COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the matter of: :

ELECTRONIC JOINT APPLICATION OF KENTUCKY : CASE NO. 2022-00402
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 :

RESPONSE BRIEF
OF THE KENTUCKY COAL ASSOCIATION, INC.

Dated: October 4, 2023

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COMMONWEALTH OF KENTUCKY
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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

KENTUCKY COAL ASSOCIATION'S RESPONSE BRIEF

The Kentucky Coal Association (KCA), as intervenor in this action, submits the following as its Response Brief in this matter:

Kentucky Utilities Company and Louisville Gas and Electric Company (the "Companies") filed this certificate of public convenience and necessity ("CPCN") action seeking approval to build or acquire a resource portfolio of dispatchable generating resources, non-dispatchable generating resources and non-generating resources which at the time the Companies parent PPL Corporation advertised as a $2.1 billion investment.[1] However, the statutory landscape has changed significantly in Kentucky due to the enactment of SB 4 by the 2023 Kentucky General Assembly, the EPA's proposed Greenhouse Gas ("GHG") Emission regulations and the Sixth Circuit Court of Appeals' entry of an order staying the enforcement of the EPA's Good Neighbor Rule ("GNR") to which the EPA has consented.[2] The Companies' CPCN is contrary to the express terms of SB 4 (now codified as KRS 278.264) and it is contrary to the clear public policy of the Commonwealth to support Kentucky's existing fossil fuel-fired

[1] The latest cost numbers suggest a cost between [redacted].
https://cdn.webinar.net/resources/15a4cea8-6959-4e6a-8112-ffab49e62b86.pdf, Page 8

[2] https://www.epa.gov/csapr/epa-response-judicial-stay-orders

electric generating plants. But rather than withdraw their CPCN, the Companies ask the Commission to interpret SB 4 in a manner that would defeat the very purpose for which it was enacted.

The Companies effectively urge the Commission to ignore SB 4, or to interpret the law in a manner that renders it meaningless or ineffectual. In their initial brief, the Companies suggest that the KCA's interpretation of SB 4 is an absurdity that must be rejected.[3] However, the purpose of the statute is clear. Consider Senate President Robert Stivers' public comments to the Commission regarding the passage of the bill: ". . . [T]he Kentucky General Assembly engaged in considerable debate and discussion regarding the importance of maintaining a reliable and resilient electric energy grid that provides the citizens and businesses throughout the Commonwealth of Kentucky with reliable and affordable energy." The General Assembly was and is concerned about the reliability and resiliency crisis facing Kentucky due to the premature retirement of fossil-fuel fired plants in Kentucky and its neighboring states. By creating a strong presumption against the retirement of fossil-fuel fired generating capacity, the General Assembly exercised its prerogative to determine that fossil-fuel fired generating capacity is more reliable and more resilient than other forms of power in the Commonwealth.

The Companies have failed to adequately advise the Commission of the direct and indirect costs of retiring their coal-fired plants. Nor have they demonstrated how the retirement of their coal-fired plants will create cost savings that benefit their customers. The General

[3] "When the words of the statute are clear and unambiguous and express the legislative intent, there is no room for construction or interpretation and the statute must be given its effect as written." *McCracken County Fiscal Ct. v. Graves*, 885 S.W.2d 307, 309 (Ky.1994) (quoting *Lincoln County Fiscal Ct. v. Dep't of Pub. Advocacy,* 794 S.W.2d 162, 163 (Ky.1990)); *see also Griffin v. City of Bowling Green*, 458 S.W.2d 456, 457 (Ky.1970). "The cardinal rule of statutory construction is to ascertain and give effect to the intent of the legislature." *Kentucky Ins. Guar. Ass'n v. Jeffers,* Ky., 13 S.W.3d 606, 610 (2000). *See also* KRS 446.080(1).

Assembly created a presumption against the retirement of coal-fired plants, and a formidable gauntlet of strict requirements to overcome that presumption. The Companies ask the Commission to approve their plan to shutter four (4) coal-fired plants having failed to overcome SB 4's powerful presumption against such actions. If it is to be done, then the law requires that it be done for compelling reasons that strictly adhere to the requirements of SB 4. In this instance, the Companies have failed to meet their significant burden, and their CPCN stands as a testament to why the General Assembly felt compelled to create strict laws for the protection of the Commonwealth's fossil fuel fired plants.

1. The Companies' Proposed Resource Portfolio fails to provide for sufficient dispatchable new generating capacity to replace the four (4) coal-fired plants they propose to retire.

