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	)	**Case No. 2025-00045**
OF PUBLIC CONVENIENCE AND NECESSITY	)	
AND SITE COMPATIBILITY CERTIFICATES	)	

SIERRA CLUB'S POST-HEARING BRIEF

I. Introduction.

In this docket, Louisville Gas & Electric Company and Kentucky Utilities Company ("LG&E/KU" or "the Companies") seek certificates of public convenience and necessity ("CPCN") from the Commission for more than $3 billion in new generation assets, battery storage, and pollution control equipment on an aging coal plant to meet speculative load growth from potential large-scale data centers that may never emerge. Specifically, the Companies requested approval to construct two 645-megawatt ("MW") natural gas combined cycle ("NGCC") facilities at KU's E.W. Brown Generating Station (called "Brown 12"), to be in service by 2030, and LG&E's Mill Creek Generating Station (called "Mill Creek 6"), to be in service by 2031; a 400-MW, four-hour battery energy storage system ("BESS") at LG&E's Cane Run Generating Station, to be in service in 2028; and installation of a selective catalytic reduction ("SCR") pollution control system at KU's Ghent 2 coal unit, to be in service by 2028.[1]

[1] *Electronic Application of Kentucky Utilities Company and Louisville Gas & Electric Company for Certificates of Public Convenience and Necessity and Site Compatibility Certifications*, Case No. 2025-00045, Joint Application at 10 (Feb. 28, 2025) (hereafter, "Joint Application").

The Companies' projected capital costs for the facilities are:

- Brown 12: $1.383 billion;
- Mill Creek 6: $1.45 billion;
- Cane Run BESS: $775 million;
- Ghent 2 SCR: $152 million.[2]

Prior to the August 2025 hearing in this matter, the Companies and some of the intervening parties, though not Sierra Club, Louisville/Jefferson County Metro Government, Lexington-Fayette Urban County Government, or Kentuckians for the Commonwealth, Kentucky Solar Energy Society, Mountain Association, and Metropolitan Housing Coalition (the last four of which are referred to collectively as "Joint Intervenors"), entered into a proposed Stipulation that would approve both gas plants and the SCR at Ghent 2, withdraw the CPCN request for the Cane Run BESS, and extend the life of the aging Mill Creek 2 coal-fired generating unit until Mill Creek 6 comes online in 2031, and potentially beyond. Sierra Club urges the Commission to scrutinize the proposed Stipulation and reject its terms because it offers no meaningful protections for ratepayers for the construction of two gas plants based on speculative data center load growth, the SCR for Ghent is expensive and remains legally unnecessary, which will not change for years, the Companies have not made an affirmative case (or any case at all) that extending the life of Mill Creek 2 is in the best interest of ratepayers, and the mere acquiescence of a subset of parties does not by itself constitute the requisite showing necessary to support issuance of CPCNs.

The key issue in this docket, and thus whether the roughly $3 billion in proposed generation investments is justified, is whether the Companies have accurately forecast future data center load growth in their service territories and whether that forecasted growth will

[2] Joint Application at 12.

actually come to fruition. The Companies' 2025 CPCN load forecast projects 2,000 MW of load growth from 2025 to 2032.[3] Nearly all of that forecasted growth – 1,750 MW – represents the Companies' projection for new, hypothetical large-load data centers that could potentially come online in their service territories over the next seven years.[4] But the Companies' approach to creating the load forecast was deeply flawed: it runs counter to the Commission Staff's recent recommendations for addressing data center load forecasts in the Companies' 2024 Integrated Resource Plan, docket no. 2024-00326; it is out-of-step with the approach taken by other utilities that have actual experience with large load data centers locating in their service territories; the Companies' lists of supportive factors wither when tested under even minor scrutiny; the forecast is not supported by the record the Companies have created; and the proposed gas plant buildout based on that forecast exposes customers to significant risk of paying for stranded assets if the Companies invest in this new generation and the data centers fail to materialize at the pace or scale the Companies hope.

The looming growth in data center construction nationally is not contested. Every forecast cited in this docket projects large increases in data center load growth in the coming years. But not a single national forecast includes Kentucky as a prime location for new data center development, and the Companies did not develop, produce, or rely on a single Kentucky-specific data center growth forecast.

Nor do on-the-ground conditions suggest the Companies' service territories are ripe for new data center development. There isn't a single large load data center currently operating in Kentucky, the Companies don't have a single large load data center with a signed electric service

[3] *Id.* at 5-6.

[4] *Id.* at 5-6.

agreement, and none of the "hyper-scalers" – Meta, Google, Amazon, Microsoft – have intervened or even filed comments in this docket in support of the Companies' CPCN requests. And although the Companies assert that they have had discussions with one or more hyper-scalers, they declined to provide the Commission, parties, or the public with hyper-scaler names or the number of projects under consideration, citing confidentiality agreements not part of this record. None of those potential data center projects have progressed beyond a stage of discussions that the Companies refer to as "prospect," to which the Companies attach a 50% ballpark confidence level of the project coming to fruition.[5]

The factors cited and relied on by the Companies in developing their data center load forecast simply do not hold water. The Companies' witness Tim Jones, who is responsible for communicating with the economic development team and developing the 2025 CPCN load forecast, identified four key factors that, according to his direct testimony, supported the Companies' bullish view of data center load growth. But the Commission should not share that optimism. As Mr. Jones confirmed in cross examination testimony, the Companies did not meaningfully test the strength of the factors they purport to rely on most heavily, such as the effectiveness of Kentucky's data center tax incentives compared to those offered by other states, or whether the projected national data center boom is likely to result in a comparable boom in Kentucky.[6] *See infra* Part IV. Any one of these omissions should give the Commission pause in accepting the load forecast at face value; as a whole, these gaps in the Companies' analysis

[5] KU/LG&E response to PSC PH-28 (prospect phase); KU/LG&E response to SC PH-3.a. (citing confidentiality agreements and declining to provide the "name(s) of the particular hyperscaler(s)" in discussion with the Companies); Hearing Video, 6:16:30 – 6:17:35 (discussing confidence levels). *See also* Jones Rebuttal Testimony, Exhibit TAJ-1 CONF.

