of statements in various intervenors' briefs that are either plainly incorrect or will mislead the Commission without appropriate context. The Companies have also included an appendix containing other notable misstatements or mischaracterizations to help clarify the record.

- Joint Intervenors
    - "Once identified in Stage One, the Companies' preferred two-NGCC portfolio was never compared to any other significantly different plan on the basis of cost and reliability. … It is significant that the modeling runs performed in Stages Two and Three did nothing to reexamine selection of the two NGCCs. With that, effectively, the Resource Assessment avoided meaningful comparisons of the Companies' preferred portfolio with two NGCCs to significantly different portfolios on the basis of cost and reliability."[30]
        - FACTS OF RECORD: Joint Intervenors' statements above are false. Even a cursory review of the Resource Assessment shows that the Companies compared their Stage One optimal replacement resource portfolio to nine other portfolios on the basis of reliability (reserve margins), then to eight of those portfolios on the basis of cost across 18 different combinations of fuel and CO_2 cost scenarios.[31] Those portfolios contained varying combinations of one or zero NGCC units, SCRs on existing coal units, renewables, and simple-cycle combustion turbines.[32] *Indeed, the whole purpose of the Stage Two analysis was to test the optimal Stage One portfolio against other very different replacement portfolios on the basis of reliability and cost.*[33]

[29] *See, e.g., Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the Construction of a Combined Cycle Combustion Turbine at the Green River Generating Station and a Solar Photovoltaic Facility at the E.W. Brown Generating Station*, Case No. 2014-00002, Order at 9-10 (Ky. PSC Dec. 19, 2014).
[30] Joint Intervenors Brief at 89, 91.
[31] *See* Companies' Response to Joint Intervenors' Second Request for Information No. 60(a), Updated Exhibit SAW-1 at 27-33.
[32] *Id.* at 28-29.
[33] *Id.* at 27.

- The Joint Intervenors claim the Companies did not provide workpapers to support the PVRR effects of the EPC RFP bid responses presented in JI PHDR No. 1.[34]

    - FACTS OF RECORD: The Joint Intervenors' statement is plainly incorrect. The Companies *did* provide the requisite workpapers in response to PSC PHDR Nos. 20 and 21. (Notably, this is the second time the Joint Intervenors have incorrectly claimed that the Companies did not provide workpapers that they had indeed provided.[35]) Moreover, the Joint Intervenors' related assertion that "[g]ranular PVRR results for each fuel price scenario are not disclosed" is misleading at best;[36] in addition to the workpapers that the Companies did indeed produce with the "granular" results, the Companies' response to JI PHDR 1 is clear about the PVRR impact of the EPC RFP bids on both NGCC units, so the Joint Intervenors could easily add those values to the PVRR values in any other existing table that uses 40-year service lives for the proposed NGCC units.

- Sierra Club

    - "LG&E/KU's own RTO study was deeply flawed, and one of its key conclusions was based on a $200 million typo."[37]

        - FACTS OF RECORD: Sierra Club's assertions are false. The "key conclusion" affected by the "$200 million typo" was that the RTO study concluded that PJM membership was not cost-effective for the Companies at that time. The so-called "$200 million typo" did not *weaken* that conclusion; indeed, it *strengthened* that conclusion. The original table from the RTO study affected by the error is below:[38]

Table 2 - Net Benefits/(Costs) of Joining PJM ($M)

	Case 1	Case 2	Case 3	Case 4
Nominal	(1,246)	(2,327)	(2,675)	(1,183)
2022 PV Dollars	(620)	(1,165)	(1,365)	(272)

[34] Joint Intervenors Brief at 96-98.

[35] *See* Joint Intervenors' Response to Companies' Request for Information No. 13(c). In that response, Joint Intervenors Witness Anna Sommer referred to the Companies' Response to Commission Staff's Fifth Request for Information No. 2 and stated, "The analysis conducted was merely summarized and the workpapers and modeling files supporting that analysis have not been produced." Ms. Sommer was incorrect: the Companies filed a complete set of workpapers confidentially with their response to Commission Staff's Fifth Request for Information No. 2 on July 7, as well as a set of public workpapers on the same day.

[36] Joint Intervenors Brief at 97.

[37] Sierra Club Brief at 9.

[38] Case No. 2020-00350, *Electronic Application of Louisville Gas and Electric Company for an Adjustment of Its Electric and Gas Rates, a Certificate of Public Convenience and Necessity to Deploy Advanced Meter Infrastructure, Approval of Certain Regulatory and Accounting Treatments, and Establishment of a One-Year Surcredit*, Case No. 2020-00350, 2022 RTO Membership Analysis (Ky. PSC filed Nov. 14, 2022).

The corrected table is below:[39]

Table 2 - Net Benefits/(Costs) of Joining PJM ($M)

	Case 1	Case 2	Case 3	Case 4
Nominal	(783)	(1,864)	(2,212)	(1,983)
2022 PV Dollars	(421)	(966)	(1,166)	(848)

Note that in the original table, the case most favorable to PJM membership showed a net *cost* of $272 million in 2022 present value dollars. In the corrected table, the case most favorable to PJM membership showed a net *cost* of $421 million in 2022 present value dollars. Also, the average unfavorability of PJM membership across the four cases did not change materially because while three of the cases decreased in unfavorability by $200 million each, the fourth case became $600 million more unfavorable. Thus, correcting the so-called "$200 million typo" showed PJM membership to be *less* favorable in the most favorable case, not *more* favorable, strengthening the "key conclusion" that PJM membership is not currently economical for the Companies' customers.

- KCA
    - KCA asserts that the Companies do not have estimates for the firm gas transportation costs for the NGCCs and that the CPCN analysis did not include such costs.[40]
        - FACTS OF RECORD: KCA's statement is false. The Companies provided estimated firm gas transportation costs in response to KCA 1-51, and further explained in response to KCA 2-44 that the firm gas transportation costs are included as O&M costs within PLEXOS and the Financial Model.

V. The Joint Intervenors' Assertions about the EPC RFP Bids Seek to Unnecessarily Complicate the NGCC Analysis and Reveal that their Real Objective Is Delay, which Will Be Costly to Customers.

Though the Joint Intervenors spend multiple pages trying to complicate the analysis of the effect of the EPC RFP responses, the *sole* impact of the responses is to update NGCC capital costs.[41] The EPC RFP responses do not affect reliability, resilience, or other issues. That is why it was fully sufficient to provide just two PVRR adders resulting from the EPC RFP responses—

[39] Companies' Response to Sierra Club's Second Request for Information No. 26(b), Corrected RTO Membership Analysis at 6.
[40] KCA Brief at 16
[41] Joint Intervenors Brief at 95-100.

one adder for each proposed NGCC unit—in the Companies' response to Joint Intervenors' post-hearing DR 1. Adding that value for each unit to any of the PVRR analyses the Companies performed in which the proposed NGCC units had 40-year service lives would be the correct means of adjusting the previously provided PVRR values. It really is that simple.

Yet the Joint Intervenors devote several pages of their brief to alleging—falsely—that the Companies did not provide workpapers for their post-hearing DR responses related to the EPC RFP responses and that even if the Companies had provided workpapers (which in fact they did), the Joint Intervenors somehow have not had a sufficient opportunity to review them.[42] They further and relatedly allege that "the Companies' narrative response offers no sworn statement to confirm that the updated PVRR results included only updated NGCC capital costs, and no other changes."[43] And they assert that only rerunning *the entire analysis the Companies performed*—beginning with Stage One, Step One portfolio optimization—will suffice "to test if the increased capital costs would have favored different portfolio compositions than it did previously."[44]

All of these allegations and assertions are incorrect. Indeed, these allegations reveal that the Joint Intervenors simply did not review the record before writing their brief. Had they reviewed the Companies' responses to the Commission Staff's post-hearing DRs in addition to the Companies' responses to the Joint Intervenors' post-hearing DRs, they would have found the workpapers they claimed the Companies did not provide.[45] They would also have found that the only changes made in the updated PVRR results were to account for updated NGCC capital costs, all of which was provided under oath in the DR responses.[46] And they would have known that

[42] *Id.*
[43] *Id.* at 97.
[44] *Id.* at 98.
[45] *See* Companies' Responses to Commission Staff's Post-Hearing Request for Information, Nos. 20 and 21.
[46] *Id.*

rerunning the Companies' entire resource analysis is not necessary considering the dozens of portfolios explicitly modeled in this proceeding across six fuel price cases (and a number of those across three CO_2 price cases), the PVRR results of which any party can easily adjust and analyze using the PVRR adders the Companies supplied.

