COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

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

INITIAL DATA REQUESTS OF THE ATTORNEY GENERAL AND KIUC

Comes now the Attorney General of the Commonwealth of Kentucky, by his Office of Rate Intervention ("Attorney General") and Kentucky Industrial Utility Customers ("KIUC"), and submit these Data Requests to Kentucky Utilities Company and Louisville Gas and Electric Company (hereinafter "KU", "LG&E," or collectively "KU/LG&E" or "Companies") to be answered by April 17, 2025, in accord with the following:

(1) In each case where a request seeks data provided in response to a staff request, reference to the appropriate requested item will be deemed a satisfactory response.

(2) Identify the witness who will be prepared to answer questions concerning each request.

(3) Repeat the question to which each response is intended to refer.

(4) These requests shall be deemed continuing so as to require further and supplemental responses if the company receives or generates additional information within the scope of these requests between the time of the response and the time of any hearing conducted hereon.

(5) Each response shall be answered under oath or, for representatives of a public or private corporation or a partnership or association, be accompanied by a signed certification of the

preparer or person supervising the preparation of the response on behalf of the entity that the response is true and accurate to the best of that person's knowledge, information, and belief formed after a reasonable inquiry.

((6) If you believe any request appears confusing, please request clarification directly from undersigned Counsel for the Office of Attorney General.

(7) To the extent that the specific document, workpaper or information as requested does not exist, but a similar document, workpaper or information does exist, provide the similar document, workpaper, or information.

(8) To the extent that any request may be answered by way of a computer printout, please identify each variable contained in the printout, which would not be self-evident to a person not familiar with the printout.

(9) If the company has objections to any request on the grounds that the requested information is proprietary in nature, or for any other reason, notify the Office of the Attorney General as soon as possible, and in accordance with Commission direction.

(10) As used herein, the words ‘‘document’’ or ‘‘documents’’ are to be construed broadly and shall mean the original of the same (and all non-identical copies or drafts thereof) and if the original is not available, the best copy available. These terms shall include all information recorded in any written, graphic or other tangible form and shall include, without limiting the generality of the foregoing, all reports; memoranda; books or notebooks; written or recorded statements, interviews, affidavits and depositions; all letters or correspondence; telegrams, cables and telex messages; contracts, leases, insurance policies or other agreements; warnings and caution/hazard notices or labels; mechanical and electronic recordings and all information so stored, or transcripts of such recordings;

calendars, appointment books, schedules, agendas and diary entries; notes or memoranda of conversations (telephonic or otherwise), meetings or conferences; legal pleadings and transcripts of legal proceedings; maps, models, charts, diagrams, graphs and other demonstrative materials; financial statements, annual reports, balance sheets and other accounting records; quotations or offers; bulletins, newsletters, pamphlets, brochures and all other similar publications; summaries or compilations of data; deeds, titles, or other instruments of ownership; blueprints and specifications; manuals, guidelines, regulations, procedures, policies and instructional materials of any type; photographs or pictures, film, microfilm and microfiche; videotapes; articles; announcements and notices of any type; surveys, studies, evaluations, tests and all research and development (R&D) materials; newspaper clippings and press releases; time cards, employee schedules or rosters, and other payroll records; cancelled checks, invoices, bills and receipts; and writings of any kind and all other tangible things upon which any handwriting, typing, printing, drawings, representations, graphic matter, magnetic or electrical impulses, or other forms of communication are recorded or produced, including audio and video recordings, computer stored information (whether or not in printout form), computer-readable media or other electronically maintained or transmitted information regardless of the media or format in which they are stored, and all other rough drafts, revised drafts (including all handwritten notes or other marks on the same) and copies of documents as hereinbefore defined by whatever means made.

(11) For any document withheld on the basis of privilege, state the following: date; author; addressee; indicated or blind copies; all persons to whom distributed, shown, or explained; and, the nature and legal basis for the privilege asserted.

(12) In the event any document called for has been destroyed or transferred beyond the control of the company, please state: the identity of the person by whom it was destroyed or transferred, and the person authorizing the destruction or transfer; the time, place, and method of destruction or transfer; and, the reason(s) for its destruction or transfer. If destroyed or disposed of by operation of a retention policy, state the retention policy.

(13) Provide written responses, together with any and all exhibits pertaining thereto, in one or more bound volumes, separately indexed and tabbed by each response, in compliance with Kentucky Public Service Commission Regulations.

(14) “And” and “or” should be considered to be both conjunctive and disjunctive, unless specifically stated otherwise.

(15) “Each” and “any” should be considered to be both singular and plural, unless specifically stated otherwise.