The Companies argue that SB 4 does not require a megawatt of retired capacity to be replaced with an identical megawatt of new capacity. SB 4 expressly requires the utility to replace the retired plant capacity with new electric generating capacity that is dispatchable, and either maintains or improves the reliability and resilience of the electric transmission grid. The Attorney General said it best, "Senate Bill 4's message is clear: the General Assembly has declared the Commonwealth's public policy to be that the Commonwealth must ensure that Kentucky has reliable, dispatchable electricity twenty-four hours per day, for every day of the year."[4]

The Companies' proposal, on its face, fails to satisfy KRS 278.264(1)(a). The collective new dispatchable capacity of the two proposed NGCCs will create less than the collective capacity of the plants the Companies seek to retire. According to the Companies, the

[4] OAG initial brief, dated September 22, 2023 at p. 8-9.

dispatchable NGCC plants will produce 1282 MW[5] whereas the to-be retired coal plants generate 1494 MW.[6] Moreover, the Companies' projection of 1282 MW ignores the fact that the GHG regulation, if implemented as proposed, will limit the NGCC to a 50 percent capacity factor. If that occurs, the negative impact upon the electric transmission grid will be significant, require additional generation sources to be built and contravene the General Assembly's efforts to protect Kentucky's electric transmission grid.

In order to match the net *summer* generating capacity of the to be retired fossil fuel-fired plants (inclusive of DSM), the Companies must include company-owned solar and Brown BESS capacity. As KIUC points out, "[t]he conclusion that Company-owned solar is dispatchable for purposes of SB 4 is not strong."[7] Moreover, even with the addition of non-dispatchable solar and non-generating BESS, the proposed portfolio falls short of the existing fossil-fuel assets net winter capacity. Similarly, all parties agree that the Solar PPAs are not dispatchable and the BESS is not "new electric generating capacity". Under no circumstance can company-owned solar, solar PPAs and/or the BESS battery be included in the Commission's analysis of whether the Companies' proposed new portfolio of replacement assets satisfy KRS § 278.264(1)(a)–(b).

The Companies dislike the plain language of the statute and assert that it is absurd because it will create an ever-increasing excess capacity gap. If anything, the notion that there will be an ever-increasing excess capacity issue is a function of the Companies' stagnant load forecast which does not provide for expected economic growth.

2. The Companies' Brief glosses over the reliability and resiliency problems with their proposal.

[5] But see post-hearing data request of the Joint Intervenors (4.1) with higher capacity.
[6] *See*, Wilson SB4-1, p. 12 and 14 of 33, filed May 10, 2023, Case No. 2023-00122.
[7] Notably, the Companies conceded that even aggregating the proposed NGCC capacity with the company owned solar capacity falls short of matching the dispatchable capacity of the to-be retired fossil fuel plants. KU/LGE Initial Brief, dated September 22, 2023 at 32-33.

The Kentucky Legislature enacted KRS 278.264 to ensure that utilities are able to quickly and effectively respond to events that compromise the electric grid. To achieve that end, the General Assembly established a strong presumption against what the Companies seek to do here, by prematurely retiring fossil fuel generating capacity and replacing it with less reliable alternatives. The Companies failed to demonstrate that the plan put forward would not have a negative impact on the reliability or the resilience of the electric grid.

The Companies believe that a portfolio with an LOLE equal to or less than 3.57 satisfies the reliability requirement of SB 4 § 2(2)(a)(2).[8] In reaching that suggestion, the Companies used a portfolio of existing generating assets, excluding Mill Creek Unit 1, and single cycle combustion turbines (SCCT).[9] KCA suggested in its initial brief that the Companies failed to meet the reliability and resilience standards of SB 4 based on their LOLE portfolio profiles including non-dispatchable and non-generating assets.[10] Despite arguments about whether LOLE even in fact equates to SB 4 reliability, it is apparent to KCA that non-dispatchable resources (e.g. solar power), non-generating resources (e.g. the battery) and non-spinning resources (e.g. DSM) should not be used to address a loss of load expectation.[11] Further, KCA contends that the portfolios cited by the Companies to meet the reliability requirement of SB 4 incorrectly include non-dispatchable and non-generating assets.

With respect to the Companies' proposed asset mix, the resilience and reliability of the proposed asset mix are also compromised by the EPA's proposed GHG regulation that may limit

[8] See, Companies' Response to Commission Staff Fourth Request for Information, No. 6, dated May 30, 2023.
[9] SAW-1, Response to JI-2, Question No. 60(a), p. 97 of 104.
[10] KCA initial brief, p. 4-9.
[11] The need to be able to instantaneously respond to a load loss (e.g. a spinning reserve asset) should eliminate solar, battery and demand-side management (DSM) from use in a LOLE calculation. https://www.sciencedirect.com/topics/engineering/spinning-reserve

the capacity factor of the new NGCC's to 50 percent if they are not equipped with carbon capture and storage ("CCS") or cannot switch to low GHG hydrogen, which also has impacts on reserve requirements. Moreover, unlike coal that can be stored on-site, the replacement NGCCs do not have onsite fuel storage, nor do they have the same dispatchability profile of the coal-fired plants the Companies want to retire. In response to legitimate concerns about known fuel security issues encountered recently during Winter Storm Elliot, the Companies asked the Commission to look the other way and to trust that they will resolve the concerns. They say they are working closely with Texas Gas Transmission, adding software updates, evaluating adding gas compression equipment, evaluating onsite fuel storage for new NGCCs and studying pipeline diversity. However, none of those considerations is included in the CPCN and equally important to SB 4, the Companies have failed to provide any information about what those security measures might cost ratepayers at the time of filing this CPCN. At this juncture, the Companies have not provided adequate analysis of the costs associated with the NGCCs. The conclusion must be that replacing coal- fired plants with NGCCs fails to improve reliability as required by KRS § 278.264(2).