Of course, the updated NGCC capital costs represent initial bid amounts, *not* final prices. Through the typical procurement process, the Companies are working with the prospective NGCC vendors to reduce the NGCC costs in any way they can that is consistent with having safe and reliable units.[47]

But the real effect of the Joint Intervenors' allegations and assertions, if taken seriously, would be to create delay. That delay would serve only to drive up the cost of the proposed NGCC units or have them become unavailable. That would be consistent with the Joint Intervenors' anti-fossil fuel bias, but it would be purely detrimental to customers. The Commission should therefore reject the Joint Intervenors' intentional confusion about the EPC RFP bids and instead approve the two proposed NGCC units now, just as both KIUC and Walmart—customers who have a vested interest in reliable service at the lowest reasonable cost—have recommended.

VI. The Status Quo Parties' Mere Hope that the U.S. Environmental Protection Agency Will Reverse Course on Tightening Environmental Constraints on Coal Is Not a Strategy, and It Will Harm Customers.

The Status Quo Parties will never support the retirement of existing fossil fuel-fired generating units, hoping instead that the Environmental Protection Agency ("EPA") will somehow allow the indefinite operation of the coal-fired units. As Mr. Imber explained under extensive cross examination at the hearing, the Attorney General's litigation concerning the Good Neighbor Plan is not final, but ongoing.[48] Despite that litigation, EPA remains firmly committed to the Plan

[47] *See* Companies' Response to Joint Intervenors' Post-Hearing Request for Information No. 1.
[48] For relation to Kentucky, the litigation is pending in the United States Court of Appeals for the Sixth Circuit.

and will defend it vigorously, as evidenced by the fact that the new requirements have already gone into effect in those states that have not been affected by court-ordered stays. Moreover, the D.C. Circuit Court of Appeals recently rejected an attempt to halt implementation of the Plan.[49] Moreover, the final outcome of the litigation is unlikely to have any effect on the Companies' generation decisions;[50] and, even if it does, EPA has existing authority under the Clean Air Act to require the same sort of emissions reductions it seeks under the Good Neighbor Plan.[51] Therefore, under any reasonable consideration of the Good Neighbor Plan, the time to act is now. Deferring any decision on the two NGCC CPCNs is only another invitation to "escape the responsibility of tomorrow by evading it today" and will only lead to higher costs for customers and less reliability in the Companies' electric system. The time to invest in the two NGCCs is now.

VII. CPCN Standard and Related Issues

Perhaps the most notable fact regarding the CPCN standard and related issues that arose in the intervenors' briefs is the agreement of the Companies, KIUC, and Walmart that the Commission should issue CPCNs for both of the proposed NGCC units and the two Companies-owned solar projects, as well as Walmart's agreement with the Companies that the Commission should issue a CPCN for the Brown BESS.[52] This agreement is unsurprising given that these parties have vested interests in the low cost and reliable service that results from meeting the CPCN standards of need and avoidance of wasteful duplication.

A. June 2022 RFP

Although the parties appear to be in agreement regarding the legal standard that must be met for a CPCN, they disagree over the meaning of the word "reasonable" as used in that legal

[49] *State of Utah v. EPA*, No. 23-1157, Order (D.C. Cir. Sept. 25, 2023) (denying litigation stay of Good Neighbor Plan).
[50] Rebuttal Testimony of Philip A. Imber at 7.
[51] *Id.* at 9-10.
[52] *See* KIUC Brief at 2; Walmart Brief at 2.

standard. The Commission has held that a CPCN applicant must demonstrate "a thorough review of all reasonable alternatives has been performed."[53] Under any sensible construction of the word "reasonable," the Companies performed a thorough review of all reasonable alternatives. The Companies issued a June 2022 Request for Proposals ("RFP") to meet the need in a least-cost fashion. They sent the RFP to 146 potential respondents across broad sectors of the electric generation and storage industries, and published it in a number of industry publications, along with issuing a press release.[54] Anyone could have responded to the RFP with a conforming response, and many did so. In fact, a total of 22 parties responded with 39 proposed projects.[55] Many projects had multiple options for term, size, or proposed commercial operation date, resulting in a total of 101 proposals.[56] The Companies fulfilled their obligation to their customers by seeking responses and then identifying a response or a mix of responses that would achieve a least-cost, executable solution for customers.

The Joint Intervenors' Initial Brief accurately quotes Mr. Bellar as stating "the Companies cannot invent a market or somehow create bids that were not submitted."[57] But Joint Intervenors go on to suggest that the Companies somehow failed to obtain and consider all "reasonable alternatives" by "chilling" responsive bids to their RFP.[58] They theorize that the Companies "reserved a critical competitive advantage to the Companies: the ability to incorporate existing plant sites and transmission system interconnection points."[59] Their criticism completely ignores the fact that the Companies received dozens of bids and carefully considered and modeled many

[53] *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for the Construction of Transmission Facilities in Jefferson, Bullitt, Meade, and Hardin Counties, Kentucky,* Case No. 2005-00142, Order (KY. PSC Sept. 8, 2005).
[54] Direct Testimony of Charles S. Schram at 4.
[55] *Id.*
[56] *Id.*
[57] Joint Intervenors' Brief, p. 88 (quoting Rebuttal Testimony of Lonnie E. Bellar at 4).
[58] *Id.* at 86.
[59] *Id.*

of them. But more importantly, the Joint Intervenors completely miss the point that any advantage derived by using the Companies' existing sites[60] is, at bottom, an advantage for their *customers*. The Companies absolutely want to ensure those advantages are enjoyed by their customers in the form of lower rates, better reliability, and streamlined environmental permitting. To do otherwise would work an injustice on customers.

The Commission has explicitly recognized the value of using the Companies' existing sites for customers. In Case No. 2002-00029, the Commission stated:

> In the last 4 years, LG&E and KU have added four CTs to their system, adding two in 1999 and two more in 2000. In both 1999 and 2000, an unregulated affiliate constructed the CTs on generating sites owned by either LG&E or KU. In both instances, as in this case, LG&E and KU requested a certificate to acquire the CTs after construction had commenced. The Commission recognizes that the land available for new generation at the utilities existing generating sites is finite. We also realize this land is very valuable to the utilities ***and their customers*** due to the existing infrastructure that includes both natural gas pipelines and electric transmission lines. Because of the finite nature and value of these sites, we find that LG&E and KU should seek Commission approval prior to entering into the sale or lease of any land located on an existing generation site.[61]

There is not a scintilla of evidence in the record that the RFP process was "chilled." There is no proof that any bidder was aggrieved or that any potential bidder was discouraged in any way.[62] While it is correct to say that it is the Companies' and not the intervenors' burden to identify and consider all reasonable alternatives, it is likewise correct to say that the Companies have no obligation to consider mythical or non-existent responses to their RFP or to select a solution that deprives customers of advantages that should inure to them by using existing locations.

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[60] The Companies' Post-Hearing Brief explains the advantages of using existing sites at 22.

[61] *Application of Louisville Gas and Electric Company and Kentucky Utilities Company for a Certificate of Public Convenience and Necessity for the Acquisition of Two Combustion Turbines*, Case No. 2002-00029, Order at 6 (Ky. PSC June 11, 2002) (emphasis added).

[62] Joint Intervenors concede that their argument here is "speculative" when, after that speculation, they say "without speculating further . . ." (Joint Intervenors Brief at 88).

B. Load Forecast

As set forth above, the intervenors who are most focused on cost and reliability, which is the applicable standard at issue here, are closely aligned on where the decision should fall. However, the intervenor positions that are more focused on the goals set forth in their individual mission statements than on the provision of "adequate, efficient and reasonable service"[63] have very divergent positions on how the Commission should rule, and they take issue with how support for that decision should be evaluated. Take, for example, the Companies' load forecast. KCA claims that it is too *low*, which they argue supports the continued operation of all coal units instead of retirement and no NGCCs.[64] On the other hand, Joint Intervenors claim the Companies' load forecast is too ***high***, which they argue supports retiring all coal generation without replacing it with the NGCCs.[65] Neither intervenor produced a load forecast. Undoubtedly, those starkly differing views on the load forecast are used to support the well-known preexisting goals of those intervenors.