[6] Hearing Video, 5:59:00 – 6:00:40 (lack of Kentucky incentives comparison), 5:55:30 – 5:58:06 (lack of Kentucky-specific data center load growth forecast) (Aug. 6, 2025). Available at https://www.youtube.com/watch?v=x4tnefclrNk.

completely undermine the load forecast and should preclude its use as the basis for nearly $3 billion in proposed capital expenditures. The Companies' desire for securing data center load growth amidst a highly competitive national landscape cannot justify the Commission approving the significant risks to ratepayers posed by the Companies' unprecedented plan to build two new gas plants without a single signed electric service agreement in place with any large-scale data center.

Here, those risks to the Companies' existing residential ratepayers are significant, as exemplified by the many members of the public that attended the Commission's hearing and spoke for roughly 90 minutes against the Companies' proposal. Building new gas plants without first establishing protections for residential ratepayers from the risk of overbuild and stranded assets puts the cart before the horse. Although the Companies have proposed an extremely high load factor tariff (sometimes referred to by the acronym "EHLF") that would apply to large load data centers in docket nos. 2025-00113 and 2025-00114, that tariff is not yet in place and offers no protections unless data centers agree to take service under its terms. The Companies have it backwards: customer protections should be in place *before* utilities decide whether to invest in new generation assets to serve speculative data center projects, not *after*. The Commission should not approve the construction of new generation resources that are intended to serve large customers without first establishing protections for existing ratepayers that would guarantee costs caused by these new loads are paid by the data centers and provide protections against stranded assets. As Sierra Club witness Stacy Sherwood estimated in her testimony, if the proposed gas plants are built but no large load data centers show up, KU's residential customers would face an estimated $23.05 increase in their annual electric bill, and LG&E's residential customers would see an annual electric bill increase of $138.67.[7]

Based on this record, Sierra Club urges the Commission to reject the proposed Stipulation and deny the requested CPCNs for the Brown 12 and Mill Creek 6 gas plants, the Ghent 2 SCR, and the Cane Run BESS because the Companies have failed to meet their burden of establishing a need for the projects and avoidance of wasteful duplication. In the alternative, if the Commission is inclined to approve portions of the stipulation, it should deny the CPCN for at least one of the two proposed gas plants and the unnecessary Ghent 2 SCR, while approving the CPCN for the Cane Run BESS, which will at least provide multiple grid services beyond adding near-term capacity.

II. Standard of Review.

The legal standard for the CPCN proceeding is straightforward and has been in place since the 1950s. K.R.S. § 278.020 requires that a utility obtain a CPCN for "the construction of any plant, equipment, property, or facility" with limited exceptions.[8] To receive a CPCN, a utility must show (1) a need for the construction and (2) an absence of wasteful duplication.[9] The requirements around the obligation to establish the need for construction and an absence of

[7] Direct Testimony of Stacy Sherwood at 10, Table 1.

[8] K.R.S. § 278.020(1)(a) ("No person, partnership, public or private corporation, or combination thereof shall commence providing utility service to or for the public or begin the construction of any plant, equipment, property, or facility for furnishing to the public any of the services enumerated in KRS 278.010 … until that person has obtained from the Public Service Commission a certificate that public convenience and necessity require the service or construction.")

[9] *Ky. Utils. Co. v. Pub. Serv. Comm'n*, 252 S.W. 2d 885, 890 (Ky. 1952); *In re: Elec. Application of Kentucky Power Co. for a CPCN to Rebuild the Wooton-Stinnett Portion of the Hazard-Pineville 161 KV Line in Leslie County*, Case No. 2022-00118, Final Order (Ky. P.S.C. Sept. 22, 2022) at 16-17, https://psc.ky.gov/pscscf/2022%20Cases/2022-00118//20220922_PSC_ORDER.pdf.

wasteful duplication was first established by the Kentucky Supreme Court in its 1952 decision, *Kentucky Utilities Co. v. Public Service Commission,* in which the Court stated:

> We think it is obvious that the establishment of convenience and necessity for a new service system or a new service facility requires first a showing of a substantial inadequacy of existing service, involving a consumer market sufficiently large to make it economically feasible for the new system or facility to be constructed and operated.
>
> Second, the inadequacy must be due either to a substantial deficiency of service facilities, beyond what could be supplied by normal improvements in the ordinary course of business; or to indifference, poor management or disregard of the rights of consumers, persisting over such a period of time as to establish an inability or unwillingness to render adequate service.[10]

In addition to establishing a *need* for a new facility, a utility must establish "an absence of wasteful duplication resulting from the construction of the new system or facility."[11] Wasteful duplication is given to include "an excessive investment in relation to productivity or efficiency, and an unnecessary multiplicity of physical properties, such as right of ways, poles and wires."[12]

As examples, the Court explained that:

> [a]n inadequacy of service might be such as to require construction of an additional service facility to supplement an inadequate existing facility, yet the public interest would be better served by substituting one large facility, adequate to serve all the consumers, in place of the inadequate existing facility, rather than constructing a new small facility to supplement the existing small facility. A supplementary small facility might be constructed that would not create duplication from the standpoint of an excess of capacity, but would result in duplication from the standpoint of an excessive investment in relation to efficiency and a multiplicity of physical properties.[13]

---

[10] *Ky. Utils. Co. v. Pub. Serv. Comm'n*, 252 S.W. 2d 885, 890 (Ky. 1952).

