COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

IN THE MATTER OF:

ELECTRONIC APPLICATION OF KENTUCKY UTILITIES COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY FOR CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY AND SITE COMPATIBILITY CERTIFICATES	**)))))**	**CASE NO. 2025-00045**

DIRECT TESTIMONY

AND EXHIBITS

OF

LEAH J. WELLBORN

ON BEHALF OF

OFFICE OF THE ATTORNEY GENERAL OF THE COMMONWEALTH OF KENTUCKY

AND

THE KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

June 2025

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DIRECT TESTIMONY OF LEAH J. WELLBORN

Q. Please state your name and business address.

A. My name is Leah J. Wellborn. My business address is J. Kennedy and Associates, Inc. ("Kennedy and Associates"), 570 Colonial Park Drive, Suite 305, Roswell, Georgia 30075.

Q. What is your occupation and by whom are you employed?

A. I am a Manager of Consulting at Kennedy and Associates, specializing in utility resource planning, economics, and ratemaking.

Q. Please describe the nature of the consulting services provided by Kennedy and Associates.

A. Kennedy and Associates provides consulting services in the regulated electric and natural gas utility industries. Our clients include state and local government agencies and industrial electricity consumers. The firm provides expertise in system planning, load forecasting, financial analysis, cost-of-service, and rate design. Current clients include the Georgia and Louisiana Public Service Commissions, the South Carolina Office of Regulatory Staff, the Utah Office of Consumer Services, as well as industrial and commercial customers throughout the United States.

Q. Please state your educational background and experience.

A. I received an undergraduate degree in Mathematics from Georgia Southern University and a Master of Science Degree in Operations Research from the Georgia Institute of Technology, with coursework in energy policy and technology, regression analysis, simulation, optimization, and economic decision analysis.

I began my electric utility industry consulting career at Kennedy and Associates in 2013, performing data analysis and testimony support services through December 2018. In 2019, I began work at Accenture, where I supported the global regulated energy team. The team was located within Accenture's procurement practice and provided consulting services to large commercial and industrial clients in the management of their energy costs and energy related initiatives pertaining to regulated utility tariffs, economic dispatch, planning, and market risk. I rejoined Kennedy and Associates in late 2021. I have filed testimony in Georgia, Kentucky, Louisiana, Ohio, and South Carolina. A summary of my education, experience, and expert testimony appearances is included in Exhibit LJW-1

Q. Have you previously presented testimony before the Kentucky Public Service Commission?

A. Yes. I testified in Docket No. 2024-00243.

Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of the Office of the Attorney General of the Commonwealth of Kentucky ("AG") and the Kentucky Industrial Utility Customers, Inc. ("KIUC"), a group of large customers taking electric service from Kentucky Utilities/Louisville Gas and Electric ("KU/LGE" or "the Companies").

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address the Companies' requests for Certificates of Public Convenience and Necessity ("CPCN") for the construction of two natural gas combined cycle combustion turbine ("NGCC") facilities, one at KU's E.W. Brown Generating Station ("Brown 12") and the other at LG&E's Mill Creek Generating Station ("Mill Creek 6"). I also address the Companies' CPCN requests for the construction of a battery energy storage system ("BESS") facility at LG&E's Cane Run Generation Station ("Cane Run BESS") and to construct a selective catalytic reduction ("SCR") facility at Ghent 2. I address the Companies' recent observation that continuing to operate Mill Creek 2 past 2027 may be economic. I address the proposed Extremely High Load Factor ("EHLF") rate.

I address the CPCN requests and the Companies' justification for those requests, including the need for the resources and the economics of those resources. More specifically, I respond to the Companies' resource adequacy assessment. I also address the risks and potential harm imposed on customers for the costs of these new resources if the Companies' forecasts of new data center load does not materialize or is delayed, particularly in the absence of long-term contracts for the data center customers.

Q. Would you summarize your conclusions and recommendations?

A. The speculative new data center load included in the load forecasts is the primary factor driving the claimed need for the Companies' CPCN requests. If the data center loads do not materialize or are delayed, then the Companies do not need all the requested resources. This will lead to excess capacity and wasteful duplication and could lead to excess costs imposed on other existing customers. The first year revenue requirement of Mill Creek 6 could be upwards of $193 million, and if spread over existing customers absent data center load materialization would lead to significant rate increases. The Companies have acknowledged these concerns in their recent rate case filings and proposed a new EHLF tariff applicable to these new data center loads. The proposed EHLF tariff includes 15-year contracts, higher minimum bills, and credit worthiness/collateral requirements which are necessary to mitigate actual and potential harm to existing customers from the costs of new resources regardless of whether the data center loads materialize.[1]

I recommend the Commission reject the Cane Run BESS CPCN request. The BESS resource does not appear to match the Companies' need for reliable energy resources and there is significant uncertainty as to whether tax benefits under present law will be repealed or reduced in legislation under consideration in the U.S. Congress.[2]

In order to mitigate the actual and potential harm related to new economic development load, including the uncertainty whether the load will materialize, and to balance the Companies' requirement to serve with the risks of excessive capacity, I recommend the Commission approve the Companies' Brown 12 NGCC CPCN requests to meet organic load growth and initial economic development load growth. I do not specifically address the Ghent 2 SCR request, but support the CPCN as the resource is lowest incremental cost of the requested resources and maintains operation of an existing fleet resource. Continuing to operate Mill Creek 2 beyond 2027 could be a cost-effective option to meet short-term energy and capacity needs.

Finally, I recommend the Commission conditionally approve the Mill Creek 6 NGCC request, if the Companies obtain long-term contracts for 85% of Mill Creek 6 plant capacity (548 MW) with new EHLF customers. The EHLF contracts

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[1] Docket Nos. 2025-00113 and 2025-00114
[2] Supplemental Response to KCA 1-4.

needed to justify the CPCN for Mill Creek 6 should be effective on or before Mill Creek 6 is operational. The EHLF proposal should be amended to include a 90% minimum bill provision, allow for no load ramping, and be applicable only to new customers.

CPCN Requests

Q. How much will the new CPCN resources cost to build?

A. The Companies estimated the three new build CPCNs will cost $3.573 billion as shown in Table 1 below.

Table 1: New Build Cost Estimate ($millions) [3]

New Build CPCN	Construction Cost	In-service Date	Summer MW	Winter MW
Brown 12	$1,383.3	2030	645	660
Mill Creek 6	$1,414.7	2031	645	660
Cane Run BESS [4]	$775	2028	400	400
Total	**$3,573**			

Speculative Load Forecast and System Need

Q. What load forecasts were used in the Companies' Integrated Resource Plan ("IRP")?

A. The Companies IRP relied on three load forecast sensitivities, categorized as low, mid, and high, reflecting data center economic development load adjustments of 0 MW,

[3] Response to AG/KIUC 1-28.
[4] Direct Testimony of David Tummonds, p. 13 lines 5-11, before ITC, AFUDC and Transmission.

1,050 MW, and 1750 MW by 2032, respectively.[5] In the Mid-Load case, data center load growth of 1,050 MW represents 83% of the total system projected winter peak demand load growth in 2032. In the High-Load case, data center load growth of 1,750 MW represents 77% of the total system projected winter peak demand load growth in 2032.[6] These metrics highlight the significant amount of data center growth compared to organic growth assumed in the mid and high forecasts.