The Companies' sole goal is to meet their legal obligation to serve customers reliably and cost-effectively. As set forth in the Companies' Initial Brief, the Companies' load forecast, which shows a clear reserve margin need in 2028, forms the basis for Tables 1 and 2 in that brief.[66] The Companies' witness Tim Jones has explained[67] how he and his team build the Companies' electric load forecast by using historical data to develop models that relate electricity usage, demand, sales, and number of customers by rate classes to exogenous factors such as economic activity, appliance efficiencies and adoption, demographic trends, and weather conditions. He also explained how

[63] KRS 278.030(2).
[64] Indeed, KCA witness Medine admitted at the hearing that, despite serving as an expert witness for decades in the utility sector, she has *never* supported the construction of a gas-fired generating unit. 8/29/23 Hearing, VR 8:54:30-8:56:20.
[65] Joint Intervenors Brief at 79-85.
[66] Companies Brief at 7.
[67] Direct Testimony of Tim A. Jones at 3.

they develop the load forecast using historical load shapes for each of KU and LG&E to convert sales forecasts into 30-year hourly forecasts that can be used for generation planning purposes, including forecasting peak demands.[68]

Mr. Jones explained how the Companies ensure that their electric load is reasonable by: (1) building and rigorously testing statistically and economically sound models of the load forecast variables; (2) anticipating future macroeconomic events that affect load forecast variables;[69] and (3) reviewing and analyzing model outputs to ensure they are reasonable based on historical trends and the Companies' experience.[70] Finally, he noted that the Commission Staff has stated, "LG&E/KU's assumptions and methodologies for load forecasting are generally reasonable" and that the Companies sought to follow several recommendations Commission Staff has made to further improve the load forecasting process.[71] Thus, the record clearly establishes that the Companies' load forecast is reasonable and the Commission should rely on it in assessing need. It is telling that the Companies' load forecast falls between KCA's criticism on one side and Joint Intervenors' criticism on the other.

[68] *Id.*; *see also* Direct Testimony of Tim A. Jones, Exhibit TAJ-2.

[69] A glaring example of how Joint Intervenors use selective quoting to further their agenda is at page 84 of their brief when they claim that the Companies' load forecast use of a 2% inflation factor is "troublingly out of step with actual experience since 2022" and their cite to a Federal Reserve Board report for support. But what they fail to quote is the following text from the same report on appropriate long-term inflation rate: "The inflation rate over the longer run is primarily determined by monetary policy, and hence the Committee has the ability to specify a longer-run goal for inflation. The Committee reaffirms its judgment that inflation at the rate of 2 percent, as measured by the annual change in the price index for personal consumption expenditures, is most consistent over the longer run with the Federal Reserve's statutory mandate. The Committee judges that longer-term inflation expectations that are well anchored at 2 percent foster price stability and moderate long-term interest rates and enhance the Committee's ability to promote maximum employment in the face of significant economic disturbances. In order to anchor longer-term inflation expectations at this level, the Committee seeks to achieve inflation that averages 2 percent over time, and therefore judges that, following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time."

[70] Direct Testimony of Tim A. Jones at 3-4.

[71] *Id.* at 4-5.

Lastly, the Sierra Club's argument that a single NGCC will provide sufficient capacity and energy to meet demand, even assuming the proposed coal retirements,[72] is not supported by the record. To make its argument, Sierra Club relies on Table 11 of Exhibit DSS-2 to Mr. Sinclair's rebuttal testimony. That table simply shows the amount of energy that will not be met in 2028 without the NGCCs under *normal* weather conditions, as explained in the text describing that table, and further assuming that there is *zero* net load growth resulting from economic development. Sierra Club's argument does not account for the Companies' capacity and energy need on an hourly basis. As seen in Figure 2 of Exhibit DSS-2, even under normal weather conditions, the hourly capacity and energy shortfall without the two NGCCs routinely exceeds the capacity of one NGCC (640 MW). The Sierra Club's argument is inaccurate and ignores the Companies' obligation to serve customers in every hour. The Commission has stated, "Kentucky law requires retail electric suppliers … to have sufficient capacity to meet *maximum* estimated customer demand, including sufficient generation capacity."[73] Tables 1 and 2 in the Companies' Initial Brief show that demand and need under those winter and summer peak scenarios. Sierra Club may hope that weather is always normal and that there is no net load growth due to economic development, but, alas, hope is not a strategy (and it would be unfortunate for the Commonwealth to have no net load growth due to economic development).

VIII. Nothing in Any of the Intervenors' Briefs Undermines the Compliance of the Companies' Proposed Resource Portfolio with Senate Bill 4.[74]

The intervenor briefs criticizing the Companies' proposed resource portfolio fail to demonstrate that it does not comply with Senate Bill 4. Thus, rather than restate the entirety of

[72] Sierra Club Brief at110-11.
[73] *Electronic Investigation of the Service, Rates, and Facilities of Kentucky Power Company*, Case No. 2021-00370, Order at 7 (Ky. PSC June 23, 2023) (emphasis added).
[74] Throughout, "Senate Bill 4" refers collectively to KRS 278.262 and 278.264.

their Senate Bill 4 arguments here, the Companies address below a handful of points from certain briefs to provide correction and clarity where needed.

A. Contrary to the Joint Intervenors' Position, Energy Storage Assets Are Not "Generating Capacity" under Senate Bill 4.

Regarding the definition of "generating capacity," the Joint Intervenors state at one point that it "broadly includes assets capable of injecting electric energy into utility distribution and transmission grids,"[75] but at another point that "new generating capacity" should mean "any new resource capable of *generating* electricity."[76] The Companies do not dispute the latter construal, but defining the term to include any "assets capable of injecting electric energy into utility distribution and transmission grids" would be too broad, as it would presumably include storage assets like the proposed Brown BESS.[77] Contrary to Joint Intervenors' witness Mr. Wilson's testimony,[78] there is a clear difference between *generating* electricity—one recognized in the definition of "eligible electric generating facility" in KRS 278.465(2), for example—and temporarily storing electricity and later releasing it at a net loss of electric energy. A storage resource may be capable of "injecting electric energy into utility distribution and transmission grids," but that does not make it *generating* capacity on any reasonable definition of the term consistent with existing Kentucky statues.

B. Though the Joint Intervenors Are Correct that Senate Bill 4 Does Not Require MW-for-MW Replacement of Retiring Units, It Does Require *Some* Replacement Capacity Rather than *No* Replacement Capacity.

The Companies agree with the Joint Intervenors' argument that Senate Bill 4 does not require MW-for-MW replacement of retiring fossil fuel-fired generating units,[79] but retiring such

[75] Joint Intervenors Brief at 46.
[76] *Id.* at 47 (emphasis added).
[77] *Id.* at 46.
[78] Direct Testimony of John Wilson at 8-9.
[79] Joint Intervenors Brief at 47-48.

units with no replacement capacity at all, as the Joint Intervenors appear to advocate with regard to the three secondary CTs and Mill Creek Units 1 and 2,[80] would not be consistent with the statutory text.[81] It is reasonable to interpret Senate Bill 4's requirement that "[t]he utility will replace the retired electric generating unit with new electric generating capacity" that is dispatchable, maintains or improves reliability and resilience, and maintains minimum reserve capacity as not requiring MW-for-MW replacement, but asserting that *no* replacement capacity is needed does not reasonably construe ambiguous text to avoid absurd results;[82] rather, it impermissibly rewrites the statute's plain text, and the Commission must therefore reject it.

Relatedly, the Commission should also reject the Joint Intervenors' argument that because Senate Bill 4 does not explicitly state *when* new generating capacity must be available to replace a retiring fossil fuel-fired unit, the statute "allow[s] both the Commission and utilities the flexibility to choose resources that are consistent with prudent least-cost planning," presumably at any future date.[83] The Joint Intervenors depend, in part, on this apparent ambiguity to argue that the Commission can (and should) determine that fossil fuel-fired units should be retired before knowing what the new replacement generating capacity will be, which the Joint Intervenors call "conditional" retirement authority.[84] These arguments are contrary to the plain text and logic of Senate Bill 4. First, Senate Bill 4 creates a rebuttable presumption *against* retiring fossil fuel-fired generating units.[85] Overcoming that presumption requires showing that new generating capacity will meet Senate Bill 4's dispatchability, reliability, resilience, reserve capacity, customer cost impact, and federal financial incentive requirements.[86] Making those showings cannot be done in

[80] *Id.* at 2, 63-68.
[81] KRS 278.264(2)(a).
[82] *Id.*
[83] *Id.* at 48.
[84] *Id.* at 56-58.
[85] KRS 278.264(2).
[86] *Id.*

an evidentiary vacuum; rather, the retiring unit(s) must be compared to the utility's proposed new replacement generating capacity, which most quite logically occur *contemporaneously with*, not before, the Commission's evaluation of proposed replacement resources, such as in a CPCN proceeding.