[11] *Id.*

[12] *Id.*

[13] *Id.*

The Court subsequently reaffirmed its definition of wasteful duplication as "embrac[ing] an excess of capacity over need, an excessive investment in relation to productivity or efficiency, or an unnecessary multiplicity of physical properties."[14] In order to "demonstrate that a proposed facility does not result in wasteful duplication," a utility must show that it has undertaken a "thorough review of all alternatives."[15]

III. The Commission Should Reject the Proposed Stipulation, or, in the Alternative, Approve It Only With Modifications that Serve the Public Interest.

The Commission should not accept the Stipulation as a take-it-or-leave it proposition. If accepted without modification, the Stipulation harms the public interest by: authorizing the Companies to spend $152 million to install an SCR on Ghent unit 2 that is not legally required; forcing the rejection of a battery storage project that would offer many grid benefits;[16] approving both gas generators that are proposed here without any requirement that the Companies secure large load customers before investing in that new generation; and by extending the life of Mill Creek 2 until 2031 and possibly even later still without any analysis that it is in the public interest. The Commission should instead reject the Stipulation. In the alternative, if the Commission is inclined to approve part of the Stipulation, it should modify it to include only those individual CPCN(s) that the Commission finds are in the public interest. At a minimum, that would require rejecting the Ghent 2 SCR and the life extension for Mill Creek 2.

There is no downside for customers if the Commission were to reject the Stipulation. All of the customer protections that relate to large load customers, which were referred to in the

---

[14] *Ky. Utils. Co. v. Pub. Serv. Comm'n*, 390 S.W. 2d 168, 173 (Ky. 1965).

[15] *In re Application of Big Rivers Electric Corporation for Approval of its 2012 Environmental Compliance Plan*, Case No. 2012-00063, Final Order, pp. 14-15 (Ky. P.S.C. Oct. 1, 2012).

[16] Hearing Video at 4:36:17 – 4:36:30 (Aug. 6, 2025) (Wilson testimony noting the batteries would be used "very frequently.").

Stipulation, would apply only if a large load customer signs an electric service agreement to take power under the Companies' proposed EHLF tariff. Meaningful customer protections would come from a protective EHLF tariff approved by the Commission, but the existence of the tariff itself does not protect customers, if a large load customer has not signed an agreement committing itself to take power from the Companies under its terms.[17] The Stipulation itself adds nothing in terms of protections from the risk of building generation to meet unrealized demand growth. Any modifications to the EHLF tariff, which has not yet been approved by the Commission, would necessarily come through the dockets reviewing the proposed tariffs in PSC case nos. 2025-00113 and 2025-00114.

Rejecting the Stipulation furthermore allows the Commission to serve its role as the regulator, with responsibility to protect the Companies' existing customers from the risk of higher rates posed by this proceeding. If the proposed gas generators are built, and no new large customers sign up for service from the Companies, KU's residential customers would face an estimated $23.05 increase in their annual electric bill costs, and LGE's residential customers would see a whopping $138.67 increase in their annual electricity costs.[18] The sheer size of these potential bill impacts favors the Commission taking all available steps to protect customers. Because the Stipulation is an impediment to protecting customers, the Commission should reject it.

The Stipulation also provides that the Companies will seek the necessary environmental approvals to allow Mill Creek 2, an aging, increasingly-expensive coal-fired unit already

[17] Hearing Video at 4:47:55 – 4:49:28 (Aug. 4, 2025). Available at https://www.youtube.com/live/HdSDloGgEy0?feature=shared.

[18] Sherwood Direct Testimony at 10, Table 1. The Companies have not offered an estimate of the residential customer bill impacts of the requested CPCNs or the proposed Stipulation.

authorized for retirement, to continue to operate until the Mill Creek 6 gas plant goes into service.[19] Worse still, under the terms of the proposed Stipulation, as part of the 2027 IRP process, the Companies agree to explore keeping Mill Creek 2 open beyond 2031.[20] Extending the life of Mill Creek 2 makes no economic sense for ratepayers, is not supported by testimony or economic analysis in this record that has been subject to expert review by intervening parties, and should be swiftly rejected by the Commission. Moreover, the proposed term directly contradicts one of Staff's recommendations to the Companies in the most recent IRP docket: "LG&E/KU should estimate the retrofitting costs and either explicitly model or allow the model to economically select retrofitting of all aging coal units in its fleet to operate on natural gas instead of having the model assume new build resources."[21] By proposing to extend the life of Mill Creek 2 coal unit until the in service date of the Mill Creek 6 gas plant and potentially beyond, the Stipulation disregards the Staff's recommendation filed in the Companies' IRP docket just over a month ago. The Commission should not approve any version of the Stipulation that requires ratepayers to bear the costs of extending the life of Mill Creek 2.

IV. The Commission Should Reject CPCNs for the Proposed Gas Generators Because Any Speculative Benefits to Customers Are Outweighed by the Costs and Risks.

The proposed Brown 12 and Mill Creek 6 gas plants intended to accommodate speculative data center load growth have a combined capital cost of approximately $2.83 billion.[22] There is no question that the potential business case for large load data centers in

[19] Stipulation Testimony Exhibit 1 at 8.