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Respectfully submitted,

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Certificate of Service and Filing

Pursuant to the Commission's Orders and in accord with all other applicable law, Counsel certifies that the foregoing electronic filing was transmitted to the Commission on November 1, 2024, and there are currently no parties that the Commission has excused from participation by electronic means in this proceeding.

This 28th day of March, 2025

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Assistant Attorney General

1. Refer to the Application generally.

    a. Provide a detailed explanation of safety measures that will be taken to prevent fires at the Cane Run BESS facility.
    b. Please provide the expected distance from the Cane Run BESS facility to the nearest residential zone in Jefferson County.
    c. Please provide the expected distance from the Cane Run BESS facility to the nearest commercial zone in Jefferson County.
    d. Confirm that the Companies are aware of the fire hazards and safety risks posed by lithium battery facilities.
    e. Confirm that the Companies are aware of the recent Vistra Moss Landing battery fire in California and other incidents involving lithium-ion battery storage systems.

2. Refer to the Application generally.

    a. Please advise if the potential closure of the Ohio Valley Electric Corporation's coal plants will significantly impact the Companies' future supply portfolio.
    b. Please advise if the potential closure of the of the Ohio Valley Electric Corporation's coal plants will impact the proposed constructions.

3. In Case No. 2022-00402, the retirement of the Ghent facility was proposed, though it was denied by the PSC. Are there plans to request the retirement of the Ghent 2 facility in the future?

4. Provide an analysis of the expected rate impacts for residential rate of average usage for:

    a. The construction and utilization of the proposed 645 MW NGCC unit at the Brown Generation Station
    b. The construction and utilization of the proposed 645 MW NGCC unit at the Mill Creek Generation Station.
    c. The construction and utilization of the proposed 400 BESS facility at the Cane Run Station.
    d. The construction and utilization of the proposed SCR facility at the Ghent Generation Station

5. Discuss the extent of the construction necessary to facilitate the projects proposed here. Please provide an analysis of the impact to the residential ratepayer of the average usage driven by that investment.

6. Provide an analysis of the Company's forecasted capacity and energy position over the next decade, including generation and load.

7. Discuss whether KU/LG&E forecasts a changing regulatory environment related due to the recent election results and whether this affects the CPCN proposal here in any way.

8. Discuss any major new customers KU/LG&E anticipated to potentially serving, including but not limited to data centers.

9. Refer to the Direct Testimony of Robert Conroy at 14-15 wherein he states: "The Companies further propose to record a regulatory asset during the construction period for the difference between AFUDC accrued at the Companies' weighted average cost of capital and AFUDC accrued using the methodology approved by the FERC so that the Companies can recover their actual cost of capital, no more and no less."

    a. Define the Companies' "weighted average cost of capital," the proposed source(s) and/or calculation of the weighted average cost of capital, and/or a template for how the weighted average cost of capital will be calculated for this purpose.
    b. Provide a history of the average daily short-term debt outstanding on a monthly basis by type and/or source of short-term debt from January 2022 through the most recent month for which actual information is available.
    c. Provide a forecast of the average short-term debt outstanding on a monthly basis from the month after the most recent month for which actual information is available through the end of the construction period for each of the CPCN resources/assets.
    d. Provide a comparison of the rates used by each Company to accrue AFUDC "using the methodology approved by the FERC" and the rate used to accrue AFUDC at the "Companies' weighted average cost of capital" from January 2022 through the most recent month for which actual information is available. Also provide the calculations of the monthly rates for each Company using the two methodologies for this purpose.

10. Refer to the Direct Testimony of Robert Conroy at 15 wherein he states: "The Companies request that post-in-service carrying costs be accrued using the Companies' weighted average cost of capital." Define the Companies' "weighted average cost of capital," the proposed source(s) and/or calculation of the weighted average cost of capital, and/or a template for how the weighted average cost of capital will be calculated for this purpose.

11. Refer to the Direct Testimony of Robert Conroy at 15 wherein he states: "In addition, for Brown 12, Mill Creek 6, and the Cane Run BESS, the Companies are requesting that the Commission approve regulatory asset treatment for post-in-service carrying costs, operating and maintenance expense, property taxes, investment tax credit amortization, and depreciation expense until such costs are fully reflected in the Companies' retail base rates or an applicable cost recovery mechanism."