During the hearing, the Companies made a compelling case for dual fuel capability. The KCA agrees that this would improve the reliability of the NGCC's. The Companies brief, however, confirms that dual fuel capability is not part of the current plan stating only "[t]he Companies are still committed **to exploring** dual fuel capability for reliability and resilience."[12] The Companies should have included dual fuel capability in its CPCN application if it wanted to tout the benefits of dual fuel capability at the CPCN hearing. Given the uncertainty as to whether dual fuel capacity can even be permitted, the reliability of the NGCCs should not reflect

[12] Page 25 of the Companies' initial brief, dated Sep. 22, 2023.

dual fuel capability. Given a consensus that dual fuel capability is desirable, the original NGCC costs should have included such capability.[13]

3. **The Companies' proposal and brief fail to satisfy the financial restrictions that apply to the retirement of fossil-fuel generating capacity.**

KRS 278.264 has two financial protections for ratepayers that must be satisfied before the retirement of a coal-fired plant can be approved. First, the Commission must find that the retirement will "not harm the utility's ratepayers by causing the utility to incur any net incremental costs" that could be avoided by continuing to operate the unit. KRS 278.264 (2) (b). Second, the utility must provide affirmative evidence that ratepayers will actually benefit from retirement. The utility must provide evidence that "cost savings will result to customers" from the retirement. KRS 278.264 (3).

Stated differently, the proposed resource portfolio must be affordable. As SB 4 requires, a demonstration of affordability is required to justify the closure of coal plants. Suggesting a Net Present Value of Revenue Requirements (referred to as a "NPV or PVRR") of a resource plan is less expensive through a comparative NPV analysis says *nothing* about its affordability. It does not say what the impact on rates and ratepayers will be from that case. Said simply, the NPV and affordability/rate impact analyses are two separate analyses and should not be conflated into one.

The legislative concern in SB 4 regarding affordability no doubt relates to the recent and significant increases in power rates in Kentucky. Kentucky has experienced above average increases in power pricing over the last twelve (12) years as coal-fired generation has gone from

[13] In response to a post-hearing data request of the Joint Intervenors (4.1) the Companies included some confidential cost *estimates* from a latent RFP request to add dual fuel capabilities wherein the costs totaled approximately [redacted] in capital for each NGCC – an additional cost not included with the original CPCN request. No information was provided relative to the cost of the No. 2 fuel oil which could easily run into the millions depending upon the size of the tanks, the contemporaneous price for the No. 2 fuel oil, and the expected annual consumption.

over 90 percent to less than 70 percent. Residential rates have increased by 50 percent (versus 31 percent nationally), commercial rates by 52 percent (versus 23 percent nationally) and industrial rates by 51 percent (versus 25 percent nationally).[14]

Power Rates in Kentucky (Cents/kwh)

	RESIDENTIAL			COMMERCIAL			INDUSTRIAL			TOTAL		
	KY	All States	Rank	KY	All States	Rank	KY	All States	Rank	KY (cents/kwh)	All States (cents/kwh)	Rank (Lowest to Highest)
2010	8.57	11.54	4	7.88	10.19	14	5.05	6.77	4	6.73	9.83	4
2011	9.2	11.72	8	8.49	10.24	17	5.33	6.82	6	7.17	9.9	5
2012	9.43	11.88	6	8.73	10.09	19	5.35	6.67	6	7.26	9.84	5
2013	9.79	12.13	8	8.56	10.26	13	5.66	6.89	6	7.69	10.07	4
2014	10.16	12.52	8	9.44	10.74	19	5.68	7.1	3	8.15	10.44	7
2015	10.24	12.65	8	9.44	10.64	20	5.48	6.91	5	8.14	10.41	7
2016	10.49	12.55	9	9.57	10.43	21	5.67	6.76	6	8.42	10.27	8
2017	10.85	12.89	9	9.85	10.66	22	5.72	6.88	6	8.57	10.48	8
2018	10.6	12.87	8	9.74	10.67	23	5.68	6.92	7	8.52	10.53	9
2019	10.8	13.01	9	10.15	10.68	27	5.57	6.81	7	8.61	10.54	10
2020	10.87	13.15	10	10.34	10.59	29	5.31	6.67	6	8.58	10.59	11
2021	11.5	13.66	16	10.75	11.22	30	5.95	7.18	4	9.12	11.1	13
2022	12.85	15.12	17	11.95	12.55	31	7.63	8.45	21	10.62	12.49	18
2022 vs 2010	50%	31%		52%	23%		51%	25%		58%	27%	

As a result of the disproportionate increase in rates, Kentucky's rankings with respect to other states have significantly deteriorated. For residential rates, Kentucky now ranks 17 (up