[20] Stipulation Testimony Exhibit 1 at 9.

[21] Kentucky Public Service Commission, *Electronic 2024 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company*, Case No. 2024-00326, Staff Report at 51 (July 31, 2025).

[22] Joint Application at 12.

Kentucky is new and untested. As the Companies stated in the recently completed 2024 Integrated Resource Plan ("IRP"), "[d]ue to the magnitude of data center loads, economic development is a key uncertainty in this load forecast."[23] But in the approximately 11 months since the Companies filed the 2024 IRP, the uncertainty has only increased. The Companies still have not signed a single electric service agreement with a large-load data center, and the 750 MW Project Lincoln data center in Oldham County was scrapped after intense public opposition and the failure to secure a necessary zoning change from agricultural to industrial use.[24] Similarly, Phase II of the Blue Oval electric vehicle battery manufacturing facility was recently put on an indefinite hold.[25] But after the total loss of the Project Lincoln data center proposal, the Companies did not reevaluate the prospective data center projects in their economic development pipeline. The Companies did not, for example, identify the number of data centers in the pipeline that require a zoning change in order to move forward, nor did they estimate how many megawatts of load growth that would represent. Instead, as explained below, the Companies' hope-and-see approach to data center growth failed to test even those factors on which the Companies have stated they relied on most heavily.

A. The Companies' data center load growth forecast is untested and unreliable.

The Companies' 2025 CPCN load forecast for 1,750 MW of data center load by 2032 is not based on specific prospective data center customers. Instead, the Companies acknowledged that the 1,750 MW is based on an estimate:

---

[23] Kentucky Public Service Commission, *Electronic 2024 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company*, Case No. 2024-00326, IRP Volume 1 at 7-13 (hereafter, "2024 IRP"). The Commission incorporated the full docket from Case No. 2024-000326 into this docket in its Order dated August 11, 2025.

[24] Rebuttal Testimony of John Bevington at 2; Hearing Video at 1:03:30 – 1:06:05 (Aug. 6, 2025) (Bevington testimony).

[25] Hearing Video at 5:00:03 – 5:06:15 (Aug. 4, 2025).

> The 1,750 MW of data center load included in the 2025 CPCN Load Forecast does not consist of specific data center projects; rather, it is a reasonable estimate of how much of the more than 6,000 MW of potential data center load in the Companies' current queue will come to fruition in the near term.[26]

Moreover, the specific factors cited and relied on by the Companies in developing their data center load forecast simply do not hold water. The Companies' witness Tim Jones, who is responsible for communicating with the economic development team and developing the 2025 CPCN load forecast, identified four key factors that, according to his direct testimony, supported the Companies' bullish view of data center load growth:

1) "enormous projected growth in data center load nationally,"
2) "Kentucky's efforts to attract data centers to locate here,"
3) "the announcement of the first hyperscale data center in Kentucky locating in Jefferson County," and
4) "having more than 6,000 MW of data center projects in the Companies' economic development queue."[27]

When subject to even the smallest amount of scrutiny, each factor has glaring holes in it. Any one of these failures should give the Commission pause in accepting the load forecast at face value; as a whole, these gaps in the Companies' analysis completely undermine the load forecast and should preclude its use as the basis for nearly $3 billion in proposed capital expenditures.

1. <u>Projected data center load growth nationally</u>

No party disputes that, on a national level, data center electricity needs are expected to increase dramatically in the coming years.[28] But on cross examination, Mr. Jones conceded that

---

[26] KU/LG&E response to Staff 1-17.

[27] Direct Testimony of Tim Jones at 18.

[28] *E.g.*, Direct Testimony of Jeremy Fisher at 6-7.

the Companies did not produce, cite, or rely on a single study forecasting how much of that national data center load growth is expected to occur either in Kentucky or their service territories,[29] and there isn't a single national forecast that expects Kentucky to be a prime location for new data center development.

2. Kentucky's tax incentives for data centers

Both Mr. Jones' direct testimony and the Companies' Joint Application identify Kentucky's sales tax incentive aimed at attracting data centers to Kentucky as a key factor.[30] But, as explained in the direct testimony of Joint Intervenors' expert Elizabeth Stanton, the competition among states for new data center projects is fierce: "36 states have enacted some kind of tax incentive for new data center development," "almost all states offer the same sort of sale and use tax incentives as Kentucky," and "[a]t least 10 states currently have given more than $100 million per year each in tax subsidies for data centers."[31] On cross examination, Mr. Jones did not dispute the studies and figures cited by Ms. Stanton, and conceded that despite being aware of the competition from other states, he had not compared how Kentucky's sales tax incentive stacked up against the sales tax incentives offered by other states; nor had he compared whether a sales tax incentive would fare favorably to other types of incentives offered by competing states, such as income or property tax relief or infrastructure grants.[32]

---

[29] Hearing Video at 5:55:30 – 5:58:06 (Aug. 6, 2025).

[30] Jones Direct Testimony at 18; Joint Application at 6.

[31] Direct Testimony of Elizabeth Stanton at 15.

[32] Hearing Video at 5:59:00 – 6:00:40 (Aug. 6, 2025).