a. Describe the source(s), calculations, and resulting depreciation rates the Companies propose to use for depreciation expense for this purpose. Provide all assumptions/parameters and the sources of those assumptions/parameters that will be used for this purpose.
b. Describe the source(s), calculations, and timing (assuming a January 1 valuation date) that will be used to calculate property tax expense tax expense for this purpose.
c. Describe the eligibility of each resource/asset for investment tax credit ("ITC") and the credit percentage that will be applicable to that resource/asset.
d. Describe how the Companies proposes to calculate rate base for each resource/asset for this purpose, including the subtraction of ADIT due to tax depreciation in excess of book depreciation, and deferred ITC.
e. Confirm that under the Inflation Reduction Act for new battery resources/assets, the Companies may elect to subtract deferred ITC from rate base *and* amortize ITC for ratemaking purposes, a change from prior tax law, which allowed either the subtraction of deferred ITC from rate base *or* the amortization of ITC, but not both. Also confirm the Companies plan to make and will commit to making this election. If not, then explain why not.

12. See Mr. Conroy's testimony at p. 15, l. 12. Mr. Conroy requests that regulatory asset treatment be utilized for post-in-service carrying costs, operating and maintenance expense, property taxes, investment tax credit amortization, and depreciation expense until such costs are fully reflected in the Companies' retail base rates or an applicable cost recovery mechanism. Please state KU/LG&E's expectation for a range of time that might occur between when the Companies' request would presumably be approved in this proceeding and when costs would go into retail base rates or an applicable cost recovery mechanism.

13. See Mr. Wilson's testimony at pp. 6-7.

a. Please provide actual hourly loads for all of 2024 and 2025 up to the most recent hour load data is available, consistent with the statement that the peak hourly demand was 6,814 MW on January 22, 2025.
b. Explain the difference between the peak hourly demand of 6,814 MW and 7,000 MW.
c. Describe the analysis performed to derive the values for the Likelihood of Energy Emergency Alert 1 and 3 shown in Table 1.
d. Provide hourly load forecasts for each load forecast the Companies modeled through the study period.

14. Refer to Exhibit SAW-1 at page 36 par 5.3 Anticipated Ownership Allocations.

a. Mr. Wilson uses the term "anticipated ownership allocations" at p. 36 of Exhibit SAW-1. Also, the Joint Application at p. 12, par. 21, entitled "Ownership," implies the ultimate ownership percentages could be different. Is it the Companies intention that the allocation percentages will be as the Companies identified in the filling unless changed by the Commission, or are the Companies implying they, on their own accord, would want to change the allocation percentages. If the latter is the case, under what circumstances might the Companies want to change the allocation percentages, and do the Companies believe they would not need to seek Commission approval to make a change to the allocation percentages. Please explain.
b. Are the Companies considering a different ownership allocation if the new data center load materializes, but less is sited in the LG&E territory and more is sited in the KU territory than assumed by the Companies. Please explain.
c. Regarding the two NGCC units, provide any analysis performed to determine that the "….optimal ownership allocation is 100% LG&E." If no analysis was performed please provide the Companies' support for that statement.
d. Provide any analysis performed to determine that the allocation of the Cane Run BESS should be 62% to LG&E and 32% to KU. If no analysis was performed, provide the Companies' support for those allocations.
e. Confirm the two new NGCCs will not be used exclusively to supply the new data center load and that the load, if it materializes, will be supplied by all resources on a system-wide basis.
f. Confirm the costs of the two new NGCCs will not be directly assigned to the new data center load/customers.
g. Confirm that the fuel costs of the two new NGCCs will be charged to all LG&E and KU load/customers.
h. Explain what will happen to the NGCC costs that the Companies are proposing to allocate to LG&E's load/customers if some or all of the new data center load does not materialize. Are the Companies proposing any protection for those customers?

15. See the file 20250129 Resource Assessment RM Need Tables_0336_D02.xlsx containing the Companies' load and resource balance table.

a. For any year during the period of 2025 to 2033 that the Companies' reserve margin is less than 23% in the Summer and 29% in the Winter, explain why the Companies did not present a plan that will meet its reserve margin targets. Is it because the Companies conducted SERVM analysis that showed the LOLE target would be met even though the RM targets would not be? Does this mean the 23% and 29% reserve margin targets overstate the Companies' reliability targets?
b. Do the Companies consider reliability strictly on a combined LG&E/KU basis, or do they evaluate needs to meet specific reserve margin targets on an individual Company basis?

c. Refer to Exhibit SAW-1, Table 15. Please provide the workpapers that derived the Reserve Margin with Proposed Allocations for KU and LG&E separately by year.
d. Regarding the Reserve Margin with Proposed Allocations please provide a narrative explaining the purpose of that information and how it was used in this proceeding.
e. Please provide any analysis performed to determine the capacity value (ELCC) of BESS and solar resources used in the load and resource balance table. Provide all workpapers that derived the ELCC values.