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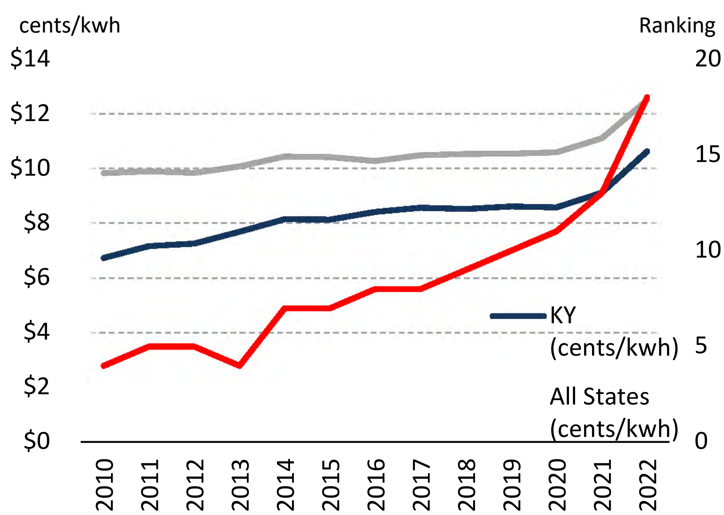
[14] **Residential**
https://www.eia.gov/electricity/data/browser/#/topic/7?agg=1,0&geo=00fvvvvvvvvvo&endsec=8&freq=A&start=2001&end=2022&ctype=linechart&ltype=pin&rtype=s&maptype=0&rse=0&pin=
Commercial
https://www.eia.gov/electricity/data/browser/#/topic/7?agg=1,0&geo=00fvvvvvvvvvo&endsec=4&freq=A&start=2001&end=2022&ctype=linechart&ltype=pin&rtype=s&pin=&rse=0&maptype=0
Industrial
https://www.eia.gov/electricity/data/browser/#/topic/7?agg=1,0&geo=00fvvvvvvvvvo&endsec=2&freq=A&start=2001&end=2022&ctype=linechart&ltype=pin&rtype=s&maptype=0&rse=0&pin=
All sectors by state
https://www.eia.gov/electricity/data/browser/#/topic/7?agg=1,0&geo=00fvvvvvvvvvo&endsec=g&freq=A&start=2001&end=2022&ctype=linechart&ltype=pin&rtype=s&pin=&rse=0&maptype=0
All sectors national
https://www.eia.gov/electricity/data/browser/#/topic/7?agg=0,1&geo=g&endsec=vg&freq=A&start=2001&end=2022&ctype=linechart&ltype=pin&rtype=s&maptype=0&rse=0&pin=

from 4); for commercial rates Kentucky now ranks 31 (up from 14), and for industrial rates, Kentucky now ranks 21 (up from 4). *Id.* The Companies conceded that in the first ten (10) years, if the CPCN is approved, ratepayers would incur *at least* $150,000,000 in additional net incremental costs, which clearly offends the express requirements of SB 4. *See*, response to KCA 3-29.

For obvious reasons, power rates are an important determinant of desirability of location for businesses. Kentucky's power rates have increased at a greater pace than All States and its ranking has significantly worsened.[15]

Kentucky Rates versus All States and Kentucky Rank



The Kentucky General Assembly is raising the issue of affordability not because of a concern about the relative NPV rankings, but rather a concern about the rate impact upon consumers and the economic competitiveness of the state. At a minimum, the Companies should be required to estimate impact on at least residential rates by year for the first ten (10) years of its plan in order to be compliant with SB 4 and for the Commission to be appropriately informed when deciding whether to approve the Companies' proposal. Residential and commercial rates

[15] *Id.*

are the most important indicator because the industrial rates are heavily affected by contractual arrangements.

4. **The Companies' recent RFP responses show the Companies' NGCC cost estimates are unreliable and significantly higher than suggested.**

The Companies' capital cost estimates are well above what was assumed in the CPCN application. In response to a joint intervenor post-hearing data request from September 2023, the Companies acknowledge the bids are [redacted] per kw above what it had modeled.[16] The [redacted] increase may or may not include dual fuel capability for which the Companies made a compelling argument in the proceeding and could increase costs even more.[17] Notably, the total dollars are more than [redacted] higher because the units are now sized at 645 MW vs 621 MW, about 4 percent higher. However, every penny of capitalization helps earning growth ("EG") from the Companies' perspective. The all-in costs for the NGCCs including capital and improvements related thereto totaled $661 million for the Mill Creek NGCC and $699 million for the Brown NGCC as of April 14, 2023. The Companies are now telling the Commission that the all-in proposed costs total [redacted] million for the Mill Creek NGCC and [redacted] million for the Brown NGCC as of September 2023, an increase of [redacted]. [18]

Astonishingly, the Companies represent that there are no issues with affordability despite their confirmation that the "net benefits" to ratepayers are reduced.[19] The Companies' flawed modeling analysis with its unproven coal-to-gas ("CTG") methodology and NPV/PVRR analyses ducks the issue and provides no analysis of affordability or estimated rate impact upon customers.