Finally, these statutory requirements preclude the Commission from granting the Joint Intervenors' request for retirement authority for Brown Unit 3 and Ghent Unit 2 (and possibly the other units proposed to be retired) conditioned on the Companies making a filing for new replacement generating capacity more to the Joint Intervenors' liking.[87] Senate Bill 4 contains no provision for granting "conditional" retirement authority, and granting such authority would be contrary to the express terms and necessary implications of Senate Bill 4 discussed above. Moreover, granting such "conditional" authority would be pointless if the Companies would still have to make a subsequent filing for new replacement generating capacity that satisfied Senate Bill 4's requirements. Thus, the Commission should reject the concept of "conditional" retirement authority under Senate Bill 4.

C. Though KCA Is Incorrect about the Definition of "Dispatchable" under Senate Bill 4, the Companies' Proposed Resource Portfolio Would Still Comply with Senate Bill 4 Even under KCA's Erroneous Definition.

KCA argues that under Senate Bill 4 a renewable resource cannot be "dispatchable" and that Senate Bill 4's reliability and resilience requirements necessitate that a utility's current reliability metrics improve with a proposed retirement and replacement or the Commission cannot

[87] Joint Intervenors Brief at 2, 57-59, 61, 108. Note that early in their brief, the Joint Intervenors explicitly ask the Commission to "[a]pprove the proposed fossil-fired unit retirements for Mill Creek Units 1 and 2, Haefling Units 1 and 2, and Paddy's Run 12, and conditionally approve the proposed retirement of Brown Unit 3 and Ghent Unit 2 . . . ." Joint Intervenors Brief at 2. Later, the Joint Intervenors "request that the Commission conditionally approve under KRS 278.264(1) *all* of the proposed fossil fuel generating unit retirements proposed in this proceeding . . . ." Joint Intervenors Brief at 59 (emphasis added); *see also* Joint Intervenors Brief at 108. It is therefore unclear precisely for which units the Joint Intervenors are requesting the Commission to grant conditional retirement authority.

approve the retirement.[88] In other words, KCA advocates for exactly the kind of one-way reliability ratchet both the Companies and the Joint Intervenors have shown would be unnecessarily costly for customers.[89] Assuming the Commission does not accept KCA's invitation to increase customers' bills unnecessarily, the Companies have shown that even if only their proposed NGCCs are considered "dispatchable" for Senate Bill 4 purposes, they would still provide adequate reliability and resilience, and they would help maintain sufficient reserve margins.[90] Also, as discussed above in the section concerning KIUC's proposal not to retire Ghent 2 at this time, adding both of the Companies' proposed NGCCs would unquestionably satisfy the reliability and resilience requirements of Senate Bill 4 if the Commission determined to approve all of the Companies' proposed retirements except Ghent 2.[91] Thus, the KCA's arguments on these points should have no bearing on the Commission's decisions in this proceeding.

D. KCA's Assertions about the Companies' Investigations into Dual-Fuel Capability for the Proposed NGCC Units Do Not Accurately Reflect the Current Record of Evidence.

KCA's brief represents that at hearing the Companies did not "identify" certain dual-fuel capability costs for the proposed NGCC units.[92] But the Companies did in fact require the EPC RFP respondents to include dual-fuel capability costs in their bids,[93] and the Companies have verified that all bids include cost information for the requested fuel-oil option and that all bidders have demonstrated the technical ability and prepared design to execute that option.[94] The

[88] KCA Brief at 4-9.
[89] Companies' at 31; Joint Intervenors Brief at 57.
[90] *Electronic Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company for Approval of Seven Fossil Fuel-Fired Generating Unit Retirements*, Case No. 2023-00122, Direct Testimony of Stuart A. Wilson, Exhibit SB4-1 at 8 (Table 2), 12 (Table 4), 14 (Table 5), 16 (Table 6), 18 (Table 7), and 20 (Table 8) (Ky. PSC filed May 10, 2023).
[91] *See id.* at Portfolios 3 and 4 at 8 (Table 2), 12 (Table 4), 14 (Table 5), 16 (Table 6), 18 (Table 7), and 20 (Table 8).
[92] KCA Brief at 10-11.
[93] *See, e.g.*, Rebuttal Testimony of Lonnie E. Bellar at 8.
[94] *See* Companies' Response to Joint Intervenors Post-Hearing Request for Information No. 1, Attachment 1.

Companies have requested some clarification on fuel oil performance data, which will help facilitate a full analysis of the benefit of dual-fuel capability. Thus, there is indeed evidence in the record enabling the Commission to consider the value of such an option. Importantly, it is not necessary to reach a decision about dual-fuel capability prior to issuing CPCNs for both NGCC units because the Companies have demonstrated that their proposed portfolio meets Senate Bill 4's reliability and resilience standards without such capability.

E. KCA's and Sierra Club's Positions on Senate Bill 4's "Minimum Reserve Capacity Requirement" Are Erroneous.

The Commission should disregard KCA's arguments concerning Senate Bill 4's "minimum reserve capacity requirement." As noted above, contrary to KCA's assertion,[95] the Companies have indeed provided evidence of the reserve margin requirement established by the Companies' reliability coordinator, TVA: TVA has established no such requirement.[96] Thus, unless the Commission believes that Senate Bill 4 effectively bars the Companies from retiring any fossil fuel-fired units until TVA issues a reserve capacity requirement or the Companies change reliability coordinators, it must reject KCA's strained statutory interpretation.[97]

The Commission should also disregard Sierra Club's position on Senate Bill 4's "minimum reserve capacity requirement," which Sierra Club construes to mean the Companies' capacity obligation under their Contingency Reserve Sharing Group ("CRSG") arrangement with TVA.[98] As Sierra Club correctly notes, the Companies' CRSG obligation is just 243 MW—a fraction of

[95] KCA Brief at 11.
[96] *Electronic Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company for Approval of Seven Fossil Fuel-Fired Generating Unit Retirements*, Case No. 2023-00122, Direct Testimony of Stuart A. Wilson, Exhibit SB4-1 at 17 (Ky. PSC filed May 10, 2023).
[97] Although the Commission is not the Companies' reliability coordinator, it does have the opportunity to review the Companies' target reserve margins in Integrated Resource Planning proceedings and to effectively approve or disapprove them in CPCN, rate, and even Economic Development Rider proceedings.
[98] Sierra Club Brief at 22-27.

any plausible reserve margin for the Companies.[99] Moreover, maintaining contingency reserves is a Balancing Authority obligation, not a Reliability Coordinator obligation, which is why the Companies have a CRSG agreement with TVA that is separate from their Reliability Coordinator agreement with TVA.[100] Thus, the Commission should not adopt the Companies' CRSG obligation as their "minimum reserve capacity requirement" under Senate Bill 4.

F. KCA and Sierra Club Would Impermissibly Extend the Commission's Jurisdiction with an Overly Expansive Understanding of a Single Word in Senate Bill 4: "Indirect."

Although they arrive at similar positions from very different ideological perspectives, both KCA and Sierra Club argue that Senate Bill 4's directive to utilities to provide evidence of "indirect costs" of unit retirements mean that the Commission should account for a host of non-jurisdictional items, including job and health impacts.[101] This position is both at odds with the full text of the statutory provision and would result in a potentially boundless set of possible items to take into account. Regarding the statute itself, it is clear that purpose of a utility's providing to the Commission "evidence of all known direct and indirect costs of retiring the electric generating unit" is solely to "demonstrate that *cost savings* will result *to customers* as a result of the retirement of the electric generating unit."[102] The statute says nothing about non-cost benefits to the Commonwealth or society at large; rather, it is explicitly concerned with savings for customers. That unambiguous point suffices to end the discussion, but the Commission should also be wary of interpreting a single word—"indirect"—to mean that the Commission's jurisdiction has now massively expanded to take in a nearly infinite collection of possible considerations. Finding a

[99] *Id.* Brief at 27.
[100] *Compare* Companies' Response to Commission Staff's Post-Hearing Request for Information No. 14 and its attachment *to* Companies' Response to AG/KIUC's Third Request for Information No. 21 and its attachment.
[101] KCA Brief at 18-19; Sierra Club Brief at 31-32.
[102] KRS 278.264(3) (emphasis added).

defensible limiting principle to this inexplicable jurisdictional expansion will be challenging to say the least, which is evidence in and of itself that the statute does not actually provide any such expanded jurisdiction; rather, it more humbly, reasonably, and consistently with the Commission's existing jurisdiction means that the Commission should account for all costs of unit retirements that will affect customers' electric rates, no more.