Q. What load forecasts were used to assess the economics of the CPCN request?

A. The Companies included five load forecasts in its CPCN application with various levels of data center load included (1,470 MW, 1,610 MW, 1,750 MW, 1,890 MW, and 2,030 MW) by 2032.[7] Compared to the forecasts included in the IRP, these are small variations around the "high forecast" from the IRP, which reflected 1,750 MW of data center load. The Companies did not study data center load materializing below 1,470 MW in the CPCN and instead pointed to the IRP in which scenarios of 0 MW and 1,050 MW were provided.[8] I note that the CPCN demonstration of need relied on a load forecast with a narrow set of cases around what was considered a "high" forecast just months ago in the IRP. The projected load can swing more than 140 MW or 280 MW based on changes related to a single customer, and to assume that the

[5] Docket No. 2024-00326, KU-LGE IRP, Volume 1, Table 5-2
[6] In addition to data center load forecast change, the Companies made changes to distributed generation and other energy reductions (e.g., energy efficiency) across the scenarios.
[7] Direct Testimony of Stuart Wilson ("Wilson Direct"), Exhibit SAW-1, Table 1, p. 7
[8] Response to AG/KIUC 1-24.

Companies CPCN load forecast(s) are precise to such a degree is a flaw. A good example of this is the current proposed facility in Oldham County would be nearly 600 MWs and is facing severe local opposition.[9] Based on the community's concerns, it has been reported that this project is pursuing a new site and smaller project in the area.[10] The IRP considered a more reasonable range in materialization of 1,750 MW (0 to 1,750 MW), whereas the CPCN is relying on a forecast band of only 560 MW (1,470 MW to 2,030 MW). The Companies have customers larger than 560 MW in the economic development pipeline, and as such the CPCN analysis is not adequately assessing possible risk related to load materialization.[11]

Q. Do the load forecasts used in the CPCN reflect the full range of risk of load materialization?

A. No. The Companies do not have contracts for new data center load but rely on various pipeline metrics to determine a forecasted materialization level. The following table describes the Companies' pipeline of projects, which includes zero data center projects with signed Electric Service Agreements ("ESA"). The Companies described the various stages of pipeline, where "Announced" loads are those loads that are most certain and "Inquiry" are least certain.[12] Only 402 MW of data center load is in the

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[9] https://www.weareoldhamcounty.com/
[10] PSC June 10, 2025 Data Request No. 8; https://www.wdrb.com/in-depth/group-scraps-oldham-county-data-center-plan-in-favor-of-new-site-smaller-project/article_618befd2-e634-443e-b3ab-5309483cc1c0.html
[11] Response to AG/KIUC 1-45 (customers as large as 650 MW).
[12] Response to PSC 1-18 part c.

"Imminent" category, which includes projects with submitted Transmission Service Requests ("TSR").[13] Again, there are no data center projects in the announced category with signed long-term contracts for electric service.[14]

Table 2: Economic Development Load Pipeline Analysis [15]

Electric Peak (MW)	Announced	Imminent	Prospect	Suspect	Inquiry	Total
Customer Expansion – Elec.	46	54	25	64	72	262
Customer Expansion – Elec./Nat Gas	-	-	-	-	50	50
Customer Expansion - Nat Gas	1 -	-	-	-	-	-
Data Center - Economic Dev.	-	402	2,365	2,285	1,130	6,182
Economic Dev. Project	0	20	571	1,621	27	2,239
National Accounts	-	1	-	1	4	7
New Customer - Electric	3	5	15	-	70	93
Grand Total	**50**	**482**	**2,975**	**3,971**	**1,353**	**8,832**

The Companies point to the total pipeline of data center customers as rationale for its forecast, however the Companies have no long-term certainty for the prospective load, which could be accomplished through EHLF contracts. If the Companies had long-term contracts, the load forecast would be backed by customer commitments and would be more reliable. The Companies' load forecasts in this CPCN case, ranging from 1,470 MW to 2,030 MW of data center load, do not capture the true range of possible outcomes, and are speculative. The Companies did not provide a load forecast showing only the current contracted load. A contracted only forecast would have reflected approximately 50-350 MW, due mostly to economic load growth from

[13] Response to PSC 2-17(g).
[14] Response to PSC 1-18 part c.
[15] Response to AG/KIUC 1-33

existing customer expansions and non-data center industries. This again shows the Companies base load forecast in the CPCN proceeding includes mostly "potential" load based only on internal evaluations and no firm long-term contractual commitments.

Q. Why is the load forecast a key issue for these CPCN requests?

A. The CPCN requests for the new resources are based on significant projected data center loads included in the load forecast. Yet, this forecasted load growth is speculative and uncertain, and the new resources will cost billions of dollars. The Application states that economic development is responsible for all of the forecasted load growth.[16] The Companies argue they need the new resources to reliably serve new load, yet the majority of the new economic development loads do not exist today, nor are the new loads under contract with long term Electric Service Agreements ("ESA"). Additionally, there is not an approved tariff with necessary safeguards to protect existing customers if the loads are planned for, but do not materialize or are delayed. If unneeded generation is built which unnecessarily raises electric rates on non-data center customers, then that would be an economic development negative.

The Companies currently only have 535 MW of economic development load in the announced or imminent pipeline phases, which could be served by existing

[16] Application, paragraphs 7-14.

resources and approval of the Brown 12 NGCC.[17] With no signed long-term contracts for new data center customer load, it would be inappropriate approve all the CPCN resources without any conditions for "prospect", "suspect", or "inquiry" load. Approving excess CPCN resources without contracts for new data center load shifts risks associated with economic development efforts to customers rather than the Companies and could result in wasteful duplication.

Q. What is your conclusion regarding the Companies' load forecast?

A. The speculative new data center load included in the load forecasts is the primary factor driving the claimed need for the Companies' CPCN requests, and without signed long-term contracts, the load forecast is not reliable or sufficient to affirm a need for all the new proposed resources.

Load and Resource Balance

Q. How does the load forecast drive the resource need?

A. The Companies requested new resources to meet the needs of the system stemming from new data center load growth and existing generating unit retirements. The resource need is evaluated, and new resources are proposed to fill that need. The

[17] Response to AG/KIUC 1-8. Application Paragraph 10 and 11 indicates explicitly calls out on-going economic development related to the Poe Development and PowerHouse Data Centers at approximately 402 MW, BlueOval SK Battery Park ("BOSK") at 250 MW, 20 MW from prospect in the auto industry, and 19.4 MW in existing customer expansion.

Companies relied on a speculative load forecast in their CPCN request for the new resources, particularly the Cane Run BESS and Mill Creek 6 resources.

Q. Are the proposed resources needed across all possible load forecast futures modeled by the Companies in the IRP and CPCN?