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[16] Response No. 4.1 to Joint Intervenors Post-Hearing Data Request.
[17] The" bid response numbers, with dual fuel, do not add up to the suggested totals in fn.1 of Response No. 4.1 to Joint Intervenors Post-Hearing Data Request.
[18] Response to KCA 2-39, Response to No. 4.1 to Joint Intervenors Post-Hearing Data Request.
[19] *Id*.

The Companies dismiss these higher costs and argue, based upon representations of the vendor, that the recent increase in prices is the reason to move forward now, not a reason to pause and reconsider their proposal.[20] In the same breath, the Companies confirm these prices are not final and are subject to negotiation. The Companies would like the Commission to assume these prices could be negotiated downward, however, in the current inflationary and labor constrained atmosphere that seems highly unlikely.

As previously provided, the industry believes that CCGT (combined cycle gas turbine) costs are expected to decline over time.[21] Buying at the peak of the market is not likely to end well. As industry capacity is expanded to meet "higher demand", costs will adjust as demand lessens over time. The Companies urgency to proceed is not justified. It can meet its load requirement with the existing coal-fired plants for a cost significantly below the costs for the NGCC's.

As stated above, the Companies' capital cost estimates when they filed this CPCN did not include dual fuel capability.[22] The Companies' testified dual fuel capability is needed to make the gas plants more reliable. *Id*. at fn.23.

Also, the Companies are asking the Commission to approve this commitment without a firm estimate of the Firm Transportation (FT) which KCA believes could range from $15 to $30 million **per year** (a 20-year commitment would equate to $300 to $600 million). Rather the Companies included simply an "estimate" of FT costs in their modeling. In response to KCA Q-

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[20] Similar to recent mortgage interest rate increases, millions of Americans have reconsidered moving homes and instead chosen to remain in their existing home in light of the risk of increased costs associated with moving – the Companies choose risk because they can do so with ratepayers paying for any consequences.
[21] https://atb.nrel.gov/electricity/2023/data
[22] See also, discussion in Paragraph 4 above discussing the Companies' RFP response attached to JI PH-DR 4.1.

20, the Companies acknowledge they have no plans to finalize or execute FT agreements until after Commission approval of the new NGCC units. Given the changes in market conditions described in the Companies response to Joint Intervenors Q-4.1, the FT costs could be considerably higher than those assumed in the Companies' modeling. Similarly, the Companies were unwilling to share even a draft FT agreement with the expected non-monetary terms precluding a full evaluation. The FT agreements provide no guarantee of natural gas supply, only a guarantee of delivery. Further, the Companies have failed to demonstrate adequate long-term natural gas supply to these units.

All of these factors, including the additional information about the cost of hydrogen capability all point to the fact that this commitment is premature. The coal plants are capable of continuing to operate and the capacity is not needed. The Companies have yet to show the impact of their proposed investments on rates.

5. PVRR calculations are skewed by compounding layers of biased assumptions that favors the Companies' retirement of their coal-fired plants.

As discussed above, the Companies' proposal harms ratepayers because it will result in increased rates and make it more difficult for Kentucky to attract economic development. The PVRR analysis is based on assumptions that diminish the projected costs of their proposal and increase the projected cost of the continued operation of the coal fired plants. These biased assumptions, that underpin the supporting analysis used to justify the Companies CPCN request and the Companies' attempt to squeeze the CPCN proposal into the rubric of SB 4, emanate from the parent company (PPL) executive incentives highlighted in the KCA's initial brief. In the face of so much uncertainty and change, with sufficient existing fossil fuel fired generating capacity, prudence dictates that the Companies should have re-evaluated the CPCN.

The biased assumptions that should be discounted by the Commission include:

- Proposed federal regulations (Greenhouse Gas – GHG) and promulgated and stayed federal regulations (the Good Neighbor Rule) create significant uncertainty as it pertains to the Companies' NGCC requests from a permitting standpoint and from an operating capacity allowance standpoint (pertaining to GHG) and delay of the proposed retirements would help defray stranded costs associated with the prematurely retired coal plants and reduce the risk of potential stranded costs associated with the NGCC plants.
- The CPCN includes unknown material costs, such as executable Firm Transportation costs.
- If history repeats, there will be additional capital expenditures related to these NGCC plants after ten (10) years which will more than offset any hypothetical savings.
- Inclusion of federal incentives in the PVRR analysis is in violation of KRS § 278.264(2)(c). The Legislature clearly believed in drafting SB 4 that there are valuable attributes associated with fossil fuel-fired generation that make it reasonable to exclude federal financial incentives associated with retiring those assets. The statute is clear; it is not discretionary or permissive. Because the Companies' CPCN request is reliant on federal incentives for renewable energy sources, the request runs afoul of SB 4 and must be denied.
- Ignoring the economic costs of closing plants in violation of SB 4. Indirect costs of retiring the fossil fuel-fired plants may or may not impact customers rates but remain part of the overall analysis for the Commission to consider in determining

compliance with SB 4. The Companies' failure to provide sufficient evidence of those indirect costs further contributes to their failure to overcome the rebuttable presumption against retirement of the coal fired plants.