3. The Campground "announcement"

Similarly, both Mr. Jones' direct testimony and the Companies' Joint Application tout the "announced" Campground data center project in Jefferson County.[33] But Mr. Jones conceded during cross examination that the Companies do not include the Campground project as "announced" in their economic development pipeline hierarchy that sorts potential projects into one of five categories: inquiry, suspect, prospect, imminent, and announced.[34] Moreover, Mr. Jones confirmed that the Campground project has not identified a data center tenant to occupy the space and – like every other potential data center in its economic development pipeline – the project has not signed an electric service agreement with the Companies.[35]

4. The Companies' economic development pipeline

Finally, Mr. Jones cites the more than 6,000 MW in the Companies' economic development queue to justify the 1,750 MW of data center growth included in the 2025 CPCN load forecast.[36] But here, as with the Campground project, Mr. Jones conceded on cross examination that: none of those projects had signed an electric service agreement with the Companies; none were listed as "announced" based on the Companies' internal economic development pipeline; and that there has not been a single large-scale data center built anywhere in Kentucky or the Companies' service territory.[37]

[33] Jones Direct Testimony at 18; Joint Application at 6.

[34] Hearing Video at 6:01:11 – 6:01:19 (Aug. 6, 2025).

[35] Hearing Video at 6:01:10 – 6:01:25 (Aug. 6, 2025).

[36] Jones Direct Testimony at 18.

[37] Hearing Video at 6:01:25 – 6:02:15 (Aug. 6, 2025).

Moreover, the way in which the Companies translate their economic development pipeline into a load forecast supporting new generation investments is opaque, ad hoc, and untested. As Staff explained in comments on the Companies' 2024 IRP, the Companies should "establish objective standards to determine if and when significant additional load will be added to its service territory."[38] Yet as the Companies confirmed here, "[n]o internal documentation exists that the Companies use to assign the stage of economic development projects."[39]

5. Actual experience doing economic development work

As an additional factor, in his rebuttal testimony Mr. Jones cites "Mr. Bevington's and his team's actual experience with doing economic development work" to support the 2025 CPCN load forecast.[40] Mr. Jones' cross examination revealed that this factor, like the others, should be understood with multiple qualifiers. First, the Companies have no experience judging their discussions with prospective large-scale data center customers and then seeing those data centers actually come to fruition.[41] Second, while Mr. Jones' rebuttal testimony acknowledges that "it appears there is some amount of potential data center load appearing in more than one utility's economic development queue,"[42] he confirmed on cross examination that he does not query potential data centers as to whether they are in discussions with other utilities for the same project.[43] More problematically, Mr. Jones, who is responsible for developing the load forecast, testified that he only learned at the hearing that Mr. Bevington's economic development team

[38] 2024 IRP, Staff Report at 50.

[39] Direct Testimony of Chelsea Hotaling at 26 (quoting KU/LG&E response to AG-KIUC 2-20(b)).

[40] Rebuttal Testimony of Tim Jones at 8.

[41] Hearing Video at 6:01:30 – 6:02:15 (Aug. 6, 2025).

[42] Jones Rebuttal Testimony at 5.

[43] Hearing Video at 6:12:08 – 6:12:29 (Aug. 6, 2025).

similarly does not ask data centers how many other utilities' service territories they are considering for their project.[44]

Third, while Mr. Bellar testified, in response to a question from Commissioner Wood, that in designing the extremely high load factor tariff the Companies evaluated how other utilities structured their data center rates, Mr. Jones stated that the Companies did not conduct a similar comparison as to what other utilities do to forecast data center load growth.[45] This imbalance – considering what other utilities with more data center experience do to design rates but not how they accurately forecast load growth – is glaring. Sierra Club's witness Chelsea Hotaling evaluated four similarly-situated utilities (AEP, Dominion Energy, Exelon, and PPL) that each require a signed electric service agreement or similar commitment from the data center before including the project in load forecasts.[46] On cross examination, Mr. Jones did not dispute Ms. Hotaling's analysis and merely confirmed that the Companies did not consider the forecasting methodologies of utilities with actual experience with large-scale data centers.[47] This approach directly contradicts Staff's IRP recommendation that the Companies "evaluate similarly situated utilities, specifically with regards to data center load growth that actually materializes in the utilities' territories as a comparator to help LG&E/KU understand the data center landscape as LG&E/KU prepare to serve large load customers."[48]

---

[44] Hearing Video at 6:12:30 – 6:13:30 (Aug. 6, 2025).

[45] Hearing Video at 6:04:05 – 6:05:50 (Aug. 6, 2025).

[46] Hotaling Direct Testimony at 21, Table 5.

[47] Hearing Video at 6:08:10 – 6:08:21 (Aug. 6, 2025).

[48] 2024 IRP, Staff Report at 50.

B. Existing customers will face a significant rate increase if the gas plants are built and no large customers pay for them.

The Companies' existing customers face significant risk if the proposed gas plants are developed and the data centers do not materialize at the pace or scale the Companies hope. As explained by Sierra Club witness Chelsea Hotaling, "[m]aking significant investments in generation without any financial commitments from prospective customers places the risk on existing ratepayers."[49]

This risk is compounded by additional pending rate increases for both KU and LG&E customers. Not including the new investments proposed here, the Companies recently filed pending rate cases that, if approved, would increase the average KU residential customer's electricity bill by more than $217 per year, and the average LG&E residential customer's bill by more than $132 per year.[50] Sierra Club expert Stacy Sherwood estimates that if the Companies build the proposed assets applied for here and the new data center load does not materialize, existing KU residential customers' bills will increase by $23.05 more per year, and LG&E residential customers' bills will go up $138.67 per year.[51]

---

[49] Hotaling Direct Testimony at 44.

[50] *Electronic Application of Kentucky Utilities Company for an Adjustment of Its Electric Rates and Approval of Certain Regulatory and Accounting Treatments,* Case No. 2025-00113, Application at 4 (May 30, 2025) (stating that the average monthly residential electric bill would increase by 13.6 percent, or approximately $18.15 per month, for a customer using 1,085kWH of electricity per month).