A. No. The Companies evaluated the economically optimal resource portfolio across 5 load forecasts in the CPCN evaluation. As shown in SAW-1, the Companies concluded that Brown 12 and Mill Creek 6 NGCC capacity would be a selected system resource across all five load forecast futures.[18] The analysis also shows the Cane Run BESS economics are marginal, in that the amount of capacity selected follows the load forecast and is not 400 MW in each case evaluated.[19]

In the IRP, the Companies evaluated 3 data center load sensitivity cases (low case of 0 MW, mid case of 1,050 MW, and high case of 1,750 MW). In the IRP, two NGCCs were only selected under the highest 1,750 MW data center load case.[20] Though Brown 3 and Mill Creek 2 are expected to continue operating over the short-term in the Companies recommended resource plan, the Companies modeled various Brown 3 outcomes in the IRP and indicated the decisions around Mill Creek 2 are still

[18] Wilson Direct, Exhibit SAW-1, p. 26 describing reliance on "Ozone NAAQS scenario" for use in Resource Assessment.
[19] Wilson Direct, Exhibit SAW-1, p. 7, Table 1: Stage One Results (Least-Cost Portfolios) and p. 22 Table 12
[20] E02, Mid Gas Mid CTG, Ozone NAAQS scenario

pending. Considering existing resources "holistically" with new resources is important, as possible retirements also drive resource needs and/or deferrals of need.[21]

Q. Are all the requested CPCN resources required to meet economic development initiatives?

A. No. The Companies determine the amount of new resource capacity needed to reliably serve load accounting for projected fleet changes, a planning load forecast, and reserve margin. Building resources well above the planning reserve margin may introduce unnecessary system costs. Therefore, many utilities plan to meet the planning reserve margin targets closely. The following tables provide a peak demand and resource summary for the years 2029-2033 and account for projected fleet changes that include the recommended approval of Ghent 2 SCR and Brown 12 NGCC. The tables calculate a load forecast and amount of economic development load that could be reliably served by a resource plan anchored by only the Brown 12 NGCC. Each case reflects the Companies' current plans to retire Mill Creek 2 (297 MW) in 2027 and continued operation of Brown 3 (412 MW summer) through 2034.

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[21] Response to AG/KIUC 2-32 and PSC 2-47, "The Companies are addressing the possibility of delaying the retirement of Mill Creek 2 in the context of a broader analysis to determine the optimal approach for supporting economic development and managing tariff, ITC, firm gas transport availability, and load risk for customers."

Table 3a: Peak Demand and Resource Summary (Summer) [22]

Load and Resource Balance	**2029**	**2030**	**2031**	**2032**	**2033**
Existing Dispatchable Resources[23]	7,618	7,618	7,618	7,618	7,618
Existing Renewable/Limited Duration Resources	705	710	719	730	742
Ghent SCR Auxiliary Load	(4)	(4)	(4)	(4)	(4)
Brown 12 NGCC		645	645	645	645
Total Resources	**8,319**	**8,969**	**8,978**	**8,989**	**9,001**
Peak Load Reliably served by Total Resources[24]	**6,764**	**7,292**	**7,299**	**7,308**	**7,318**
2025 CPCN Load Forecast Peak Load (excl. econ dev)	6,031	6,017	5,997	5,996	5,972
Economic Development Headroom	732	1,275	1,302	1,312	1,346

Table 3b: Peak Demand and Resource Summary (Winter)

Load and Resource Balance	**2029**	**2030**	**2031**	**2032**	**2033**
Existing Dispatchable Resources	7,985	7,985	7,985	7,985	7,985
Existing Renewable/Limited Duration Resources	431	433	442	452	463
Ghent SCR Auxiliary Load	(4)	(4)	(4)	(4)	(4)
Brown 12 NGCC		660	660	660	660
Total Resources	**8,412**	**9,074**	**9,083**	**9,093**	**9,104**
Peak Load Reliably served by Total Resources[25]	**6,521**	**7,034**	**7,041**	**7,049**	**7,057**
2025 CPCN Load Forecast Peak Load (excl. econ dev)	5,988	5,982	5,975	5,970	5,984
Economic Development Headroom	533	1,052	1,066	1,078	1,074

As shown above, the Companies would be able to serve approximately 1,000 – 1,300 MW of economic development load with just Brown 12 and Ghent 2 SCR approvals.[26] The Companies presented additional information at the June 10, 2025 informal technical conference and articulated that load growth targeting a loss of load

[22] Data from SAW-1, Table 8 and associated workpapers.
[23] Includes Mill Creek 5
[24] Assuming 23% minimum summer reserve margin target.
[25] Assuming 29% minimum winter reserve margin target.
[26] Supplemental Response to KCA 1-4, May 30, 2025, Table 2, p. 10.

expectation (LOLE) of 1 day in 10 years (~0.1) is facilitated through the new resource additions, and that with adding Brown 12 and Mill Creek 6 to today's portfolio, the Companies could support up to approximately 1,350 MW. This is consistent with the table above, and 1,350 MW is a sufficient runway of resources to use in securing new customer contracts.[27]

If additional near-term capacity is required there is flexibility through an extension at Mill Creek 2. The Companies concluded:

> although Mill Creek 2 life extension is unlikely to be a long-term solution for meeting current and future customers' needs, a short-term life extension could help bridge an important gap of uncertainty regarding trade tariffs and tax credits. Therefore, the Companies regard a short-term life extension to be a potentially important tool for serving customers in the near term in combination with the Companies' other approved and proposed resources, and the Companies will continue to study it as such.[28]

Mill Creek 2 is approximately 297 MW, slightly larger than the load forecast deviation considered by the Companies in the CPCN filing (280 MW). The Companies should continue to evaluate a short-term extension on Mill Creek 2 in the context of load materialization. If contracts are secured requiring near-term capacity, then the $72 million cost of continuing to operate Mill Creek 2 beyond 2027 through 2031 could be economic. For example, 200 MW of billing demand on the Retail Transmission Service ("RTS") rate or EHLF rate provides approximately $45.6 million of annual fixed cost recovery.

[27] June 10th Informal Technical Conference presentation, p. 18
[28] Supplemental Response to KCA 1-4

Q. How do the capacity costs of the proposed resources compare?

A. Figure 1 below compares the revenue requirements per capacity contribution MW related to each project. Using a metric based on revenue requirement and normalized accredited capacity helps compare the projects that vary based on size, capacity contribution, and service life.

Confidential Figure 1: CPCN Request Revenue Requirement Comparison (\$/kW-yr)

[redacted]

Ghent 2 is the lowest cost compared to the new build resources, including the range of possible capacity contributions for the Cane Run BESS project.[29] Brown 12 is the next most economic resource after considering Cane Run BESS risks related to

[29] Cane Run is reported as a range based on capacity values from 50-85% reflecting the range of reliability accreditations based on KU/LGE and PJM assumptions. The lower end of the range reflects the Companies' current assumptions for Cane Run BESS (85% capacity contribution, and 40% ITC). The higher end of the range reflects loss of ITC and/or lower capacity contribution assumptions).

capacity contribution (reliability) and monetization of Investment Tax Credits ("ITC") (cost). If the BESS does not provide energy and dispatchable capacity during peak load needs, the capacity contribution may be less than the modeled 85%. If federal tax incentives for the Cane Run BESS are not available, the economics of the BESS project would further deteriorate on a comparative basis.[30] The comparative economics are important to consider because only some of the resources are required to meet the system needs.

Q. How do the projects compare on fixed cost per MWh basis?

A. The following table compares the projects on a fixed cost per MWh basis for the year 2032, after all the new resources are expected to be in operation. This comparison excludes fuel costs, which for the combined cycle resources would add costs depending on dispatch. This comparison also excludes charge and discharge cost/value which could change the implied cost for Cane Run BESS depending on the economic arbitrage captured in the dispatch.