- The EPA has proposed new source performance standards ("NSPS") a/k/a Greenhouse Gas ("GHG")[23] rules for new NGCC's that arose during this proceeding after the filing and request for this CPCN that all parties acknowledge would adversely affect the proposed NGCCs. As currently proposed, the GHG rules will require carbon capture or switching to low GHG hydrogen to continue to operate as baseload units. The Companies argue they can comply with the new rule by switching to be an intermediate load plant which would not increase the capital cost. (*See*, Witness Crockett, 8/22/23, 11:37-8). They claim that the new rules, once published, will not be enforced due to years of anticipated litigation following their promulgation. (*See*, Witness Crockett, 8/22/23, 11:38). Any delay in enforcing a new regulation would require a stay which is far from certain.[24] Notwithstanding their predictions, if the proposed rule stands, the Companies will not have sufficient capacity to meet the needs of ratepayers if their coal-fired plants are retired.
- The Companies have received the permits required to implement the CPCN, most notably the air permits for the NGCC plants.

[23] The proposed GHG rules also modify regulatory compliance for coal plants allowing them to operate through 2031. www.epa.gov/system/files/documents/2023-05/111%20Power%20Plants%20Stakeholder%20Presentation2_4.pdf, page 13.
[24] For example, the Mercury and Air Toxics (MATS) rule was ultimately vacated but not stayed. www.epa.gov/system/files/documents/2022-02/fact-sheet_mats-an-proposed-rule.pdf

- Coal-To-Gas (CTG) Methodology - The Companies' fuel-price and CO_2 cost modeling are misguided because both fail to account for important variables across a range of possible futures. The Companies likewise demonstrate a lack of understanding of fuel markets with a backward-focused forecast linking coal and natural gas prices that does not conform to industry standards. The Companies could not identify a single other party that used or could justify this CTG methodology.

The Companies have the affirmative obligation to demonstrate that their analyses supporting the CPCN are accurate. Therefore, the Companies' argument that Witness Medine should have provided an alternative price forecast and remodeled all of the Companies' cases does not align with the role of stakeholders in reviewing a CPCN proceeding. Witness Medine testified that the Companies should have and could have obtained third party fuel price forecasts and that there are multiple providers available that they could have retained. Instead, the Companies relied upon Energy Information Administration ("EIA") gas price forecasts to which they applied the historical relationship factors. The Companies' use of an *ad hoc* methodology developed by the Companies that is unconventional, unsupported and without any demonstrable institutional knowledge in the gas markets should not be used to justify a multi-billion dollar investment.[25] It is unacceptable. Interestingly, EIA also produces coal price forecasts which the Companies did not appear to consider at all.[26]

[25] The Companies' methodology was to apply historical factors to EIA's range of natural gas price forecasts. EIA in no place suggests this is an appropriate methodology for forecast future coal prices nor is this methodology applied for develop EIA's own price forecasts. https://www.eia.gov/outlooks/aeo/tables_ref.php

[26] https://www.eia.gov/outlooks/aeo/tables_ref.php, Tables 64 and 66.

As Witness Medine further testified, the issue is not the past relationship between coal and natural gas prices that is important. Natural gas supply and demand has changed as a result of significant increased demand in the power sectors and significant increased demand from both pipeline exports to Mexico and liquified natural gas ("LNG") exports overseas. Further, as acknowledged by the Companies, natural gas pipelines have been increasingly challenging to permit and construct in the U.S. What the Companies have failed to acknowledge or analyze is the adequacy of supply even with firm transportation, which does not guarantee the supply of gas, only its transportation if the supply exists. Therefore, even if the Companies are successful in contracting for pipeline capacity, firm transportation does not mean that the gas supply will be there. In other words, the Companies' natural gas supply analysis is materially incomplete.

The lack of understanding of markets and pricing was also demonstrated in the Companies' initial brief which claims that because coal prices were below the price of natural gas, the forecasting methodology was not biased.[27] The Companies certainly know that the dispatch of power plants is not based upon the commodity price alone.

Witness Medine further testified that, in addition to securing third party assistance in developing fuel price forecasts, there was nothing to prevent the Companies from soliciting coal bids from the market for a five plus year term. This would have provided a more credible basis for the CPCN forecast.