16. Mr. Wilson's testimony at p. 15, l. 17 discusses a generic 243 MW SCCT option. Please provide all workpapers showing the development of that cost estimate and the operating unit characteristics. Also, show how the cost assumptions were prepared for input into PLEXOS.

17. See Mr. Wilson's testimony at p. 16, regarding DSM resources and the discussion, "As such, the Companies modeled these measures as having no incremental fixed costs. The Companies also modeled a 100 MW expansion of their CSR-2 program. Notably, the Companies' ability to require CSR-2 customers to curtail their usage without a buy through option is limited to 100 hours annually when all available units are dispatched or being dispatched."

    a. Were the three new dispatchable DSM program measures modeled as selectable resources in PLEXOS resources or were they modeled with predefined MWs and MWhs. Please explain.
    b. Regarding the CSR-2 program, how did the Companies determine the size of that expansion, and was it treated as a selectable resource in PLEXOS. Please explain.
    c. What current program caps or limitations are in place for customer participation? Please explain.
    d. Provide all analyses and studies conducted evaluating market potential for expanding existing curtailable service offerings and demand response programs.
    e. Explain how the incremental 100 MW related to CSR-2 was determined, and provide all workpapers that were used to derive the 100 MW assumption. Also, provide workpapers developed for any other alternative cases that were considered.

18. See Mr. Wilson's testimony at p. 18, l. 13 regarding key uncertainties. Why didn't the Companies consider capital cost uncertainty in light of the fact that new capital assets are being proposed in this proceeding?

19. See Mr. Wilson's testimony at p. 29, l. 7. Mr. Wilson discusses the possibility that data center load could come on faster than new resources could be added. If that were the case, Mr. Wilson explains the Companies would need to consider additional means of meeting customer's needs such as adding additional resources. What additional resources could be built by the 2029/2030 timeframe if data center load materializes faster than expected?

Would the Companies consider rejecting or delaying the data center load to protect existing customers?

20. See Mr. Wilson's testimony at p. 30. Mr. Wilson describes that natural gas accounts for more than 40% of installed utility-scale generation capacity in the US. Certainly, the EPA 111 rule could be overturned, but if it does not go away and new NGCC resources have to meet 40% capacity factor limits, what would the Companies' plan be to meet the system's energy requirements once the NGCC units are constructed?

21. See page. 8 of the 2025 CPCN Resource Assessment (Ex SAW-1) (the "Assessment"). In the paragraph below Table 2, the Assessment states that reserve margins are lower because of the economic development loads.

    a. Please explain how economic development loads cause reserve margins to be lower.
    b. Provide all SERVM study analyses workpapers comparing the difference in Target Reserve Margin without Data Center loads to those with Data Center Loads.
    c. Please quantify what exactly is meant by "slightly lower"? Provide the % winter reserve margin before and after the data center load?
    d. What % of the total system load would be attributed to high-load factor load that is insensitive to weather?

22. See Mr. Wilson's testimony generally, in which he describes the allocation of ownership percentages for the various resources identified for construction.

    a. Refer to page 36 of SAW-1, which states, "Of the 1,750 MW of data center load in the 2025 CPCN Load Forecast, 1,400 MW are assumed to locate in the LG&E service territory." Have the Companies performed any analysis assessing the cost impacts and rate impacts of the various allocations and various load growth differences between KU and LG&E service territories? If so, please provide all the analyses. If not, explain why not.
    b. Please provide a comparison of the load allocation and revenue requirements allocation between LG&E and KU for the forecast periods.
    c. Have the Companies assessed the possible rate impacts to existing customers especially if the load does not materialize or materializes slower than when new resources are added? Please explain any analysis that has been conducted.
    d. Would the Companies agree that the incremental generation is more expensive than embedded generation and there could be an increase in the average cost to customers, all else being equal? If the Companies cannot agree, please provide a comparison of the existing average cost to the projected average cost.

23. Please Refer to SAW Confidential Workpaper "CONFIDENTIAL_20250226_FinancialModel_01_Stage1Step2_0336.xlsx".

a. Please provide an index description of the various portfolios and loads modeled as described on the "PivotResults" tab.
b. Please describe if any model functions or features have been added, modified, or removed to the Financial Model since the 2024 IRP.

24. Refer to Exhibit SAW-1, Section 4.1.2 and Table 1 describing the various load forecast sensitivities.

a. Did the Companies evaluate data center sensitivities below 1,470 MW? Please explain.
b. How were each of the sensitivity levels determined? Please provide a narrative description of the assumptions and process utilized as well as any accompanying workpapers that were used to derive the load forecasts for each sensitivity.
c. It appears that the difference between the 1,470 MW and 1,610 MW Stage One results are minimal. Please explain why the load increase did not lead to changes to the resource plan.