Response to KCA 2-11. The Companies have already indicated the full 50% modeled is not likely, as ITC related to domestic content appears unlikely to be obtainable.

Confidential Table 4: Fixed Cost 2032 Comparison

Resource	MW	Fixed Cost $millions (2032)	Assumed Capacity Factor[31]	annual MWH	$/MWh	$/ kW-yr
Ghent 2 SCR	482	[redacted]	73.2%	3,090,738	[redacted]	[redacted]
Mill Creek 6 NGCC	660	[redacted]	75.5%	4,365,108	[redacted]	[redacted]
Brown 12 NGCC	660	[redacted]	75.5%	4,365,108	[redacted]	[redacted]
Cane Run BESS (40% ITC, 85% Cap. Contr.)	400	[redacted]	16.7%	584,000	[redacted]	[redacted]
Cane Run BESS (no ITC, 85% Cap. Contr.)	400	[redacted]	16.7%	584,000	[redacted]	[redacted]

As I discuss below, relative the cost of capacity ($/kW-yr) shows that the BESS project costs are highly dependent on the capacity contribution and ITC assumptions. The comparison also highlights the relative limitation of BESS in serving energy requirements and the high relative cost when looking at an average $/MWh metric.

Q. What resources do you recommend be approved to meet new load?

A. Based on the load and resource balance tables above, I recommend the Commission only approve Brown 12 and Ghent 2 SCR at this time, given these resources are likely sufficient for initial economic development efforts related to both organic and economic development load. The Ghent 2 SCR project is a lower marginal cost option than new resource builds to maintain the existing fleet resource while adding additional operating flexibility throughout the year. As indicated by Witness Imber,

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[31] Annual MWH / (Nameplate MW x 8760). BESS are not usually reported with capacity factors as they charge and discharge throughout the operation. Assumed energy derived assuming 1 cycle per day (1600 MWh per day)

post-combustion NOx controls are common in the industry, and Ghent 2 would be the only large coal unit projected to operate beyond 2030 without NOx controls in the region, if the SCR is not approved.[32]

I recommend conditional approval of Mill Creek 6, as discussed below, if the Companies can secure load commitments for 85% of Mill Creek 6 capacity through customer contracts under an amended EHLF rate. The EHLF rate should be amended to include a 90% minimum bill provision, not allow for load ramping, and only apply to new customers. The EHLF contracts should begin at full contract capacity (subject to the 90% minimum bill) on or before Mill Creek 6 goes into service.

I recommend the Commission require the Companies make another filing in this same proceeding before they commence site construction of Mill Creek 6 to demonstrate they have met the conditions of these threshold requirements, and obtain Commission approval to proceed with site construction.

<u>Reject Cane Run BESS</u>

Q. Did the Companies' CPCN modeling affirm the need for the Cane Run BESS capacity?

A. No. The Companies estimate that the Cane Run BESS will cost $774.7 million on an overnight basis (meaning without AFUDC), and $849.6 million on an overnight basis including required transmission upgrades.[33] The Companies' CPCN analysis shows

[32] Direct Testimony of Philip Imber, p. 12 lines 1-6.
[33] Exhibit SAW-1 page 45.

the Cane Run BESS economics are marginal, in that the amount of capacity selected follows the load forecast and is not selected at the full 400MW in each case evaluated. The Companies' CPCN Least Cost Portfolio analysis is replicated below for ease of reference.

Table 5: Replicated CPCN Portfolio Summary [34]

Table 1: Stage One Results (Least-Cost Portfolios)

Data Center Load in Load Scenario	Brown 12 NGCC	Mill Creek 6 NGCC	Generic NGCC	Cane Run BESS	Ghent BESS	Solar PPA	Add. DSM (Y/N)	GH2 SCR (Y/N)
2,030 MW	645	645	645	300	-	-	Y	Y
1,890 MW	645	645	645	100	-	265	Y	N
1,750 MW (CPCN)	645	645	-	400	200	-	Y	Y
1,610 MW	645	645	-	400	-	-	Y	Y
1,470 MW	645	645	-	200	-	-	Y	Y

The Companies also evaluated the impacts of a Mill Creek 2 life extension through 2031 (instead of retirement in 2027), and again concluded that the BESS is a marginal resource that fluctuates based on load.[35] It would be premature to approve the Cane Run BESS without load materialization evidence, as it appears to be a marginal resource. This is further supported in that BESS resource development may be more flexible in terms of size and speed to develop. An approval in this case is not required at this time.

[34] Wilson Direct, Exhibit SAW-1, p. 7, Table 1: Stage One Results (Least-Cost Portfolios) and p. 22 Table 12

[35] PSC 3-8(b) Att 2 – PLEXOS "20250414_2025CPCN_MC2_UpdatesCombined_D03.xlsm"

Q. Did the Companies' CPCN modeling affirm an energy value for the Cane Run BESS capacity?

A. No. The Companies modeling runs indicates minimal, if any, energy margin on Cane Run BESS resources.[36] The Companies state that the PROSYM charge and discharge profiles are not available and that energy margins are not a useful metric when the Companies rely on the model to minimize overall costs. The use of the terminology "margins" is another way to describe and discuss energy value of a resource. I disagree that this is not useful information. For a BESS resource that operates by charging and discharging at different times of the day, modeled charge and discharge costs are critical data points that should be considered in a CPCN evaluation. These data points are even more important when considering that the new load growth is expected to require around-the-clock energy. Meeting the needs of potential EHLF customers will require significant amounts of energy, especially if that energy will be produced by other system resources or attained through purchases.

BESS resources store and dispatch energy on the system, but do not reduce the overall energy requirements of the system. They actually increase the requirements because there are efficiency losses in the charge and discharge cycles.[37] Again, this is an important note when considering the new data center load will require significant amounts of energy around-the-clock.[38] The proposed Cane Run BESS resource does

[36] Response to AG/KIUC 3-2. Confidential PROSYM Station Revenue Report indicated near zero margins.
[37] Wilson Direct, Exhibit SAW-1, p. 20, Table 5. The Companies assumed a round-trip efficiency of 87%.
[38] AG/KIUC 1-34, the Companies assumed a 95% load factor assumption.

not meet the projected energy needs of the system assuming significant EHLF load growth.

Q. Did the Companies' modeling affirm the reliable capacity value for the Cane Run BESS project?

A. No. The capacity value and reliability of the BESS resource is dependent on the duration of the storage and its ability to provide reliable service in peak periods.[39] The Companies assumed an 85% capacity contribution for a new 4-hour BESS, which is less than its nameplate capacity. The Companies neighbors in PJM only accredited 4-hour storage 50% in the 2026/2027 Base Residual Auction ("BRA") Class Ratings.[40] Those PJM forecasts trend downwards in future year all the way to 38% in 2034/2035, highlighting a risk of continued capacity value in later years.[41] The Companies admit that subsequent BESS resources would decrease in contributions, showing additional downside risk.[42]

Q. Are there other concerns related to the Cane Run BESS cost and relative economics?

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[39] AG/KIUC 2-12 and 2-13.
[40] https://www.pjm.com/-/media/DotCom/planning/res-adeq/elcc/2026-27-bra-elcc-class-ratings.pdf
[41] https://www.pjm.com/-/media/DotCom/committees-groups/committees/pc/2024/20240806/20240806-item-08---supplementary-information---elcc-class-ratings.pdf
[42] AG/KIUC 2-12 and 2-13.