Finally, the analysis construct did not properly model or assess the strategy that KCA believes makes the most sense. That strategy is to retain the coal-fired plants (with SCR retrofits, if needed) for a period of time that would (a) minimize ratepayer impacts, (b) obtain

[27] Companies' Initial Brief, Page 20. "Also, the Companies' fuel cost forecasting approach is actually favorable to coal by ensuring that gas prices are always higher than coal prices on a cost per MMBtu basis, and the coal-to-gas rations."

clarity regarding future environmental regulations; and (c) provide the Companies ample time to revise their analysis to address issues that became apparent during the hearing including cost certainty, dual fuel capability, permitting issues, adequacy of natural gas pipelines and supply, and affordability. Supporting this position, the recent NGCC RFP bid responses show a [redacted] cost increase per MW above the Companies' initial estimate in this case and an increase in plant size which has the net effect of increasing the cost of the plants by more than [redacted] of the initial estimate. Further no information has yet to be provided on what the status is of costs under firm transportation agreements. [28]

6. **The Commission should not look past the requirements of SB 4 to retire the existing fossil-fuel fired generating capacity in response to fuel transportation scare tactics to benefit the Companies and their parent company's executives at the expense of ratepayers.**

The reported motivation for the Companies' new portfolio mix was to comply with the GNR, which *was modified*, then stayed. It is interesting that the Companies did not support the OAG and others in pursuit of stay or withdraw the CPCN request when the rule was stayed.

Undeterred, the Companies have continued to move forward asking the Commission to ignore the plain language in SB 4, approve the retirement of coal-fired plants which have years of useful life remaining, and approve the new portfolio now, stating the need to secure FT and EPC Contractors for the NGCC because of limited availability.

Evidence suggests that the current increases in EPC contractor costs are due to supply chain shortages, labor issues, and inflation.[29] However, there is no reason to believe these issues will not be resolved going forward. National Renewable Energy Laboratory (NREL) produces an

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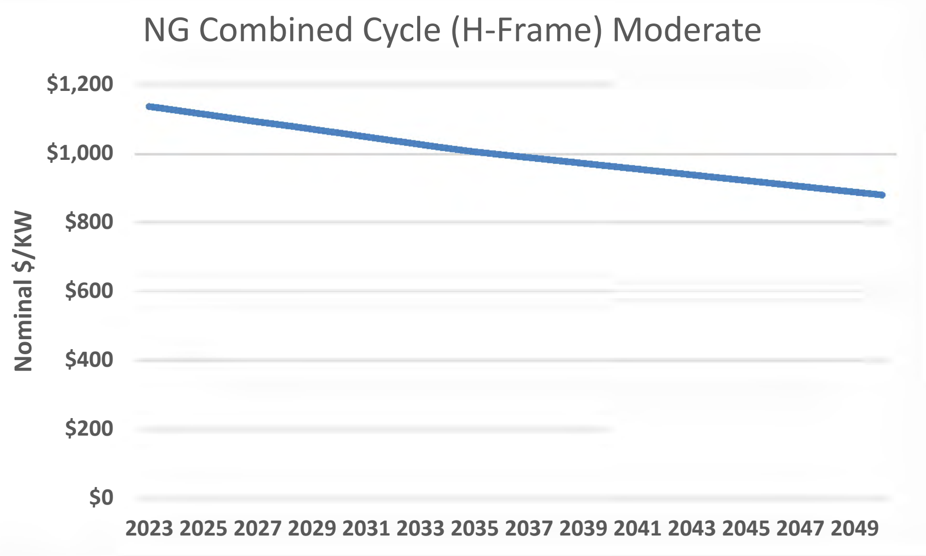
[28] Companies' response to KCA 2-44 and 2-38.
[29] Companies' RFP Response to Joint Intervenors' Post-Hearing Data Request No. 4.1

annual forecast of resource costs. The forecast from the 2023 workbook for natural gas combined cycle plants calls for a decline in overnight capital cost from 2023 through 2050.[30]



The recent responses to the Companies' RFP bids involving the NGCCs currently demonstrate at least a [redacted] cost increase per MW above the initial CPCN estimates. *See*, fn. 29. The Companies suggest they will negotiate aggressively with bidders to reduce costs while having no reason to do so and benefitting financially if the costs increase. *Id*. The Commission should not approve the CPCN for these new gas plants under this uncertain cost structure which does not provide an accurate or complete picture of the total costs (e.g. firm transportation)[i]. Additional time would allow for more certainty. Additionally, while the CPCN cost estimates remain uncertain, the Companies certainly plan to recover any and all of these costs from the ratepayers. *See*, Companies' response to KCA 3-30.

Equally concerning here is that the Companies have consistently failed to provide the expected FT costs, the terms of any FT agreement, or assess the actual availability of long-term natural gas supply, and none of the foregoing costs are included in their PVRR analysis.

[30] https://atb.nrel.gov/electricity/2023/data

Evidence indicates that FT costs could be considerably above the already massive [redacted] price tag. If the additional FT costs were properly considered in the Companies' self-fulfilling PVRR analysis it could have a material effect on the outcome. More importantly, those additional FT costs will be recovered from the ratepayers.

The Companies have also operated under the assumption that if the GHG rules are promulgated and survive legal challenge, the Companies can comply with no additional costs by operating as an intermediate load plant (limiting the plant to a 50% capacity factor). The Companies fail to disclose that the costs of operating a planned baseload plant as intermediate load. will certainly affect the cost to ratepayers as additional capacity will need to be added to support load. The Companies' analysis also fails to account for the risk that the final rules may no longer provide limited generation as a compliance option or that the new NGCC's may be required to close absent the installation of CCS or conversion to GHG hydrogen as the fuel source. The risk of such an outcome compounded by substantial FT costs, weighs in favor of denial at this time.