25. See Mr. Schram's testimony, p. 7, l. 18 regarding the Companies' operating reserve requirements.

a. Explain how the Companies' spinning reserve requirement is determined, and provide the calculation of 230 MW.
b. Provide a copy of the Companies' reserve sharing agreement with the TVA. documentation discussing the Companies' contingency reserve obligation.
c. Please describe any and all changes to the reserve sharing agreements and impacts of winter storm planning (e.g. changes made as a result of Winter Storm Elliot)
d. Describe how any reserve sharing opportunities are incorporated in the SERVM modeling.
e. Please describe what would have happened under an "energy emergency status" situation in accordance with the reserve sharing agreement.

26. See Mr. Schram's testimony, p. 8 regarding new load additions.

a. Please provide the year, month and MWs when the Camp Ground data center, the Blue Oval SK Battery Park Phase 1, and the 19.4 MW existing customer expansion will be added to the system.
b. Please provide all other expected load additions specifically accounted for in the load forecast including the year, month, and MWs. For example, this would include Blue Oval SK Battery Park Phase 2 and others that have been included in the Companies' load and capacity table, and production cost modeling analyses. The goal is to get a specific accounting for what makes up the 1,750 MWs of data center load the Company has identified.

27. See Mr. Bellar's testimony at p. 6, l. 8, which explains the process the Companies used to determine the resources they propose adding. The Companies did not conduct an RFP process for either the CC or BESS resources. Please explain why not, and explain why an RFP process was used for the recent May 2024 Renewable solicitation. Explain the Companies' position on this separately for the CC resources and the BESS resource.

28. See Mr. Bellar's testimony at pp. 7 – 10 regarding construction costs for the NGCC units. Also, referenced in Mr. Tummonds' testimony at p. 10., l. 17.

    a. Provide a detailed construction timeline, and schedule of costs broken down by cost category for the Mill Creek 5 (913.4 million), Mill Creek 6 ($1.415 billion), Brown 12 ($1.383 billion), and the site specific cost for KU's Green River Generating Station (Wilson Direct p. 13, l. 22) NGCC units, so that schedules and costs by category can be compared to each other.
    b. For the already approved resources, with regard to schedule, if the schedule being provided reflects any delays and/or cost overruns from the original schedule, please provide a detailed explanation and identify the original costs and schedule.
    c. Provide support for the derivation of the annual $5.1 and $4.7 million in 2030 dollars fixed cost estimates for Brown 12 and Mill Creek 6, respectively, and provide support for why Brown 12 is higher than Mill Creek 6. Also, what are the assumed escalation rates for those costs. Besides these fixed costs, are the Companies assuming there will be any maintenance capital expenditures for these units. If those costs were included in modeling, please state what they are for the two units and if not, please explain why not. Also provide the escalation rates for those costs.
    d. Provide support for the derivation of the annual $1.8/MWh and $1.86/MWH in 2030 dollars variable cost estimates for Brown 12 and Mill Creek 6, respectively, and provide support for why Mill Creek 6 is higher than Brown 12. Also, what are the assumed escalation rates for those costs.

29. See Mr. Bellar's testimony at p. 7, l. 18, regarding the BESS units.

    a. Provide a detailed construction timeline, and schedule of costs broken down by cost category for the Brown BESS (latest estimate), the Cane Run BESS ($775 million) and the Ghent (Wilson Direct, p. 13, l. 24) units, so that schedules and costs by category can be compared to each other.
    b. For the already approved resources, with regard to schedule, if the schedule being provided reflects any delays and/or cost overruns from the original schedule, please provide a detailed explanation and identify the original costs and schedule.
    c. Provide support for the derivation of the annual $25.11/kW-yr in 2028 dollars fixed operating and maintenance costs for the Cane Run BESS resource discussed in Mr. Tummonds' testimony.