Electronic Application of Louisville Gas and Electric Company for an Adjustment of Its Electric and Gas Rates and Approval of Certain Regulatory and Accounting Treatment, Case No. 2025-00114, Application at 4 (May 30, 2025) (stating that the average monthly residential electric bill would increase by 10.1 percent, or approximately $11.04, for a customer using 866 kWH of electricity per month, which is the average monthly consumption of an LGE residential customer).

[51] Sherwood Direct Testimony at 10, Table 1.

These concerns were voiced by multiple parties. For example, the Kentucky Coal Association's witness Emily Medine stated that "the bullish load growth assumption is uncertain," that the Companies "do not properly evaluate ratepayer impacts," and "ignore the potential impact of stranded costs."[52] Joint Intervenors' expert Sean O'Leary catalogued the risks to ratepayers, including the following:

> 1. LG&E and KU's plan for new gas plants to serve possible future data centers could require infrastructure investments for which the utilities may not be compensated by the data centers, resulting in significant costs falling on other ratepayers.
>
> 2. LG&E and KU's budgeting for the construction of two new gas-fired power plants fails to take into consideration recent increases in construction costs, which may be 20% to 30% greater than those anticipated by the utilities.
>
> …
>
> 4. The increase in demand forecasted by LG&E and KU is highly uncertain, posing the risk that either these or other generating facilities could become stranded assets for which ratepayers would be on the hook.[53]

And while the Companies' witnesses noted at the hearing that they could ameliorate this risk by selling any excess power to other utilities,[54] the mechanics and economics of that proposition are not set out in testimony, and the Companies' responses to requests for information on this point offer conflicting views. As explained in Ms. Hotaling's testimony,[55] the Companies stated that if they were put in the position of over-capacity, they could pursue capacity sales, but also articulated potential hurdles, including the obligation to "undesignate" the units and cascading challenges caused by such a designation. In response to a question from

---

[52] Direct Testimony of Emily Medine at 4-5.

[53] Direct Testimony of Sean O'Leary at 4.

[54] Hearing Video at 5:39:11 – 5:39:45 (Aug. 4, 2025) (Bellar testimony); Hearing Video at 4:29:25 – 4:30:00 (Aug. 6, 2025) (Wilson testimony).

[55] Hotaling Direct Testimony at 45.

the AG-KIUC, the Companies stated that if in a position of overcapacity, the Companies could pursue capacity sales:

> That aside, 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.[56]

However, in a follow up discovery response, the Companies hedged:

> Please note the Companies are not in an RTO. Thus, a capacity sale or other firm power sale would require undesignating the applicable unit(s) from their status as Designated Network Resources ("DNRs") that enables their Network Integrated Transmission Service ("NITS") to serve native load. Undesignated units would no longer be available to serve native load. Therefore, the Companies do not expect to make capacity sales; rather, they were simply noting that it could be an option in an over-capacity situation.[57]

Thus, while the initial response appears to align with statements made at hearing by the Companies' witnesses, the follow up response indicated a significant hurdle to this approach: the Companies would need to undesignate a generating unit to be able to enter into a capacity sale, which would mean that resource would no longer be available to serve native load. Thus, it appears that in order to recoup revenue associated with the capacity sale, the resource could no longer be used to serve the Companies' own load. As Ms. Hotaling concluded, "there is no guarantee that a capacity sale would occur at all if there is no willing purchaser or that such a sale would recoup the investment in the projects."[58]

The record created by the Companies on this critical issue is thus incomplete and contradictory, and the Commission should not authorize billions of dollars in new investments to

---

[56] KU/LG&E response to AG-KIUC 1-42(c).

[57] KU/LG&E response to AG-KIUC 2-9.

[58] Hotaling Direct Testimony at 45.

support speculative data center growth without a thorough exploration of the potential for capacity sales to offer the ratepayer protections the Companies suggest. In the alternative, the Commission should deny approval of investments in new supply side resources until the Companies have adequately addressed the risk to existing ratepayers. As explained by Dr. Jeremy Fisher, the over-capacity risks could be mitigated by: ensuring that prospective data center customers have signed electric service agreements in place before being used to justify new generation investments and ensuring that an applicable data center tariff is in place before new data centers are developed to ensure that existing customers are adequately protected from stranded asset costs.[59] While Sierra Club appreciates that the Companies are working toward approval of an extremely high load factor tariff and moving toward electric service agreements, requesting roughly $3 billion in investment authorization before those things are in place has the operation in the wrong order. Customer protections should be in place before generation decisions are made, not the other way around.

V. Commission Should Reject the Ghent 2 SCR.

The Commission should reject the Companies' proposed CPCN for the selective catalytic reduction ("SCR") pollution control equipment at Ghent 2 because the Good Neighbor Plan does not apply to Kentucky, no other regulation will require an SCR at Ghent 2 at least during this presidential term, and rejecting this wasteful spending will protect customers from an unnecessary bill increase. Moreover, rejecting the SCR at Ghent 2 will also avoid significant spending at an aging coal resource that just two years ago the Companies proposed to retire as part of a least-cost resource plan.

[59] Fisher Direct Testimony at 3, 15-16.