A. Yes. There is significant uncertainty as to whether tax benefits under present law will be repealed or reduced in legislation under consideration in the U.S. Congress. The Companies did not assess sensitivity without ITC for Cane Run.[43] Witness Kollen further discusses the magnitude and accounting of the tax credits assumed for Cane Run BESS, however the Companies provided an indication of the economic trade off between the Cane Run BESS and a generic Single Cycle Combustion Turbine ("SCCT") in its Mill Creek 2 retirement evaluation.[44] As indicated by the Companies, reduced ITC eligibility and projected impacts of trade tariffs could impact the economic proposition. The Companies state tariff risks are not expected to exceed 1-2% at Brown 12 and Mill Creek 6, and that, "these resources remain cost-effective and necessary to serve anticipated customer needs, particularly given the trade tariff and tax credit uncertainties for BESS."[45] Again, as indicated by the Companies' recent Mill Creek 2 evaluations, a delayed retirement of the 297 MW Mill Creek 2 at a cost of $72 million may be a better cost risk mitigation strategy in the short-term than reliance on a new build 400 MW-4 hour BESS at Cane Run at a cost of $849.6 million including transmission.[46] The Companies should continue to evaluate Mill Creek 2 in the context of load materialization. If contracts are secured requiring near-term capacity, then the costs of continuing to operate Mill Creek 2 should be refined and additional studies conducted to assess delayed retirement.

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[43] Response to AG/KIUC 2-16.
[44] KCA 1-4 Supplemental Response, Attachment 1, Section 4.3 p. 11.
[45] KCA 1-4 Supplemental Response, Section 4.3 p. 11.
[46] KCA 1-4 Supplemental Response, Section 3.1 and 3.2, p. 4.

Q. Finally, do you have any operational concerns related to Cane Run BESS capacity?

A. Yes. The Companies emphasize a key benefit of BESS is that it can be developed and in-service quickly,[47] however they also acknowledge there are risks related to its own experience as a new adopter when technologies are changing. In discussing why, the Companies did not issue RFP for BESS resources, the Companies stated:

> the industry's understanding of BESS as a means of improving reliability continues to develop. The Companies believe that operational experience with BESS is a prerequisite to negotiating a favorable battery offtake agreement that minimizes risks, including the risk of potential operational limitations.[48]

Some sources even indicate overall pricing for BESS could decrease over time as the market develops and technologies evolve.[49] Though precise pricing is best tested in a competitive market solicitation, the risks of delaying a decision on Cane Run BESS may be offset slightly if favorable pricing could be achieved in future years while the Companies wait to secure new customer commitments.

The Companies also note the details around fire risk, insurance costs and liability are largely unknown at this stage of the Engineering, Procurement, and Construction ("EPC") process.[50]

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[47] PSC 1-26 c, "Additional battery storage is the only new resource that can potentially be brought online prior to 2030."
[48] AG/KIUC 1-27
[49] National Renewable Energy Lab, Annual Technology Baseline reports, https://atb.nrel.gov/electricity/2024/utility-scale_battery_storage
[50] AG/KIUC 1-39

Q. What is your recommendation for the Cane Run BESS CPCN request?

A. I recommend the Commission reject the Companies' request. The proposed Cane Run BESS resource is not the right fit to meet economic development high load factor load. If the BESS project will not provide a significant energy value and its reliability value is in question, it should not be considered a high priority resource to serve new load that is expected to require significant amounts of reliable energy and around-the-clock. Additionally, considering downside risks of increased costs due to tax incentives, possible tariffs, capacity accreditation, insurance, and other operational or contracting risks, I recommend the Commission reject the Cane Run BESS CPCN at this time.

Approve Brown 12 NGCC

Q. Did the Companies' IRP and CPCN modeling affirm the need for the Brown 12 NGCC?

A. Generally. As shown in SAW-1 and replicated above as Table 5, the Companies concluded that Brown 12 and Mill Creek 6 NGCC capacity would be a selected system resource across all five CPCN load forecast futures, but all 5 futures assume much higher data center load materialization than is currently supported by existing contracts. In the low forecast IRP scenario no NGCC was selected,[51] and in the mid forecast, only 1 NGCC was selected.[52] These results indicate that NGCC resources

[51] IRP Vol. 3 Table 13, Low Load, Ozone NAAQS
[52] IRP Vol. 3 Table 12, Mid Load, Ozone NAAQS

are needed only in mid and high load forecast cases, and that under a lower load materialization case, additional NGCC could lead to excess capacity.

Q. Are the proposed NGCC resources expected to meet the capacity and energy needs of the system?

A. Yes, the Companies summarized, "Depending on natural gas price levels and future CO_2 regulations, the Brown 12 and Mill Creek 6 NGCC units are expected to operate at a 60-85% capacity factor, generating significant amounts of energy."[53] Upon further investigation, the Companies' modeling also reported the energy value of the resources as shown below in Table 6.

Table 6: NGCC Dispatch and Energy Value (1750MW, E02, MGMR)[54]

	Brown 12			Mill Creek 6		
	Cost $/MWh	Revenue $/MWh	Margin $millions	Cost $/MWh	Revenue $/MWh	Margin $millions
2030	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2031	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2032	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2033	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2034	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2035	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2036	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2037	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2038	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2039	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
2040	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]

[53] Wilson Direct SAW-1 Section 5.2.1
[54] Confidential PROSYM Station Revenue Report.

The Companies modeling suggests new NGCC resources will be dispatched significantly to meet the high load factor load, but at relatively small margins. The resources are valuable for providing energy to the system (serving high load factor customers); however, the energy margins may not be enough to justify the capital cost recovery risks of building new capacity without sufficiently contracted new load.

Q. What is your recommendation for the Companies' NGCC CPCN requests?

A. In order to mitigate risks related to load materialization, I recommend the Commission grant the CPCN request for Brown 12. NGCC. Brown 12 appears to match the energy and capacity needs of the system after accounting for high load factor load additions, but both the Brown 12 and Mill Creek 6 projects are not needed at this time considering the speculative nature of the forecasted load growth.

<u>Conditional Approval of Mill Creek 6</u>

Q. Have the Companies addressed the need for long-term contracts and risks around load materialization?

A. Yes. The Companies have asserted tariffs are a rate case issue, not a CPCN issue.[55] The Companies filed rate case Applications on May 30, 2025 which include requests for a new EHLF tariff to address load materialization and cost shift concerns.[56] Witness Michael Hornung stated:

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[55] PSC 1-28

[56] Case No. 2025-00113; Case No. 2025-00114

> The Companies recognize that customers with large demands (more than 100 MVA) and very high load factors (expected average load factor above 85%) have sufficiently different service characteristics and potential financial impacts to the Companies and their other customers to require a separate rate schedule and terms and conditions of service. In particular, because any one or just a few such customers could require the Companies to acquire additional generation resources to supply their needs and the needs of existing customers, increased minimum billing demands, extended contract terms, and enhanced collateral requirements are appropriate for such customers.[57]

Q. Do you agree that data center load contract requirements are uniquely a rate case issue?

A. No. A primary part of a CPCN is to determine if requested resources meet a public need. Therefore the "need" should be well understood before making a decision. Contracts are a very reliable way to assess a prospective customer's commitment, so having long-term contracts and appropriate tariffs in place before or during a CPCN proceeding helps the Commission assess the Companies' need with a higher degree of certainty than relying strictly on the Companies' developed pipeline metrics and forecasting methods. The Companies agreed:

> Yes, electric service contracts are firmer commitments than service inquiries for which the Companies issue TSRs to their Independent Transmission Organization. Engineering, procurement, and construction contracts regarding transmission facilities, which the Companies have regarding the Camp Ground Road data center, are also stronger commitments and indications of interest than service inquiries resulting in TSRs.[58]

[57] Direct Testimony of Michael Hornung, p. 4, lines 9-16.
[58] AG/KIUC 2–21-part e.