30. See Mr. Bellar's testimony at page 7 regarding the Brown BESS project.

   a. Explain why the Companies are unable to pin down the schedule for the project any better than a 9 month window between July 2026 and March 2027, in light of the fact that BESS resources are supposed to have relatively short construction periods. Please explain all of the factors leading to this uncertainty.
   b. Explain what was meant by final determination of critical equipment availability and appropriate contracting. Have the Companies encountered any issues with those factors since the CPCN was approved? Please explain.
   c. Explain why there will be a substantive update to the cost of the Brown BESS resource.
   d. Please provide the Companies' current best estimate of what the updated cost will be broken down by cost category, and compare those costs to the same components but based on the 270 million estimate from Case No. 2022-00402. Note, this information will be important for evaluating the Cane Run BESS project.
   e. Mr. Bellar stated at line 21, "….execution of the material procurement and engineering procurement and construction ("EPC") installation contracts (received in January 2025 and expected in May 2025, respectively)." Does this mean the contracts were first received in January 2025 and expect to be signed in May 2025. Please clarify. Also, provide copies of the contracts.
   f. Mr. Bellar noted at p. 8, l. 4 that the Companies currently estimate that project costs may decrease from the noted estimate. Please clarify what this means as Mr. Bellar also stated that there would be a substantial increase in the $270 million dollar cost. What estimate may be reduced, and provide an estimate of the reduction?
   g. Explain why the new BESS at Cane Run is so much more expensive than the BESS project at Brown.
   h. Mr. Wilson noted at p. 15, l. 11 that the cost estimates for the BESS options at Cane Run and Ghent were developed from the most recent estimate for the Brown BESS resource. Please provide the workpapers, electronically with all formulas intact, showing the development of the Cane Run and Ghent BESS options from the Brown estimate.

31. Refer to Jones Direct Testimony. Please provide the source data for Figures 1, 2, and 3 to include a side-by-side comparison of the 2025 CPCN Load Forecast, the 2024 IRP Mid Load Forecast, and the 2024 IRP High Load Forecast on a Winter Peak (MW), Summer Peak (MW), and Annual Energy Requirements (GWh) basis for each year of the 30 year study horizon. Also, provide the History and Weather Normalized History for the 10 year look back period.

32. Refer to Jones Direct Testimony, page 21 starting at line 15 noting "the Companies' 2025 CPCN Load Forecast of non-economic-development load is materially unchanged from the Companies' 2021 IRP load Forecast and the 2022 CPCN-DSM load Forecast…"

a. Please provide the load forecast documentation from the 2021 IRP and the 2022 CPCN-DSM studies.
b. Please explain if any load forecast methodologies or load research has changed or updated comparing the 2021 IRP, 2022 CPCN-DSM, 2024 IRP, and 2025 CPCN methodologies.
c. Refer to Jones testimony at page 22 which describes the high load factor shape of the prospective economic development load. Has the Companies performed any analysis assessing the impact of new load to the average cost of energy? If so, please provide the analysis, analysis document, and analysis workpapers. If not, please explain why not.

33. Refer to page 16 of Jones Direct Testimony which describes, "the Companies have over 8,000 MW of total economic development load potential based upon the current list of prospective customers, over 6,000 MW of which is related to data centers"

a. Provide a breakdown of the 8,000 MW economic development queue describing customer, winter peak MW, summer peak MW, annual energy requirements, site location (if known), site control status, contract for service with KU/LG&E. Describe any ramping assumptions or requests and provide year-by-year detail by customer on the likelihood of materialization.
b. Provide a breakdown of the 6,000 MW economic development queue related to data centers describing customer, winter peak MW, summer peak MW, annual energy requirements, site location (if known), site control status, contract for service with KU/LG&E. Describe any ramping assumptions or requests and provide year-by-year detail by customer on the likelihood of materialization.

34. Refer to page 13 of Mr. Jones' Direct Testimony at line 11.

a. Please explain how the Companies determined the 95% load factor was a reasonable assumption for data centers. If the Companies based this data on historical data center load usage on the System, please provide that historical data center load evidence, or provide whatever the Company used to support the 95% assumption.
b. Did the Companies model all data centers identically? Provide the load shape assumed with monthly energy and peak demand assumptions.
c. Do the Companies expect the annual peak to occur in the summer? Please explain if the Companies have studied data center load sensitivity to weather and provide all notes, memos, calculations, or load study documents relating to data center load shapes.

35. Refer to page 17, line 2 of Mr. Jones' Direct Testimony and the Companies' projected 1,750 MW of economic development load.

a. Please provide any load materialization workpapers, calculations, probability models, analysis associated with the economic development queue and development of the 1,750 MW forecast.
b. Please provide a narrative description of the load materialization analysis and documents provided in response to part a.
c. Do the Companies have firm long-term contracts for each customer included in the 1,750MW forecast? Please explain.
d. Please provide any signed or offered contracts and summary of major terms of contract, such as contract term (years), minimum demand, ramping allowance, contract capacity, and tariff.
e. Please explain if the Companies have offered contracts that have not been signed to date. Please indicate the process for removing a customer from the economic development queue.
f. Have the Companies assumed a ramp up for specific customers or a ramp up that applied to the entirety of the 1,750 MW of economic development customer load? Please describe the methodology utilized, source of assumptions, and evidence such assumption aligns to any requests made by potential data center customers. Provide all workpapers deriving the ramp assumptions.