The Companies' position appears to be that an SCR is needed at Ghent 2 to comply with the 2015 National Ambient Air Quality Standard for ozone ("2015 Ozone NAAQS"), and to be able to operate the unit to serve new customer loads.[60] The Companies estimate that the capital cost of installing an SCR on Ghent 2 by 2028 would be $152 million.[61] This $152 million figure includes the capital cost of the SCR only and not additional variable costs of operations.[62]

The Companies' case for an SCR at Ghent unit 2 is unreasonable and relies on speculation. The Good Neighbor Plan itself no longer applies to Kentucky.[63] The EPA promulgated the Good Neighbor Plan in June 2023, after the EPA disapproved of several state implementation plans ("SIPs") under the 2015 ozone NAAQS, including Kentucky's plan, for failing to curb emissions that contribute to nonattainment in downwind states. But in December 2024, the Sixth Circuit Court of Appeals vacated EPA's SIP disapproval for Kentucky. As a result, EPA's Good Neighbor Plan does not apply to Kentucky and, further, EPA does not have authority to implement *any* federal implementation plan for the 2015 ozone NAAQS in Kentucky. Separately, in June 2024, the U.S. Supreme Court stayed the effectiveness of the Good Neighbor Plan pending the completion of litigation. In March 2025, the EPA announced an intention to reconsider the Good Neighbor Plan altogether.[64] Whether the Good Neighbor Plan would ever apply to Kentucky is highly speculative and would require a new EPA rulemaking once again disapproving Kentucky's SIP, another rulemaking re-imposing the Biden EPA's Good Neighbor Plan, and then a final court order upholding each of those actions. In light

60 Direct Testimony of Philip Imber at 2.

61 Hotaling Direct Testimony at 7.

62 Hearing Video at 4:57:11-4:57:55 (Aug. 4, 2025).

63 Hotaling Direct Testimony at 4; Rebuttal Testimony of Philip Imber at 1.

64 Hotaling Direct Testimony at 49.

of EPA Administrator Lee Zeldin's stated goal to reduce regulations on power plants, that sequence of events—each of which is a prerequisite to any need for SCR at Ghent 2—seems unlikely, at best, for the foreseeable future.[65]

In his direct testimony, Mr. Imber speculated further that even if the Good Neighbor Plan does not apply to Kentucky, other regulatory avenues might drive an SCR at Ghent unit 2, namely a SIP call or a Section 126 petition.[66] But as Mr. Imber conceded on the stand, these two regulatory options both would ultimately require the Zeldin EPA to issue a regulation requiring SCR at Ghent unit 2,[67] which again, is speculative at best, given this Administration's efforts to prop up coal power plants.

On the stand, Mr. Imber further speculated that a president interested in more stringent air pollution regulation might be elected in 2028 and that presidential administration might one day impose an SCR requirement on Ghent unit 2.[68] That level of speculation should not support a CPCN, as the outcome of the 2028 election is of course unknown. Furthermore, if a president took office in 2029 that was interested in more stringent air regulation, that president might also propose carbon regulation, which would likely make Ghent 2 uneconomic to operate whether it had an SCR or not. Simply put, there is no legal obligation to put an SCR on Ghent 2 now or in the foreseeable future and, if and when such an obligation does occur, it might not be the only environmental retrofit required at the unit which could lead to the SCR becoming a stranded

---

[65] Trump EPA Announces Plan to Work with States on SIPs to Improve Air Quality and Reconsider "Good Neighbor Plan." U.S. Environmental Protection Agency, available at https://www.epa.gov/newsreleases/trump-epa-announces-plan-work-states-sips-improve-air-quality-and-reconsider-good.

[66] Imber Direct Testimony at 4, 8.

[67] Hearing Video at 1:35:25-1:36:00 (Aug. 7, 2025). Available at https://www.youtube.com/live/qgMBHaJnI1w?feature=shared.

[68] Hearing Video at 1:33:17-1:33:45 (Aug. 7, 2025).

asset. Mr. Imber's theory that a future president might impose an SCR on Ghent unit 2 does not support the Companies' request here as it is premature and there will be time to evaluate all compliance alternatives if and when such an obligation does arise.

In addition to protecting customers from unnecessary spending, rejecting the SCR would be in the public interest. Just two years ago,[69] the Companies proposed to retire Ghent unit 2 because it was one of the Companies' highest-cost coal units. The Companies should avoid large investments in aging coal units, especially when there is no requirement driving such investment. Customers' resources would be better spent on modern, cleaner generators. Lastly, it is unclear if building an SCR would even appreciably benefit the environment, as absent a regulation requiring an SCR, there is no assurance the Companies would operate any SCR to achieve optimal emissions reductions that benefit downwind states.

VI. The Commission Should Reject the Cane Run BESS or, Alternatively, If It Is Going to Approve Some Level of Generation for Speculative Load Growth, Approve the CPCN for the Cane Run BESS.

As set out above, the Commission should not approve massive generation investments to serve speculative data center load growth, including the $775 million Cane Run BESS. Alternatively, the Commission should only approve the Stipulation with modifications that are necessary to protect the public interest, including only approving one of the new gas plants (that still doesn't currently have any customers to serve), rejecting the CPCN for the Ghent 2 SCR as legally unnecessary, and approving the Cane Rune BESS. In their Joint Application, the Companies sought approval for, among other things, a CPCN for construction of a 400 MW, 4-

[69] *Electronic Joint Application of Kentucky Utilities Company and Louisville Gas and Electric Company for Certificates of Public Convenience and Necessity and Site Compatibility Certificates and Approval of a Demand Side Management Plan and Approval of Fossil Fuel-Fired Generating Unit Retirements*, Case No. 2022-00402, Order (Nov. 6, 2023).