IX. The Joint Intervenors' Theory that the Companies Rigged their RFP Proposals and Process to Ensure Two NGCCs Would Emerge as Least Cost Is Both Baseless and Pointless.

KIUC's and Walmart's support for both proposed NGCCs demonstrates the baselessness of the Joint Intervenors' theory that the Companies somehow rigged their RFP process to achieve a predetermined result.[103] Walmart and KIUC are highly sophisticated commercial entities. They are well versed in how RFPs work. If there were something untoward about the Companies' RFP proposals or processes, KIUC and Walmart would likely be the first parties to highlight it precisely because low-cost, reliable service is very much in their financial interest. That Walmart and KIUC have not raised concerns about the RFP process and instead *support* the NGCCs the Joint Intervenors allege are the result of some as-yet-unspecified impropriety shows the hollowness of the Joint Intervenors' allegations.

Indeed, simple logic shows that the Joint Intervenors' allegations are specious. First, as explained in the Companies' response to Commission Staff DR 5-10(e), it was public knowledge well in advance of the Companies' June 2022 RFP issuance that they anticipated a need for capacity. Any party could have developed a project and sought a position in the generator interconnection queue at any time; nothing about the Companies' interconnection queue requests affected that. Second, as explained above, there is no evidence of any "chilling" effect on the RFP

[103] Joint Intervenors Brief at 76-79.

responses the Companies received last summer; rather, the Companies received over 100 proposals for 39 projects from 22 respondents for various solar, wind, battery, and pumped hydro projects.[104] That is a robust crop of RFP responses by any reasonable measure, not evidence of a "chilling" effect. Third, the lack of responses for fossil fuel-fired capacity from other parties to the Companies' RFP is hardly surprising at time when markets are clamoring for thermal resources, particularly gas-fired units;[105] developers of such units simply do not have inventory on the shelf that they are waiting to offload in response to RFPs, either in terms of new units or existing capacity.[106] Fourth, the Companies are familiar with their customers' energy consumption patterns. Also, they could reasonably foresee that retiring coal units, which provide around-the-clock energy, might most efficiently be replaced by NGCC units that can perform the same function at a lower cost, which they have already observed with their existing Cane Run 7 NGCC unit. Thus, it is entirely reasonable that they would have developed NGCC proposals in advance of issuing an RFP, and adding them to the generator interconnection queue was solely to secure a place in the queue, nothing more. Finally, the Companies' Project Engineering Group submitted two solar proposals, six NGCC proposals, and three SCCT proposals, of which one solar proposal, two NGCC proposals, and two SCCT proposals advanced to cost-benefit testing in the Resource Analysis, which hardly suggests that "the fix was in" for the two proposed NGCC units.[107]

[104] Direct Testimony of Charles R. Schram at 4.
[105] *See, e.g.*, Rebuttal Testimony of David S. Sinclair at 3 (quoting PJM Vice President for State and Member Services Asim Haque stating, "We are going to need thermal resources in order to preserve reliability until replacement tech exists to deploy at scale"); see, e.g., Companies' Hearing Exhibit 1, Joint Comments of ERCOT, MISO, PJM, and SPP to the EPA dated Aug. 8, 2023 at 11 ("[I]t is crucial for reliability purposes to maintain certain levels of resources with attributes such as quick start-up and ramping capabilities ….").
[106] As noted in KIUC Brief at 15, Kentucky Power Company recently issued RFPs for capacity. The Companies are also aware of currently active capacity publicly available RFPs from the Kentucky Municipal Energy Association, Owensboro Municipal Utilities, and Berea.
[107] Companies' Response to Sierra Club's Second Request for Information No. 60(a), Updated Exhibit SAW-1 at 63-71.

But perhaps most importantly, notwithstanding that the Joint Intervenors' conspiracy theory is fully debunked, the result of this supposed skullduggery *is the lowest reasonable cost portfolio for customers* across a reasonable range of future fuel and carbon costs,[108] and the Companies are using and will use RFP processes to obtain the most favorable bids to construct any Companies-owned resources the Commission ultimately approves.[109] Indeed, clearly the Companies are not the only entities concluding that new gas-fired units are economical and efficient: for example, as PJM Vice President Asim Haque noted to the Kentucky General Assembly's Interim Joint Committee Natural Resources and Energy, of the 2,000 MW of capacity added in PJM in the last year, 1,300 MW of it was "a gas plant in Ohio."[110] Presumably the owner of that 1,300 MW gas-fired facility did not build it to be uneconomical. Therefore, there is no reasonable basis to credit any part of the Joint Intervenors' conspiracy theory—just as KIUC and Walmart clearly do not—and the result of this non-conspiracy is to ensure customers have reliable service at the lowest reasonable cost. In short, the Joint Intervenors' allegations are both specious and pointless, and the Commission should disregard them.

X. The Joint Intervenors' Criticisms of the Companies' Use of PROSYM Are Empty Rhetoric, and their Own Modeling Expert Admitted to Erring by Almost $200 Million in Using PLEXOS.

The Joint Intervenors assert that the Companies' use of PROSYM is unreasonable because other utilities are no longer using it and it has not been updated since 2019. But they provided no evidence that the Companies' PROSYM results are unreasonable; rather, the Joint Intervenors make purely rhetorical points.[111] Indeed, the Joint Intervenors ignore entirely the Companies'

[108] *See* Companies' Response to Joint Intervenors Post-Hearing Request for Information No. 1; Companies' Response to Commission Staff's Post-Hearing Request for Information Nos. 20-24, 30; Companies Brief at 21-22.
[109] Companies' Response to Commission Staff's Fifth Request for Information No. 10(e).
[110] Rebuttal Testimony of David S. Sinclair at 3, quoting Interim Joint Committee on Natural Resources and Energy Hearing August 3, 2023, YouTube video at 1:19:57-1:22:14, available at https://www.youtube.com/watch?v=Bja3IDPFPMs (accessed August 4, 2023).
[111] Joint Intervenors Brief at 93-95.

testimony that they have spent years calibrating PROSYM to ensure that it produces reliable results.[112] The calibration of PROSYM is important in that one of the key functions of a Production Costing model is to simulate the real-world operation of the system being modeled. Thus, without any substantive evidence that the Companies' use of PROSYM actually resulted in erroneous results, which it did not, the Commission should disregard the Joint Intervenors' exercise in empty rhetoric.

Relatedly, the Joint Intervenors take a gratuitous swipe at the Companies' understanding of PLEXOS, stating, "[T]he Companies *attempted* to use PLEXOS' production cost modeling modules to rebut Ms. Sommer's modeling," and, "Although the Companies offered PLEXOS-based production cost modeling runs on rebuttal, they have not taken the time to fully learn the ins-and-outs of that effort."[113] But those who live in glass houses should be wary of casting stones; the Joint Intervenors' modeling witness Anna Sommer opened her live testimony at hearing by admitting *a nearly $200 million PVRR error*—pointed out in the Companies' rebuttal testimony concerning Ms. Sommer's PLEXOS modeling—resulting from omitting transmission cost for a wind resource Ms. Sommer incorporated in her two resource portfolios.[114] Thus, the Joint Intervenors' own testimony shows that the Companies' PLEXOS understanding is at least sufficient to surface a nearly $200 million PVRR error missed by the Joint Intervenors.

XI. DSM-EE

A. The DSM-EE Advisory Group Process Has Been Adequate and Sufficient under KRS 278.285(1)(f).

The Commission has repeatedly approved the Companies' DSM-EE Program Plans for nearly 25 years that involved stakeholder processes like those utilized here, i.e., the Companies'

[112] 8/23/23 Hearing, VR 18:10:00-18:10:48.
[113] Joint Intervenors Brief at 94-95 (emphasis added).
[114] 8/29/23 Hearing, VR 15:19:40-15:21:00.

DSM-EE Advisory Group, in which the Companies and a number of other stakeholders participated prior to the Companies filing their application in this proceeding.[115] If anything, the stakeholder processes in which the Companies engaged leading up to this DSM-EE Program Plan were more in-depth and involved than previous stakeholder processes, not less so.