36. Refer to page 46 of Direct Testimony of Jones at line 15 which states, "The Companies' forecast of economic development load is also reasonable, and perhaps conservative, projecting that a fraction of the more than 6,000 MW of such load currently in the Companies' economic development queue will ultimately locate in the Companies' service territories."

a. Provide a description of the "win rate" on historical economic development prospects and contracted economic development load.
b. Do the Companies track land-control and any site development work in determining the likelihood a customer will ultimately locate in the Companies' territories? Please explain.
c. For each potential customer in the economic development queue, please describe
    i. The initial contact date of customer request and start of discussion.
    ii. The initial requested capacity and estimated energy and start of service estimate.
    iii. Any interim change(s) in status or requested capacity or energy estimates and revised start of service, reason for acceleration, delay, or change in need date or capacity
    iv. Current status or contract type, and summary of final contracted capacity, forecasted energy usage and service start estimate.
    v. If any of the prospective customer has communicated an intention not to take service, please provide all data collected regarding the reason for such a decision.

vi. The current associated land-control status for each request in the pipeline, for example, does the customer own or lease a physical site, and has the customer broken ground?

37. Refer to page 13 of Mr. Imber's Direct Testimony that states, "As I previously discussed, without an SCR, Ghent 2 is a natural target for NOx reductions because it will be the only unit within Group 2E, as well as the Companies' own coal-fired generation fleet, that is anticipated to operate beyond 2030 without post-combustion NOx controls. In short, constructing the Ghent 2 SCR now is necessary to ensure the Companies' compliance with Ozone NAAQS and Ghent 2's ongoing year-round availability, which, as Mr. Wilson explains, is a component of the Companies' resource plan for serving customers safely, reliably, and at the lowest reasonable cost.

    a. Please provide a comparison of the operational limits and Ghent 2's availability expected by month with and without the SCR for Compliance.
    b. Describe any energy or capacity factor limitations imposed by existing or possible NAAQS compliance related to NOx controls.

38. Refer to the Direct Testimony of Mr. Tummonds at page 10, which describes the minimal natural gas transmission work required for firm transportation to the NGCCs.

    a. Provide all documents and agreements made with Tennessee Gas and Texas Eastern for FT related to the NGCCs.
    b. What costs are associated with the new gas compression investment?

39. Refer to Direct Testimony of Mr. Tummonds pages 12-13 and the anticipated construction of 400MW of 4 hour BESS at Cane Run.

    a. Please explain if the Companies have evaluated possible fire risk and the anticipated liability or insurance costs of new BESS capacity. Provide all quotes, calculations, estimates, or memos regarding fire risk mitigation and liability insurance premiums.
    b. Explain how the Companies has accounted for risk of the IRA ITC/PTC legislation being eliminated by the current federal authorities.
    c. How have the Companies anticipated using the BESS resources? Do the Companies expect to maximize economic value through energy arbitrage or utilize the BESS for reliability? Please explain what was modeled in the evaluation and what procedures are expected in actual future operations.
    d. Provide a summary of the modeled charge and discharge energy profile and costs under each fuel scenario. How have the Companies considered BESS degradation and recurring capital/ capital additions over the life of the unit? Please explain.

e. Do the Companies anticipate any supply chain constraints? If so, please discuss the constraints, and explain the impacts that could arise, and what contingencies have been included to address the risks.

40. Refer to page 12, lines 9-11 of Mr. Tummonds Direct Testimony that states, "The Companies plan to use lithium-ion battery technology similar to what will be used for Brown BESS absent a shift in technology in the battery industry."

a. When do the Companies anticipate finalizing designs and getting contracts for construction?
b. Will a firm price be negotiated? Please explain.

41. Refer to Mr. Tummonds Direct Testimony starting at page 7, line 2 which states, "The Companies plan to construct the NGCCs so that Brown 12 will be operational in 2030 and Mill Creek 6 will be operational in 2031. To achieve the most favorable and predictable pricing, the Companies plan to secure contracts for both units at approximately the same time in June 2026. The time between contracting and in-service operation will allow for reasonable construction and commissioning contingencies such as weather issues, supply chain issues, and force majeure type events.

a. Please compare and contrast the benefits of the Brown and Mill Creek locations and site readiness.
b. The Companies mention risks such as weather, supply chain, and force majeure. What contingency has been built into the schedule and costs? How did the Companies compare the contingencies to standards in the industry?
c. Please provide all industry research and documentation related to supply chain and turbine manufacturing risk.
d. The Companies appear to indicate that contracting both CCs would result in favorable and predictable pricing. What preliminary engineering and quotes have been conducted to date? Have the Companies evaluated the cost of the Brown and Mill Creek projects separately and together to determine a savings could be had? Provide all evidence that there is a benefit to contracting at the same time.