hour (1600 MWh) battery storage facility at the Cane Run Generation Station, with a planned in-service date in 2028.[70] The Companies' witness Charles Schram noted in supporting testimony that, "battery storage will have an important role in providing reliable service to customers for years to come,"[71] and, according to the Companies' witness Stuart Wilson, the Cane Run BESS is a "vital and necessary component[] of least-cost portfolios across a wide array of load and fuel scenarios."[72] Yet under the terms of the Stipulation, the Companies now propose to withdraw the request to build the Cane Run BESS, noting that it may refile a substitute CPCN request "supported by a competitive procurement process."[73]

As explained by Joint Intervenors' witness John Chiles, battery storage systems such as this one can provide a myriad of grid benefits, including economic benefits that result from "charging when energy prices are at their lowest during off-peak hours and by discharging when energy prices are high."[74] The benefits of battery systems identified by the Companies' own witnesses include, *inter alia*: providing additional "peaking" capacity at times of high grid utilization;[75] making "fuller use of existing and planned resources to reduce the need for fully dispatchable resources that would otherwise be required to meet peaking needs;"[76] "meeting the ramp schedule anticipated for data center customers because the companies can add it relatively

---

[70] Joint Application at 1, 10.

[71] Direct Testimony of Charles Schram at 25.

[72] Direct Testimony of Stuart Wilson at 29. The Direct Testimony of David Tummonds also supported the Companies' request for the Cane Run BESS authorization.

[73] Stipulation Testimony Exhibit 1, p. 3.

[74] Direct Testimony of John Chiles at 18.

[75] Schram Direct Testimony at 26 ("adding the proposed BESS capacity will be important to ensure reliable service during peak periods"); Wilson Rebuttal Testimony at 15 ("BESS can then act as a limited-duration peaking resource").

[76] Rebuttal Testimony of Stuart Wilson at 15.

quickly and without regard for particular fuel supply or delivery constraints;"[77] avoiding any impacts to transmission when located at Cane Run;[78] enhanced certainty of authorization given the lack of any major construction permits necessary to install the batteries;[79] promoting "fuel diversity" by receiving energy from a variety of generation sources;[80] fostering "future integration of renewable energy resources at scale;"[81] and facilitating the Companies' familiarity with optimizing battery storage systems.[82]

Though not relied on by the Companies in their affirmative presentation, Intervenor testimony in the docket includes numerous other benefits of BESS systems that the Commission should consider in weighing whether to approve the withdrawal of the Cane Run BESS as contemplated by the proposed Stipulation. These include "deliver[ing] energy imbalance service (meeting hourly mismatch between scheduled and actual load)" and "providing … 'quick-start' reserves due to their fast discharge characteristics;"[83] "balancing grid supply and demand and improving quality and reliability," adding "peak electricity demand shaving and price arbitrage

---

[77] Wilson Rebuttal Testimony at 15.

[78] Direct Testimony of David Tummonds at 12 ("The Transmission networks already in place at Cane Run allow for integration with limited impact. The Companies do not anticipate any significant system modifications or upgrades will be necessary to charge or transmit power stored in batteries….").

[79] Tummonds Direct Testimony at 13.

[80] Rebuttal Testimony of Charles Schram at 5 ("Because BESS can be powered by any electric-generating resource and is therefore fuel-agnostic, it can help make more complete use of existing coal, gas, and renewable resources, effectively amplifying the benefits of fuel diversity.").

[81] Schram Direct Testimony at 26.

[82] Schram Direct Testimony at 6 ("operating and dispatching battery storage includes fine-tuning the extensive settings associated with the battery resource to ensure optimal integration with existing resources… allow[ing] the Companies to gain this valuable experience."). *Accord* Chiles Direct Testimony at 19 ("If the Companies can gain experience with BESS to maximize value of the asset, then that sets the stage for further effective use of BESS which informs Commission understanding and ultimately benefits ratepayers.").

[83] Chiles Direct Testimony at 18.

opportunities," "storing and smoothing renewable electricity demand," "deferring electricity infrastructure investments," and "integrat[ing] with microgrids."[84]

VII. Conclusion.

For the reasons stated above, Sierra Club respectfully requests that the Commission reject the proposed Stipulation and deny the requested CPCNs for the Ghent 2 SCR, the Brown 12 and Mill Creek 6 gas plants, and the Cane Run BESS. Alternatively, the Commission should approve the Stipulation subject to modifications that are necessary to protect the public interest, including by only denying the CPCN for one of the proposed new gas plants, denying the CPCN for the Ghent 2 SCR as it is the legally unnecessary, denying the request to extend the life of Mill Creek 2, and approving the Cane Run BESS as it will at least provide multiple grid services beyond adding near-term capacity.

Dated: September 5, 2025

Respectfully submitted,

/s/ Joe F. Childers
Joe F. Childers, Esq.
Joe F. Childers & Associates
The Lexington Building
201 West Short Street, Suite 300
Lexington, KY 40507
(859) 253-9824
joe@jchilderslaw.com

Of counsel
(not licensed in Kentucky)
Nathaniel T. Shoaff
Sierra Club
2101 Webster Street, Suite 1300
Oakland, CA 94612
nathaniel.shoaff@sierraclub.org

Tony Mendoza
Joshua Smith
Sierra Club
2101 Webster Street, Suite 1300
Oakland, CA 94612
tony.mendoza@sierraclub.org
joshua.smith@sierraclub.org

[84] Direct Testimony of Benjamin Smith at 4-5.

CERTIFICATE OF SERVICE

This is to certify that the foregoing copy of Sierra Club's Post-Hearing Brief in this action is being electronically transmitted to the Commission on September 5, 2025, and that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding.

/s/ Joe F. Childers
JOE F. CHILDERS