The terms of any FT contracts are also critically important in light of EPA's GHG proposal. If, for example, the Companies sign a twenty (20)-year FT contract, ratepayers could be on the hook for payments throughout the balance of the term of the FT contract whether the plant operates or not.

Even if the Commission is inclined to accept the assertion by the Companies that FT costs will continue to increase and pipeline capacity will continue to become scarcer, the Commission should still deny the CPCN because the SB 4 analysis cannot be appropriately performed without the inclusion of all costs in the SB4 retirement analysis. The bottom line is the Companies are asking for approval for two NGCC's without fully disclosing all costs and risk. Further, stakeholders should be given the opportunity to revisit their positions, particularly with respect to affordability once the costs are actually disclosed.

7. Ratepayers bear all the risk of this premature CPCN proposal that violates SB 4.

The scale of the proposed CPCN is enormous and unclear. The Companies failed to obtain updated bids prior the hearings and their CPCN estimates did not include FT costs for the NGCCs which could cost hundreds of millions of dollars. Further, the Companies acknowledge that in order to be compliant with the corporate 2050 Net Zero commitment they will need to "find" a solution to offset the emissions associated with NGCCs but provided no named or costed solution. Should the Companies' assumptions and analysis in this case prove to be wrong, the Companies bear no financial risk or impact, if actual costs are higher than estimated the Companies will benefit.

8. The Commission should not sanction an experimental battery project on the backs of ratepayers.

The Companies rely on an experimental battery projected to cost rate payers $270 million (exclusive of federal subsidies) to attempt to recreate the reliability and resiliency of the existing fossil fuel-fired plants sought to be retired. This enormous financial request to experiment with a battery exceeds the cost of two (2) SCRs that would allow existing coal plants (such as Mill Creek 2 and Ghent 2) more operating flexibility in the non-ozone season. *See*, Companies' response to PSC 2-52. If the Commission not burden the ratepayers with the cost of this experimental battery project.

9. The Commission should not trust the load forecast from the Companies.

The Companies' load forecast predicts essentially stagnant growth from 2027 to 2050. The Companies ask the Commission to trust their analysis. However, at the last minute in this matter we are all learning that the Companies missed the mark on their NGCC cost estimates by more than [redacted] per MW equaling at least a [redacted] million dollar difference with the overrun approaching [redacted]. Why should we then trust their load forecast analysis, particularly when it do not provide for any economic growth?

Additionally, with respect to capacity and load needs in the Commonwealth, Kentucky Power recently issued an RFP[31] on September 22, 2023 requesting bids to provide 875 MW of summer capacity and 1,300 MW of winter capacity through a PPA. While obviously not part of the current capacity needs of the Companies, such an RFP from a Kentucky utility shows the on-going demand for reliable and resilient power. Likewise, it highlights the need to follow the requirements of SB4 to avoid unnecessarily retiring available dispatchable capacity from fossil-fuel fired plants such as the Companies. The Commission should consider directing the Companies to develop a response to the Kentucky Power RFP and results of the RFP should be evaluated under the totality of the Companies' CPCN request herein.

CONCLUSION

The evidence and timing of this case reflect that the Companies filed the CPCN in an attempt to comply with environmental regulations that have since been stayed. Meanwhile, other environmental regulations were proposed which would severely limit the generating capacity of the NGCCs. On top of all the regulatory uncertainty, the Legislature enacted SB 4 which creates a strong presumption against retiring coal fired plants that the Companies have failed to satisfy. SB4 is clear – the fossil-fuel fired plants must not be retired because the Companies are unable to credibly demonstrate that they satisfy each and every requirement set forth by the General Assembly at this time. The inability to satisfy the SB4 is highlighted by the questionable

[31] https://www.aep.com/news/releases/read/9134/Kentucky-Power-Issues-Request-for-Proposals-for-Generation-Resources

assumptions, particularly the stagnant load forecast and increased cost of the NGCC plants, which flow through the Companies' analysis. The KCA respectfully requests that the Commission should deny the Companies' CPCN request as it is premature in the current regulatory environment, fails to satisfy SB4 and does more harm than benefit for ratepayers.

Respectfully submitted,

/s/Matt Malone

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CERTIFICATE OF SERVICE

I hereby certify that KCA's October 5, 2023 electronic filing is a true and accurate copy of KCA's pleading and Read 1st Document to be filed in paper medium; that the electronic filing has been transmitted to the Commission on October 5, 2023; that an original and one copy of the filing will not be delivered to the Commission based on pandemic orders; that there are currently no parties excused from participation by electronic service; and that, on October 5, 2023, electronic mail notification of the electronic filing is provided to all parties of record;

/s/Matt Malone
ATTORNEY FOR KCA