42. Regarding Construction Risk of Brown and Mill Creek NGCCs:

a. Do KU/LG&E or any affiliates conduct business as wholesale generation merchant? Please explain.
b. Please explain if the Companies have considered contracting for new CC capacity through alternative structures, such as a PPA or BTA? If not, why not?
c. If the Companies request to build additional capacity is approved, but the projected load does not materialize, how would the Companies manage such an excess capacity position? Please explain.

d. If the Companies request to build additional capacity is approved, but the projected load does not materialize, how would the Companies manage such an excess capacity position? Please explain.

43. Refer to Bevington Direct Testimony at page 4, starting at line 17 which describes, "three most important factors impacting industrial projects: (1) utility and infrastructure availability, (2) workforce and labor availability, and (3) availability of development-ready sites."

a. Have the Companies evaluated whether prospective customers would site in KU or LG&E territory based on the 3 factors identified? If so, please provide all analysis and evaluation comparing the likely growth of industrial or data center load between the two jurisdictions and a description of the impacts. If not, explain why not.
b. Please provide a comparison of the utility and infrastructure availability between KU and LG&E service territories. Provide any specific city specific initiatives and/or considerations that are relevant to a Companies' site selection (e.g. Jefferson County)
c. Please provide a comparison of the workforce and labor availability between KU and LG&E service territories. Provide any specific city specific initiatives and/or considerations that are relevant to a Companies' site selection (e.g. Jefferson County)
d. Please provide a comparison of the development-ready sites between KU and LG&E service territories. Provide any specific city specific initiatives and/or considerations that are relevant to a Companies' site selection (e.g. Jefferson County)

44. Refer to Bevington Direct testimony at pages 6-7.

a. Have the Companies evaluated the jobs expected with the 1,750 MW of data center load modeled, and if so, identify how many jobs are expected to be created with the 1,750 MW data center forecast?
b. Please provide all assumptions and analysis for any estimates of job and/or economic impacts associated with the 1,750 MW.
c. Specifically regarding the Poe/PowerHouse data center to be located in Jefferson County. Indicate if the data center has any actual data center users signed up for this location, and if the Companies are aware, identify the users signed up.
d. Identify how many permanent jobs are expected at the Poe/PowerHouse data center facility, the type of jobs, and the wages and total compensation.
e. Identify if any governmental authority has granted any property tax abatements or reductions for the Poe/PowerHouse data center facility.
f. If the Companies have not evaluated these types of job impacts, please explain why not.

g. If the Companies have not evaluated economic or tax revenue impacts, please explain why not.

45. Refer to Bevington Direct Testimony page 13, starting at line 6 describing the process for large load customer to locate in the Companies' service territory.

    a. Provide a customer and peak MW breakdown of all transmission service requests submitted related to the economic development pipeline. (page 13, line 9)
    b. Provide a customer and peak MW breakdown of the EPC contracts related to the economic development pipeline (page 14, line 1).
    c. At what point would the Companies consider that they have a material commitment that the customer will take electric service for at least one year? Please explain.
    d. At what point would the Companies consider that they have a material commitment that the customer will take electric service for more than 1 year? Please explain.

46. Refer to the Companies' response to KIUC 1-2(j) in the IRP Docket # 2024-00326 which states, "The Companies are considering a number of possible tariff and contract options regarding potential large, high-load factor customers. Under the Companies' current tariffs, customers with large loads greater than 250 kVA and that take service at transmission voltage are currently served under Retail Transmission Service (Rate RTS), which contains minimum demand charge, contract term, and termination notice provisions"

    a. Have the Companies further considered tariff modification to ensure load materialization commitments for prospective customers since the response provided November 22, 2024? Please explain.
    b. Please provide all marginal cost studies which demonstrate that the marginal revenue from serving the projected data center load will exceed the marginal cost of building new generation and transmission to serve them.
    c. Are the Companies offering any economic development discount rates to attract the new data center load? If yes, please explain.
    d. Provide all studies performed by Companies in evaluating whether projected data center load will increase or decrease average rates for existing customers.
    e. Have the Companies evaluated the incremental impact of additional data center load on average or marginal energy costs? If yes, please provide those studies.