Requiring contracts before granting CPCNs for new resources reduces risks related to new load materialization. The Companies have requested a CPCN before the need is known, which makes the determination and assessment of "need" more difficult. The Companies should look to secure long-term contracts for new extremely high load factor customers ahead of a CPCN, as the contracts help inform the reliability of the load forecast utilized.

Q. Is over-building capacity a risk that should be borne by existing customers?

A. No. The Companies indicate that over-capacity could be remedied by a secondary transaction:

> if the Companies were in an over-capacity situation, they would expect to find counterparties interested in purchasing capacity and energy given the anticipated capacity shortages in multiple surrounding systems and the projected national doubling of data center demand and other anticipated load growth.[59]

However, risks related to over-capacity could be costly to existing customers if customers are on the hook for the full costs of the new resources, but the Companies are only able to monetize that capacity at a lower market value.[60] The best case scenario is not to hope for a secondary transaction, but to ensure the load planned for will materialize and that there are contractual commitments for payments to mitigate the harm that otherwise will be imposed on existing customers. There is a high level of uncertainty related to new data center load, and the best way to incentivize accurate

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[59] Response to AG/KIUC 1-42 part c.
[60] Response to AG/KIUC 2-9

load forecasting and customer commitment is to require new data centers to sign long-term ESAs with terms that provide sufficient safeguards to existing customers.[61] The Companies have now proposed an EHLF tariff, and should execute contracts with new customers once the tariff is approved.

Q. Is assessing need before building new resources an appropriate path forward?

A. Yes. The Companies appear to agree and argue that granting a CPCN does not require the Companies to pursue the generation. Though the Companies anticipate signing new contracts soon, the Companies acknowledge that there is an option to not proceed with a CPCN if circumstances change:

> The Companies intend to execute contracts with one or more ultimate customers as soon as possible. The timing ultimately rests within the negotiations between the project developer and the tenants. But it is also important to bear in mind that receiving a CPCN for a particular resource does not mean the Companies will proceed with it irrespective of changed circumstances.[62]

Q. Could the Companies have sought tariff modifications and secured contracts before a CPCN request?

A. Yes. The Companies could have requested long-term contracts with customers or developed a new tariff offering as a single issue for review by the Commission with

[61] https://www.utilitydive.com/news/a-fraction-of-proposed-data-centers-will-get-built-utilities-are-wising-up/748214/

[62] Response to AG/KIUC 2-27

stakeholders as Kentucky Power Company[63] and East Kentucky Power Cooperative[64] have. Instead, the Companies have filed a CPCN request ahead of the rate case in which it intends to address these issues. Unlike Kentucky Power and EKPC, the Companies have put the cart before the horse. I recommend the Commission consider a conditional CPCN for Mill Creek 6 to reflect the reversed timing of the rate case, contract certainty, and CPCN requests.

Q. Please explain what you mean by conditional approval.

A. I recommend that the Commission provide an initial approval for Mill Creek 6 that allows the Companies to begin initial development efforts, but shifts load materialization responsibility to the Companies. The Companies can manage their position in line for equipment, begin initial engineering, and wait until the resolution of the rate case before signing up new EHLF customers under long-term contracts with sufficient customer safeguards.[65] It is also possible for the Commission to address the EHLF proposal in this case. The Companies could consider gas transportation planning during this interim period.[66]

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[63] Case No. 2024-00305
[64] Response to AG/KIUC 2-30
[65] The Companies' response to PSC 1-34 discusses the need to reserve production slots for gas turbines via a Unit Reservation Agreement ("URA")
[66] Response to KCA Supplemental 1-4, p. 8, "A key advantage to commissioning Mill Creek 6 in 2031 is that it will enable the Companies to bid for gas transportation through Texas Gas Transmission's ("TGT") proposed Borealis project, which will be TGT's last opportunity for significant capacity additions on its existing rights-of-way within a five- to eight-year horizon."

Electricity is an economic development resource, and dispatchable resources provide economic development growth opportunities. Kentucky has this resource, and other states do not. The Companies have the opportunity as vertically integrated utilities under Commission oversight, outside of an RTO, to manage its forward capacity position to signal to the market the promise of available, reliable capacity. However, it is important to balance the investment in growth opportunities with protections for existing customers. Excess capacity can unnecessarily raise electric rates, which is an economic development negative. Mill Creek 6 should not be built on pure speculation of new data center growth but should be conditioned upon "pre-selling" at least 85% of Mill Creek capacity. Once the Companies have signed up 548 MW of new EHLF customer contracts that would start on or before the in-service date of Mill Creek 6, the Companies could provide those contracts to the Commission for review in a supplemental filing. The Commission could then assess if the Companies had complied with the conditional requirements for load certainty and finalize its CPCN order at that time. A showing of the minimum EHLF contract threshold (548 MW) provides evidence of load materialization. If the Companies can produce the 548 MW of EHLF contracts, it would act as concrete evidence that the load will materialize. If the threshold cannot be met, then it demonstrates the additional NGCC is not needed, and organic load growth including economic development could be served by a portfolio anchored by the incremental Brown 12 NGCC.

Q. Why should the Companies execute contracts with new data center load before receiving approval for a CPCN?

A. A demonstrative evaluation of the load materialization risks was included in the comments submitted by KIUC in the Companies IRP, and isolated the impact of load across the same fuel price scenario assuming rate RTS.[67] The Companies provided a revised analysis in the IRP, which still demonstrated that the best-case scenario for the system is in a full load realization case.[68] Though the Companies have proposed a new EHLF tariff, if load materialization for Mill Creek 6 falls short of expectations, there could possibly be a cost shift if ramping and minimum demand provisions are not carefully considered.

Q. Have you quantified the risks of load materialization in relation to the CPCN request(s)?

A. Yes. I provide a numerical illustration of the load materialization risks. Comparing the fixed revenue requirements related to Mill Creek 6 and an illustrative projected demand charges under the proposed EHLF rate, shows that there could be shortfall in recovery even if the new Mill Creek 6 resource is fully subscribed, but new load is allowed to ramp in the early years. The following chart provides a comparison of the

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[67] Docket No. 2024-00326, KIUC Comments filed March 7, 2025 https://psc.ky.gov/pscecf/2024-00326/mkurtz%40bkllawfirm.com/03072025042439/KIUC_Comments_Case__2024-00326.pdf

[68] Docket No. 2024-00326 Appendix to Responsive Comments of KU and LG&E filed March 28, 2025, p. 19 of 29 Responses to Comments of the Kentucky Industrial Utility Customers, Inc. https://psc.ky.gov/pscecf/2024-00326/duncan.crosby%40skofirm.com/03282025011253/LGE-KU_Response_to_Intervenors_Comments_3-28-2025.pdf

first 15 years of revenue requirements for Mill Creek 6 (645 MW) to a demonstrative escalated EHLF rate and a demonstrative contract rate assuming full "subscription" target of 85% (645 * 0.85 = 548 MW).