Regarding the amount of stakeholder collaboration KRS 278.285 requires, this element is one of eight factors the Commission is required to consider when deciding the reasonableness of a DSM plan proposed by a jurisdictional utility. The Commission has stated:

> KRS 278.285, under which the Companies' application was filed does not require that a utility's DSM programs be developed through a collaborative process. Rather, the Commission must only consider the extent to which customer representatives were involved in the development of such programs and their support for the programs. Whether DSM programs are developed through a collaborative process or with input from an advisory group is an issue to be resolved by the Companies and the interested parties.[116]

The entities with representatives attending the meetings did indeed help to shape the DSM-EE Plan.[117] As described in the Companies' initial post-hearing brief, the minutes from the DSM-EE Advisory Group two meetings in 2021 and meetings on five occasions in 2022 reflect that the Companies discussed every aspect of program selection and design with the DSM-EE Advisory

[115] *Electronic Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Certain Existing Demand-Side Management and Energy Efficiency Programs*, Case No. 2017-00441, Order (Ky. PSC Oct. 5, 2018); *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Existing and Addition of New Demand-Side Management and Energy Efficiency Programs*, Case No. 2014-00003, Order (Ky. PSC Nov. 14, 2014); *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Existing and Addition of New Demand-Side Management and Energy Efficiency Programs*, Case No. 2011-00134, Order (Ky. PSC Nov. 9, 2011); *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company Demand-Side Management for the Review, Modification, and Continuation of Energy Efficiency Programs and DSM Cost Recovery Mechanisms*, Case No. 2007-00319, Order (Ky. PSC Mar. 31, 2008); *The Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for the Review, Modification and Continuation of DSM Programs and Cost Recovery Mechanisms*, Case No. 2000-00459, Order (Ky. PSC May 11, 2001).

[116] *The Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for the Review, Modification and Continuation of DSM Programs and Cost Recovery Mechanisms*, Case No. 2000-00459, Order (Ky. PSC May 11, 2001).

[117] 8/28/23 Hearing VR, 19:54:00 – 19:54:52.

Group.[118] It is clear that the DSM-EE Advisory Group participants provide input and insight that aids the Companies to create DSM-EE proposals the Companies believe are reasonable and worthy of Commission approval. The Companies respectfully submit the DSM-EE Advisory Group was more than sufficient to merit the Commission's determination of reasonableness with respect to KRS 278.285(1)(f).

The Companies see no benefit in continuing to engage in a back-and-forth with the Joint Intervenors about the DSM-EE Advisory Group process. Any suggestion that residential and low-income concerns did not receive adequate attention during the process is simply incorrect; as Walmart stated in its brief, DSM-EE Advisory Group meetings are "dominated by residential and low-income issues."[119] The Companies have sought to engage the stakeholders in the DSM-EE Advisory Group at every turn in a professional manner and address all concerns as they occurred through the Advisory Group process. Many of the concerns about the Advisory Group process were raised for the first time not in Advisory Group meetings, but in testimony and briefing in this case. The Companies will continue to work with their DSM-EE Advisory Group to engage all stakeholders and look forward to further constructive collaboration with the Group, including ensuring that commercial and industrial customers and programs receive more of the group's time and attention as Walmart requests in its brief.[120]

B. The Commission Has Been Clear about DSM-EE Cost-Benefit Tests for 25 Years.

Joint Intervenors devote a large portion of their post-hearing brief to advocating a position the Commission is statutorily barred from taking, namely requiring the Companies (and presumably all utilities) to include non-energy benefits in the DSM-EE cost-benefit tests they

[118] Companies Brief at 48.
[119] Walmart Brief at 17.
[120] *Id.* at 16-17.

conduct.[121] LFUCG and Louisville Metro join in this recommendation.[122] That the Commission is barred from considering non-energy benefits, and therefore from requiring utilities to include them in DSM-EE cost-benefit tests, is not a close or uncertain issue. The Commission has repeatedly held that externalities such as non-energy benefits are beyond the Commission's jurisdiction.[123] In approving the Companies' prior DSM-EE plan in Case No. 2017-00441, the Commission addressed the *same* argument that the Commission should consider the non-energy costs in analyzing cost-benefits of DSM-EE programs and explained:

> In evaluating the cost-effectiveness of the proposed DSM/EE programs, the Commission disagrees with MHC's recommendation to include the cost of non-energy factors and benefits. KRS Chapter 278 creates the Commission as a statutory administrative agency empowered with "exclusive jurisdiction over the regulation of rates." The Commission has no jurisdiction over environmental impacts, health, or other non-energy factors that do not affect rates or service. Lacking jurisdiction over these non-energy factors, the Commission has no authority to require a utility to include such factors in benefit-cost analyses of DSM programs.[124]

That Commission holding reflects that the Commission is a creature of statute, and it may therefore exercise authority only within the boundaries of its statutorily granted jurisdiction,

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[121] Joint Intervenors Brief at 30-33.

[122] LFUCG/Louisville Metro Brief at 9.

[123] *See, e.g.*, *Electronic Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Certain Existing Demand-Side Management and Energy Efficiency Programs*, Case No. 2017-00441, Order at 28-29 (Ky. PSC Oct. 5, 2018); *The 2011 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company*, Case No. 2011-00140, Order at 5 (Ky. PSC June 10, 2011); *Application of Kentucky Utilities Company for Certificates of Public Convenience and Necessity and Approval of its 2009 Compliance Plan for Recovery by Environmental Surcharge*, Case No. 2009-00197, Order at 8 (Ky. PSC Dec. 23, 2009); *Joint Application Pursuant to 1994 House Bill No. 501 for Approval of Kentucky Power Company Collaborative Demand-Side Management Programs, and for Authority to Recover Costs, Net Lost Revenues and Receive Incentives Associated with Implementation of Three New Residential Demand-Side Management Programs Beginning January 1, 2009*, Case No. 2008-00349, Order at 4 (Ky. PSC Dec. 4, 2008), Order at 1, 3-4 (Ky. PSC Dec. 16, 2008), Order at 2-4 (Ky. PSC Jan. 12, 2009); *The 2008 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company*, Case No. 2008-00148, Order at 5-6 (Ky. PSC July 18, 2008).

[124] *Electronic Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Certain Existing Demand-Side Management and Energy Efficiency Program*, Case No. 2017-00441, Order at 28-29 (Ky. PSC Oct. 5, 2018).

namely the rates and service of utilities.[125] Indeed, as the Kentucky Supreme Court stated concerning the Commission:

> The legislative grant of power to regulate rates will be strictly construed and will neither be interpreted by implication nor inference. In fixing rates, the commission must give effect to all factors which are prescribed by the legislative body, but may not act on a matter which the legislature has not established.[126]

By definition, non-energy benefits do not affect utility rates or service; if they did, they would be energy-related benefits, and the Companies would have accounted for them. But because non-energy benefits do not affect the Companies' rates or service, the Commission may not account for them or require the Companies to do so. The Companies therefore correctly excluded them from their cost-benefit analyses in this proceeding, and the Commission should refuse to require including them in future DSM-EE cost-benefit analyses.

Joint Intervenors attempt to distinguish the ample precedent by arguing that the Commission's consideration of environmental compliance risks and carbon emission risks allows the Commission to consider environmental benefits in analyzing cost-benefits for DSM-EE programs. The Commission also directly addressed this argument in Case No. 2017-00441:

> As LG&E/KU correctly note, it does not follow from their citing in 2014 of the potential avoidance of environmental compliance costs in rates in support of the construction of a 10 MW solar facility that the Commission has jurisdiction in a DSM case to require an analysis of non-energy criteria such as environmental and health factors that have no impact on rates. MHC's claim that including externalities in the California tests would result in greater DSM benefits to residential customers is unpersuasive[.][127]

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[125] *See, e.g.*, *South Central Bell Telephone Company v. Utility Regulatory Commission*, 637 S.W.2d 649 at 653 (Ky. 1982); *Application of Louisville Gas and Electric Company for an Adjustment of its Electric and Gas Rates, a Certificate of Public Convenience and Necessity, Approval of Ownership of Gas Service Lines and Risers, and a Gas Line Surcharge*, Case No. 2012-00222, Order at 4 (Ky. PSC Oct. 17, 2012).

[126] *South Central Bell Telephone Company v. Utility Regulatory Commission*, 637 S.W.2d 649 at 653 (Ky. 1982).

[127] *Electronic Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Certain Existing Demand-Side Management and Energy Efficiency Program*, Case No. 2017-00441, Order at 28-29 (Ky. PSC Oct. 5, 2018).

The Companies' position regarding non-energy benefits is consistent with their view that the Commission and utilities are not constrained to consider only the four California Standard Practice Manual tests the Commission has long required utilities to use.[128] Cost-effectiveness is one of many factors the Commission should consider when analyzing a DSM-EE proposal pursuant to KRS 278.285. Joint Intervenors are asking the Commission to consider extra-jurisdictional matters, and the Commission must refuse that request because, absent further legislation, the Commission simply does not have the jurisdiction to weigh issues that do not affect the rates and services the Companies provide to their customers.

C. The Joint Intervenors' 1% DSM-EE Savings Proposal Is Entirely Arbitrary and Contrary to Kentucky Law.

Joint Intervenors seek to require the Companies to "submit an updated DSM/EE plan proposal capable of achieving 1% annual savings as a percent of sales."[129] Sierra Club and the Cities have also latched on to the additional "savings" Mr. Grevatt "proposes" and recommend the Commission approve DSM-EE with the modifications proposed by Joint Intervenors.[130] But no statute, regulation, or Commission order requires a utility to achieve a certain amount of savings via DSM-EE programs. Moreover, KRS 278.285 permits the Commission only to "determine the reasonableness of demand-side management plans *proposed by any utility* under its jurisdiction,"[131] not ones proposed by an intervenor or other party. The Commission's statutory authority is thus limited to the DSM-EE that the Companies have proposed in their Plan; the Commission has authority to approve or eliminate programs in the proposed Plan, but not to

[128] *The Joint Application of the Members of the Louisville Gas and Electric Company Demand-Side Management Collaborative for the Review, Modification, and Continuation of the Collaborative, DSM Programs, and Cost Recovery Mechanism*, Case No. 1997-00083, Order at 20 (Ky. PSC Apr. 27, 1998).
[129] Joint Intervenors Brief at 1.
[130] *See, e.g.*, Sierra Club Brief at 8, 107, 110, 115; LFUCG/Louisville Metro Brief at 8-9.
[131] Emphasis added.

approve the additional programs Mr. Grevatt recommends. Indeed, the Commission has recognized this limitation on the scope of its authority under KRS 278.285.[132]

Therefore, it is unsurprising that the Joint Intervenors provide no legal basis for the "requirement" they request the Commission impose and instead rely solely on the fact that certain other utilities achieved 1% savings in 2018 per a report that Mr. Grevatt authored. The Companies continue to dispute Joint Intervenors' characterization of these utilities in Mr. Grevatt's report as "average utility performers";[133] the report identifies the utilities as "high-achieving" utilities that "achieved savings equal to between 1% and 2% of sales in 2018."[134] Simply because utilities have achieved 1% savings in other states—particularly in states that mandate reaching certain levels of savings, costs notwithstanding, have significantly higher retail rates than the Companies, or both—has no bearing on the DSM-EE savings the Companies can cost-effectively achieve. Pointing out this fallacy in Joint Intervenors' logic does not equate to the Companies being "incapable" of achieving the same level of savings "as the leading electric utilities," but simply means that the Companies already believe they have maximized the *cost-effective* DSM-EE savings with the proposed DSM-EE Plan.

D. Achieving 1% DSM-EE Savings Would Not Affect the Need for Proposed Resources, which the Joint Intervenors Effectively Conceded in their Own Modeled Portfolios.

Even if the Companies were able to cost-effectively achieve the level of savings Joint Intervenors recommends, Joint Intervenors have not suggested that the Companies' need for capacity and energy resulting from the proposed unit retirements could be fully or even

[132] *Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Review, Modification, and Continuation of Existing and Addition of New Demand-Side Management and Energy Efficiency Programs*, Case No. 2014-00003, Order at 30-31 (Ky. PSC Nov. 14, 2014).
[133] Joint Intervenors Brief at 14.
[134] Direct Testimony of Jim Grevatt at 36.

significantly satisfied by DSM-EE programs. The Companies emphatically reject Joint Intervenors' insinuation that the Companies do not care about DSM-EE savings because they have not proposed a DSM-EE Program Plan at the level of savings Mr. Grevatt recommends.

E. The Companies Do Not Object to Retaining a 200% of Federal Poverty Level Income Requirement for Income Qualified Solutions.

The AG and Joint Intervenors disagree with the Companies' proposal to modify eligibility for the Income Qualified Solutions programs by raising the income level to 300% of the federal poverty level to allow additional customers to participate.[135] By increasing the eligibility threshold, the Companies simply sought to make the program available to more customers.[136] The Companies also proposed to increase the number of participants and the budget per home.[137] The Companies do not object to retaining the eligibility level of 200% of the federal poverty level for Income Qualified Solutions.

The Companies do object, however, to Joint Intervenors' request that the Commission direct the Companies to undertake a low-income market characterization study.[138] Conducting a study of this kind would be costly and time-consuming. The Companies would recover the cost of the study from all residential customers through the DSM mechanism, including all low- and fixed-income customers, which would increase charges to them with no plausible benefit. Therefore, the Companies ask the Commission to reject Joint Intervenors' request.

XII. RTO Membership Considerations

Sierra Club argues that simply joining an RTO such as PJM eliminates the need to construct the proposed NGCCs and will save customers money. Sierra Club also demands an immediate

[135] AG Brief at 38-40; Joint Intervenors Brief at 21-28.
[136] Rebuttal Testimony of Lana Isaacson at 8.
[137] *Id.*
[138] Joint Intervenors Brief at 1, 3, 13, 27-28, 42.

investigation into the Companies' consideration of an RTO. But joining an RTO is not the guaranteed panacea Sierra Club would have the Commission believe, and there is no reason to launch an immediate investigation. First of all, joining an RTO does not satisfy Senate Bill 4's replacement criteria.[139] Moreover, any such approach would run afoul of the Commission's clear position that it "has no interest in allowing our regulated, vertically integrated utilities to effectively depend on the market for generation or capacity for any sustained period of time."[140]

Mr. Sinclair has provided a comprehensive description[141] of the Companies' position on and consideration of joining an RTO. In summary, Mr. Sinclair testified as follows:

- The Companies do not have an aversion to joining at RTO. If joining an RTO would mean sustained net benefits for customers and is "clearly in the money," the Companies would do so.
- The Companies have performed an RTO analysis every year since 2020 and have filed it with the Commission.
- The Companies are rightly concerned about PJM's indication of a looming "supply crunch."[142]
- Joining an RTO and building the NGCCs are not mutually exclusive, and, in fact, having the NGCCs may be very attractive to an RTO.
- Sierra Club witness Levitt's RTO assessment lacks any analysis of the future PJM market prices or the value of the Companies' existing and proposed generation assets.
- Sierra Club witness Levitt's projected savings by joining PJM is not a complete cost benefit analysis, and, even if it were, his projected savings would change if PJM's current proposal to move to a seasonal capacity market happens.[143]

Mr. Sinclair's overall point is that the Companies will continue to review possible RTO membership, and, if and when it becomes prudent, the Companies should consider it. But now is

[139] Companies Brief at 34
[140] *Electronic Tariff Filing of East Kentucky Power Cooperative, Inc. and Its Member Distribution Cooperatives for Approval of Proposed Changes to their Qualified Cogeneration and Small Power Production Facilities Tariffs*, Case No. 2021-00198, Order at 5, n.10 (Ky. PSC Oct. 26, 2021).
[141] Rebuttal Testimony of David S. Sinclair at 34-49.
[142] *Id.* at 3 (quoting PJM Vice President for State and Member Services Asim Haque, Interim Joint Committee on Natural Resources and Energy Hearing August 3, 2023, YouTube video at 13:25- 13:33, available at https://www.youtube.com/watch?v=Bja3IDPFPMs (accessed August 4, 2023)).
[143] Mr. Levitt has conceded that his projected savings would change if PJM's construct changes and that he cannot quantify what they would be. See Sierra Club's Response to Companies' Request for Information No. 12; *see also* 8/29/23 Hearing, VR 10:42:00-10:47:40.

not that time as evidenced by the Companies' RTO Study indicating the impact of RTO membership to the Companies would be a cost of $421 million. Given this and the facts that the RTO capacity markets are in a state of flux and PJM is considering changing its capacity construct, perhaps Intervenor Walmart said it best in its initial brief when it said: (1) it is understandable that the Companies would want greater clarity on RTO and capacity issues before joining an RTO; (2) the Companies require demonstrated sustained benefits of joining an RTO; and (3) the Commission "need not decide whether the Companies should join an RTO/ISO *in this case*."[144]

XIII. Solar Projects

A. All Parties Except the AG and KCA Support the Proposed Companies-Owned Solar Projects.

Most intervenors support the Companies' construction of two owned-solar generating facilities in Marion and Mercer Counties, respectively. Mercer County's objections to the proposed solar facility there have been resolved favorably by agreement.[145] The Companies have demonstrated that the proposed owned-solar facilities are an important component of a balanced generation portfolio that act as a hedge against fuel price volatility and provide operational flexibility.[146] The AG and KCA objections to owned-solar are not acutely based on cost or reliability concerns, but rather that they are not a like-in-kind replacement for coal-fired generation. But that is precisely their value. As the AG's brief correctly observed, "No single energy source is perfect or without issues; thus, utilizing all cost-effective resources allows the strengths of each to be used to overcome the weakness of others, yielding a reliable and affordable

[144] Walmart Brief at 20.
[145] Mercer County Fiscal Court Brief at 1.
[146] Rebuttal Testimony of Lonnie E. Bellar at 11-12.

grid."[147] The Companies agree and the proposed owned solar facilities in Mercer and Marion Counties serve that very purpose. The Commission should grant CPCNs for their construction.