Table 7: Mill Creek 6 Revenue Requirement vs. Projected EHLF Recovery

	Mill Creek 6 Revenue Requirement (645 MW)	Escalated Tariff EHLF ($19/kVA 2026)	Tariff EHLF Revenues Peak Demand (548 MW)
	$	$/kW-yr	$
2030	193,208,452	259	141,923,847
2031	191,442,619	267	146,181,563
2032	186,954,260	275	150,567,009
2033	182,628,834	283	155,084,020
2034	178,454,570	291	159,736,540
2035	174,420,612	300	164,528,637
2036	170,516,866	309	169,464,496
2037	166,733,998	318	174,548,431
2038	163,020,873	328	179,784,883
2039	159,322,105	338	185,178,430
2040	155,630,037	348	190,733,783
2041	151,943,251	358	196,455,796
2042	148,260,329	369	202,349,470
2043	144,582,896	380	208,419,954
2044	140,911,060	392	214,672,553
PVRR	**$1,607,981,109**		**1,591,927,919**
% of Mill Creek 6 Rev. Req.			99%

Under the tariff and a full load materialization assumption, the first 15 years of Present Value Revenue Requirements ("PVRR") are recovered, however there could be a shortfall if prospective customers are allowed to trend into the full contract capacity during an initial ramping period or the applicable minimum demand provisions of the proposed EHLF for these customers remains and collections reflect billing at approximately 80%. The EHLF minimum demand charge provision and ramping allowances are key issues that will need particular scrutiny in the rate case or in this case. New data center customers should not be permitted to ramp into contract capacity during the high cost initial years of new resources. The first year revenue requirement of Mill Creek 6 is approximately $193 million. New customers that drive the need for new resources with contract capacity requirements should be held to those contract commitments on day one of their contracts, when resources are available to serve them. The costs of any short-term excess capacity caused by ramping should not be borne by existing customers. The following table demonstrates the under-recovery risk and risk shifting as the ramping case would only collect 75% of the Mill Creek 6 revenue requirements, and a ramping with minimum demand billing approximate case, only 69% of the expected revenue requirements related to Mill Creek 6. If EHLF were set to allow no ramping and have a minimum billing demand at approximately 90%, then at least approximately 90% of the 15 year PVRR would be recovered.

Table 8: Illustrative Under Recovery Scenarios under proposed EHLF

	Mill Creek 6 Revenue Requirement (645 MW)	Escalated Tariff EHLF ($19/kVA 2026)	Tariff EHLF Revenues Peak Demand (548 MW)	Tariff EHLF Revenues (25% ramp per year)	Tariff EHLF Revenues (Ramp + 80% min)
	$	$/kW-yr	$	$	$
2030	193,208,452	259	141,923,847	35,480,962	28,384,769
2031	191,442,619	267	146,181,563	73,090,781	58,472,625
2032	186,954,260	275	150,567,009	112,925,257	90,340,206
2033	182,628,834	283	155,084,020	155,084,020	124,067,216
2034	178,454,570	291	159,736,540	159,736,540	127,789,232
2035	174,420,612	300	164,528,637	164,528,637	131,622,909
2036	170,516,866	309	169,464,496	169,464,496	135,571,597
2037	166,733,998	318	174,548,431	174,548,431	139,638,744
2038	163,020,873	328	179,784,883	179,784,883	143,827,907
2039	159,322,105	338	185,178,430	185,178,430	148,142,744
2040	155,630,037	348	190,733,783	190,733,783	152,587,026
2041	151,943,251	358	196,455,796	196,455,796	157,164,637
2042	148,260,329	369	202,349,470	202,349,470	161,879,576
2043	144,582,896	380	208,419,954	208,419,954	166,735,963
2044	140,911,060	392	214,672,553	214,672,553	171,738,042
PVRR	**$1,607,981,109**		**1,591,927,919**	**1,396,560,124**	**1,117,248,099**
% of Mill Creek 6 Rev. Req.			99%	87%	69%

In a case with allowable ramping in year 1, existing customers could be at risk for additional cost shifts on the order of $160 million in just the year 2030/2031. This premium, spread out over KU-LGE's existing customer base would equate to approximately $5/MWh. The earliest years of a new resource are the most expensive due to declining rate base for ratemaking. The risk of cost-shifting in the early years is significant.

Q. How could proposed rate EHLF be modified to further protect existing customers?

A. The Companies' EHLF rate case proposal includes a 15-year term with a minimum demand charge of 80% of contract capacity.[69] The proposal also includes language that the load ramp will be prescribed in the Electric Service Agreement executed between the Company and Customer.

I recommend three changes to the proposed EHLF rate. The EHLF rate should be amended to include a 90% minimum bill provision, not allow for load ramping, and only apply to new customers. The EHLF contracts needed to justify Mill Creek 6 should begin at full contract capacity (subject to the 90% minimum bill) on or before Mill Creek 6 goes into service.

In the interim, as the EHLF proposal is vetted in the rate case or in this case, the Companies have indicated a short-term commitment to not rely on rate RTS for new EHLF customers.

> Q-5(c) Have the Companies considered a temporary pause on new data center contracts until a new large load/high load factor tariff is approved? If not, why not?
>
> A-5(c) No. Any such pause would be unnecessary and inconsistent with the Companies' obligation to serve. If a prospective large, high-load factor customer desires to take service prior to the Commission's approval of the Companies' proposed Extremely High Load Factor standard rate (Rate EHLF), the Companies would seek Commission approval of a special contract.[70]

This is an appropriate course of action as the EHLF tariff is reviewed.

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[69] Tab 06-807 KAR 5:001 Section 16(1)(b)5) p. 7 pf 53
[70] Response to AG/KIUC 3-5.

Q. What is your recommendation to mitigate these load materialization risks?

A. I recommend the Commission require 548 MW or more of executed EHLF (as amended) contracts be provided to the Commission in a supplemental filing, as a condition to final approval of the Mill Creek 6 CPCN. The EHLF contracts should be effective on or before Mill Creek 6 is in commercial operation so there is no delay in revenues from the new customers once the plant is in-service.

Q. Does that complete your testimony?

A. Yes.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

IN THE MATTER OF:

ELECTRONIC APPLICATION OF KENTUCKY	)	
UTILITIES COMPANY AND LOUISVILLE GAS	)	
AND ELECTRIC COMPANY FOR CERTIFICATES	)	**CASE NO. 2025-00045**
OF PUBLIC CONVENIENCE AND NECESSITY	)	
AND SITE COMPATIBILITY CERTIFICATES	)	

EXHIBITS

OF

LEAH J. WELLBORN

ON BEHALF OF

OFFICE OF THE ATTORNEY GENERAL OF THE COMMONWEALTH OF KENTUCKY

AND

THE KENTUCKY INDUSTRIAL UTILITY CUSTOMERS, INC.