B. All Parties Except the AG and KCA Support the Proposed Solar PPAs.

While the parties have debated the best means to recover costs associated with the proposed Solar PPAs, most parties (again, excepting KCA and the AG) support them. The PPA rider structure proposed by KIUC is agreeable to the Companies and would give the Commission ample opportunity to assess cost-recovery for the PPAs on the front end, before the facilities are built and before those costs are incurred. KIUC's proposal for rider cost recovery is now supported by the Companies, KIUC and Walmart. Sierra Club, Louisville Metro, and LFUCG also support the Solar PPAs but have not specifically commented on the rider as a means for cost recovery.[148] The Joint Intervenors support the Solar PPAs, but their suggestion of cost-recovery possibly through base rates as opposed to a rider would provide less Commission oversight and transparency than a rider.[149] The Companies therefore request the declaratory relief sought in their principal brief: that recovery may be pursued through a rider and that Commission approval of the Solar PPAs is not required under KRS 278.300 or KRS 272.020.

XIV. Conclusion

The Companies' recommended portfolio energy mix (i.e., about 50% coal, 40% gas, and 10% renewables) by retiring older generation units that are facing environmental and other economic challenges refutes the Attorney General's concern about the Companies placing "all their eggs in the natural gas basket." [150]

[147] AG Brief at 41-42.
[148] Sierra Club Brief at 109; LFUCG/Louisville Metro Brief 8.
[149] Joint Intervenors Brief at 2.
[150] AG Brief at 41.

But the Attorney General's brief fairly observes that "relying solely on hope and ignoring the law of physics and engineering will only ensure failure."[151] The Attorney General goes on to comment, "Dispatchable, thermal resources are the backbone of a reliable electric grid, and plants fired by both coal and natural gas are necessary. Common sense also dictates fuel diversification is key to stability and economic benefits."[152] His brief further notes, "Nuclear is currently not feasible, leaving gas and coal. If building new plant, gas wins by default . . . because of EPA's hostility to building coal plants."[153] Finally, his brief correctly observed, "No single energy source is perfect or without issues; thus, utilizing all cost-effective resources allows the strengths of each to be used to overcome the weakness of others, yielding a reliable and affordable grid."[154]

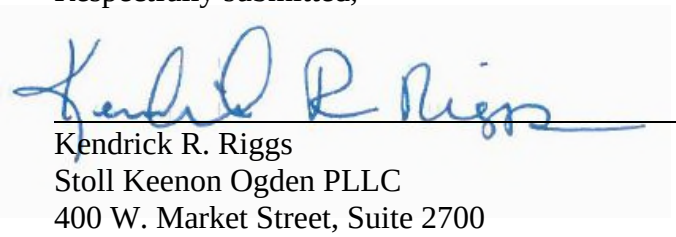
Applying these principles, based on the extensive record of evidence, leads only to one conclusion: the Commission should approve the proposed portfolio by granting the Companies the relief they request.

[Signature page follows.]

[151] *Id.* at 40.
[152] *Id.* at 41.
[153] *Id.*
[154] *Id.* at 41-42.

Dated: October 4, 2023

Respectfully submitted,



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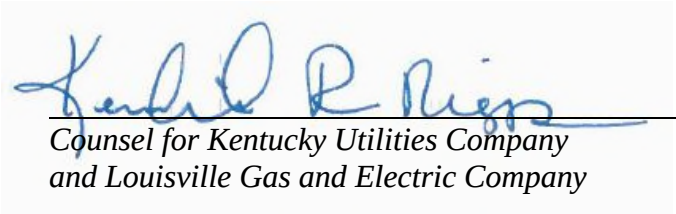
CERTIFICATE OF COMPLIANCE

In accordance with the Commission's Order of July 22, 2021 in Case No. 2020-00085 (Electronic Emergency Docket Related to the Novel Coronavirus COVID-19), this is to certify that the electronic filing has been transmitted to the Commission on October 4, 2023; and that there are currently no parties in this proceeding that the Commission has excused from participation by electronic means.



Counsel for Kentucky Utilities Company
and Louisville Gas and Electric Company

APPENDIX
TO THE POST-HEARING REPLY BRIEF OF
KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY
OCTOBER 4, 2023

Intervenor Brief Citation	Error or Mischaracterization	Correction
JI Brief 78-79	"The [October] 2022 HDR Feasibility Study is the identified basis for the Companies' NGCC cost estimates, but the 2022 HDR Feasibility Study was not final until October 2022—several months *after* the Companies' project engineering group submitted two 640 MW NGCCs to their interconnection queue, and prepared bids in response to the June 2022 RFP. This sequence of events is of concern … [for] the credibility of the assessment required by the CPCN process of the reasonable alternatives for providing reasonable low-cost utility service. Notably, the Companies did have an earlier 2013 HDR Feasibility study for an NGCC at the Brown site, and the April 2022 Services Agreement for a "**2027 Natural Gas Combined Cycle** Feasibility Study"(emphasis added) tasked HDR with "refreshing" and refining" earlier work identified only by project number. It is plausible that the Companies had only an earlier vintage analysis when Mill Creek Unit 5 and Brown Unit 12 were moved in to the interconnection queue, which would explain the understated cost assumptions."	The Companies used the October 2022 HDR study as the basis for the cost and other characteristics of the NGCC units modeled in the Companies' Resource Analysis.[155] Only the Companies supplied NGCC bids in response to the RFP, so it is unclear how using the most up-to-date information then available for the Companies' Resource Analysis is supposed to have adversely affected either the RFP process or the Resource Analysis. In addition, the NGCC cost assumptions the Companies used at the time were entirely consistent with NREL capital cost estimates considering that the proposed units would be located at existing sites, resulting in certain cost savings.[156] Thus, contrary the Joint Intervenors' untethered speculation, the actual cause of the cost differences between the costs assumed in the Companies' Resource Analysis and the results of the EPC RFP has nothing to do with the vintage of the information in the October 2022 HDR study.

[155] *See, e.g.,* Rebuttal Testimony of Lonnie E. Bellar at 4-5.
[156] Companies' Response to KCA 2-40. *See also* Companies' Response to PSC 2-21(a).

APPENDIX
TO THE POST-HEARING REPLY BRIEF OF
KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY
OCTOBER 4, 2023

Intervenor Brief Citation	Error or Mischaracterization	Correction
JI Brief at 82	"[T]he load forecast relies on a DER adoption rate that assumes … zero behind-the-meter storage."	This is false. The load forecast implicitly assumes behind-the-meter storage will continue to grow in proportion to load.[157]
JI Brief at 84	"The apparent intention of the 2% annual rate increases is to match inflation, but is troublingly out of step with the actual experience of inflation since 2022 and near-term expectations."	This is disingenuous at best; the inflation that matters for the purpose of this proceeding is *long-term* inflation, not inflation in recent months. Moreover, the Federal Reserve source the Joint Intervenors' own brief cites states: The Committee reaffirms its judgment that inflation at the rate of 2 percent . . . is most consistent over the longer run with the Federal Reserve's statutory mandate. . . . In order to anchor longer-term inflation expectations at this level, the Committee seeks to achieve inflation that averages 2 percent over time, and therefore judges that, following periods when inflation has been running persistently below 2 percent, appropriate monetary policy will likely aim to achieve inflation moderately above 2 percent for some time.[158]

[157] *See, e.g.*, Companies' Response to Commission Staff's Second Request for Information No. 46(c) ("To the extent other commercial or industrial customers have batteries about which they have not informed the Companies, whatever effect they have had on load is already reflected implicitly in the Companies' load forecast.").
[158] https://www.federalreserve.gov/monetarypolicy/2023-03-mpr-summary.htm (accessed Sept. 28, 2023).