J. KENNEDY AND ASSOCIATES, INC.
ROSWELL, GEORGIA

June 2025

RESUME OF LEAH JUSTIN WELLBORN, MANAGER OF CONSULTING

EDUCATION

M.S. Operations Research, Georgia Institute of Technology, 2017
B.S. Mathematics, Georgia Southern University, 2012

PROFESSIONAL AFFILIATIONS

Women's Energy Network, Greater Atlanta Chapter – Board Member (2019 – 2023)
Women's Energy Network, Greater Atlanta Chapter – Member (2016 – Present)

EXPERIENCE

Ms. Wellborn has been working in regulated energy markets since early 2013. She has an undergraduate degree in mathematics and graduate degree in operations research. She started her career working at J. Kennedy and Associates, Inc., and sub-contracting to Hayet Power Systems Consulting. For these companies, she provided critical support in the areas of production cost modeling and data analysis through 2018. Ms. Wellborn then spent nearly 3 years at Accenture, supporting its global regulated energy team within the procurement practice, helping large commercial and industrial clients manage their energy spend and energy related initiatives, as they related to regulated utility tariffs, economic dispatch, planning, and market risk (energy efficiency, green tariffs, PPA/VPPA, etc.). Ms. Wellborn rejoined J. Kennedy and Associates in late 2021 and currently provides analytical support to clients in the areas of utility resource planning and market modeling.

2021 to Present: **J. Kennedy and Associates, Inc.**
Manager, Consulting (October 2021 – Present)

Performs analysis and prepares expert witness testimony on utility planning studies and economic evaluations in review of electric utility regulatory filings. Clients include State Public Service Commissions, Industrial Users Groups, and Consumer Advocacy Groups.

2019 to 2021: **Accenture, LLP**
Associate Manager, Global Team, Regulated (March 2021 - October 2021)
Sourcing Specialist, International Teams Lead (March 2020 - March 2021)
Senior Analyst, Regulated Energy Procurement (January 2019 - March 2020)

As a part of Accenture Operations' Energy Management and Procurement practice, the Regulated Energy team helps clients identify opportunities for electricity and natural gas cost savings through data analysis and deep industry experience. Clients include large industrial and commercial end-use customers with locations spread across multiple geographies and utility service territories.

• Conducts tariff optimization analysis and ad hoc economic decision analysis for clients with operations and energy spend in areas served by regulated electricity and natural gas distribution utilities.
• Leads cross functional international delivery team of 10, providing career counseling and project oversight. Supports international energy procurement functions as they relate to regulated utilities/energy markets of Australia, Southeast Asia, and Latin America.
• Manages project assessments and economic studies as they relate to resource planning or capacity/energy market risk and dispatch pricing (renewables, time-of-use tariffs, real-time-pricing/avoided cost, PPA, VPPA, etc.)
• Collaborates with all energy management work streams - including utility bill management, renewable energy procurement, deregulated markets competitive sourcing, market intelligence, and project management/technology development initiatives to manage customer spend end to end.

2013 to 2019: **J. Kennedy and Associates, Inc.**
Senior Consultant (January 2016 – January 2019)
Consultant (March 2013 – December 2015)

Responsible for conducting research, performing data analysis, developing production-cost model input assumptions and running production-cost studies, analyzing model output, and conducting related economic studies.

CERTIFICATIONS

Energy Exemplar – Aurora Core Certification Course (March 2022)
Energy Exemplar – PLEXOS Power Core Certification Course (June 2023)

CLIENTS SERVED

Georgia Public Service Commission Staff
Kentucky Industrial Utility Customers, Inc.
Kentucky Office of the Attorney General
Louisiana Public Service Commission Staff
Ohio Energy Group
South Carolina Office of Regulatory Staff
Utah Office of Consumer Services
West Virginia Energy Users Group
Wisconsin Industrial Energy Group

TESTIMONY AND EXPERT WITNESS APPEARANCES

Date	Case	Jurisdict	Party	Utility	Subject
06/18	29849	GA	Georgia Public Service Commission Staff	Georgia Power	Eighteenth Semi-Annual Vogtle Construction Monitoring Report
11/18	29849	GA	Georgia Public Service Commission Staff	Georgia Power	Nineteenth Semi-Annual Vogtle Construction Monitoring Report
5/22	44160	GA	Georgia Public Service Commission Staff	Georgia Power	2022 Integrated Resource Plan (Supply Side Resource Plan, Aurora)
10/22	44280	GA	Georgia Public Service Commission Staff	Georgia Power	2022 Rate Case (Revenue Forecast)
8/23	2023-9-E	SC	South Carolina Office of Regulatory Staff	Dominion Energy South Carolina, Inc.	2023 Integrated Resource Plan
12/23	2023-154-E	SC	South Carolina Office of Regulatory Staff	South Carolina Public Service Authority (Santee Cooper)	2023 Integrated Resource Plan
12/23	U-36974	LA	Louisiana Public Service Commission Staff	1803 Electric Cooperative, Inc.	Certification of a Capacity Purchase Agreement
2/24	55378	GA	Georgia Public Service Commission Staff	Georgia Power	2023 Integrated Resource Plan Update (Supply Side Resource Plan, Aurora)
7/24	2023-8-E	SC	South Carolina Office of Regulatory Staff	Duke Energy Progress, LLC	2023 Integrated Resource Plan
7/24	2023-10-E	SC	South Carolina Office of Regulatory Staff	Duke Energy Carolinas, LLC	2023 Integrated Resource Plan
8/24	24-0508-EL-ATA	OH	Ohio Energy Group	Ohio Power Company	Application of Ohio Power Company for New Tariffs Related to Data Centers and Mobile Data Centers

Date	Case	Jurisdict	Party	Utility	Subject
11/24	2024-00243	KY	Office of the Attorney General & Kentucky Industrial Utility Customers	Kentucky Power Company	Renewable Energy Purchase Agreement
12/24	24-0611-E-T-PW	WV	West Virginia Energy Users Group	Appalachian Power Co. / Wheeling Power Co.	Application for Approval of Revisions to Schedules LCP and IP (Data Centers)
5/25	56002	GA	Georgia Public Service Commission Staff	Georgia Power	2025 Integrated Resource Plan (Supply Side Resource Plan, Aurora)

REPORTS AND INDUSTRY PUBLICATIONS

Date	Title	Author(s)
8/23	Review of EPA's Section 111 May 23, 2023 Proposed Rule for the State of South Carolina	J. Kennedy and Associates, Inc. (On behalf of the South Carolina Office of Regulatory Staff)
7/24	Review of Dominion Energy South Carolina, Inc.'s 2024 Integrated Resource Plan Update Docket No. 2024-9-E	South Carolina Office of Regulatory Staff and J. Kennedy and Associates, Inc.
1/25	Review of Santee Cooper's 2024 Integrated Resource Plan Update Docket No. 2024-18-E	South Carolina Office of Regulatory Staff and J. Kennedy and Associates, Inc.

OTHER EXPERIENCE

Dates	Case	Jurisdict	Party	Utility	Subject
1/24	R-31106	LA	Louisiana Public Service Commission Staff	Various	Approval of Phase II Energy Efficiency Rule and Implementation of Statewide Program (Transition)
3/25	2024-00326	KY	Kentucky Industrial Utility Customers	KU/ LG&E	2024 Joint Integrated Resource Plan (Comments)