COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2021 JOINT INTEGRATED RESOURCE PLAN OF LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY	))))	CASE NO. 2021-00393

JOINT INTERVENORS' RESPONSE TO SUPPLEMENTAL POST-HEARING COMMENTS ON LOUISVILLE GAS AND ELECTRIC COMPANY AND KENTUCKY UTILITIES COMPANY'S JOINT 2021 INTEGRATED RESOURCE PLAN

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Metropolitan Housing Coalition, Kentuckians for the Commonwealth, Kentucky Solar Energy Society, and Mountain Association (collectively, "Joint Intervenors") offer this Response to Supplemental Post-Hearing Comments on the 2021 Joint Integrated Resource Plan ("IRP") of Louisville Gas and Electric Company and Kentucky Utilities Company ("LG&E/KU" or "the Companies").

I. The Companies' IRP falls short of being "transformative" due to weaknesses in methodology, process, and data, as well as the absence of a preferred plan.

Joint Intervenors are struck by the Companies' focus on the outcome of their 2021 IRP, as opposed to focusing on opportunities to improve their IRP process, methodology and data inputs.[1] Joint Intervenors submit that the Companies' emphasis on the IRP's "transformative outcome" is misplaced for at least two reasons.

First, as the Companies have stressed, integrated resource planning is an iterative exercise, requiring the Companies to report the details of their long-range planning and engage in informal proceedings with the Commission and stakeholders every three years. A great strength in iterative planning is the ability to make improvements with each iteration. If the aim is to ensure a robust process with sound assumptions capable of informing least-cost resource decisions, the focus should be trained on the IRP process, methodology, and data inputs and assumptions.

[1] Supplemental Post-Hearing Comments of Louisville Gas and Electric Company and Kentucky Utilities Company ("LG&E/KU Supplemental Post-Hearing Comment") at Sec. II (Aug. 22, 2022).

To that end, Joint Intervenors engaged experts to independently review the Companies' IRP modeling and provide practical recommendations to make the Companies' next IRP more robust and reliable. Joint Intervenors continue to urge Staff to recommend and the Companies to adopt those changes in their next IRP.[2]

Second, the Companies' focus on the *outcome* of their IRP is perplexing, given that there is no preferred resource plan reported in the Companies' 2021 IRP. As the Companies explained in their May 20, 2022 Comment, it would be a mistake to look at the portfolios discussed in their IRP—including the only portfolio that financial information and revenue requirements were reported for (the base load/base fuel scenario portfolio)—and think the Companies ever expected to pursue any among them:

> Relatedly, perhaps because other jurisdictions have IRP-like proceedings that result in resource plans that formally and necessarily affect utilities' subsequent resource decisions, certain commenters appear to argue that the economically optimal portfolio the Companies included in their IRP for the base-load, base-fuel scenario is the resource plan the Companies intend to pursue, and it therefore requires significantly more rigorous analysis. But any such view is mistaken.[3]

It borders on incoherent to say both that the IRP does not include a resource plan the Companies intend to pursue *and* that the IRP is responsible for certain generation retirements and additions.

Deepening the incoherence, the Companies celebrate that the "IRP retires almost 2,000 MW of coal-fired generation,"[4] but that cannot be something the IRP does for the simple reason

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[2] Joint Intervenors' Initial Comment, Ex. 1 IRP Modeling Report, Sec. 1.4 Recommendations (April 22, 2022).

[3] Responsive Comments of Louisville Gas and Electric Company and Kentucky Utilities Company ("LG&E/KU Response Comment") at 13 (May 20, 2022) (citations omitted). Notwithstanding the Companies' clarification that it would be a mistake to think that the base fuel/base load scenario portfolio will be pursued, some continue to make that mistake. Post-Hearing Comments of Kentucky Industrial Utility Customers at 1–2 (Aug. 22, 2022).

[4] LG&E Supplemental Post-Hearing Comment at 1.

that the IRP modeling did not include optimizations of existing units' retirement dates. The IRP assumes rather than informs decisions on retirements, simplifying them right out of the analysis.

In another simplification, the IRP presents no direct evaluation of DSM-EE programmatic potential, a critical component of least-cost resource planning.[5] As result, we cannot know whether or that any "outcome" from the Companies' 2021 IRP reflects a lowest-cost resource portfolio, with an entire category of low-cost potential left unexamined.

For these reasons, Joint Intervenors submit that there is little to be gained here through a focus on outcomes. Whatever the outcome, Joint Intervenors continue to urge integrated evaluation of all potentially cost-effective resources on equal footing.

II. Effective long-range planning requires comprehensive analysis of regulatory and emissions risks.

In their Supplemental Post-Hearing Comments, the Companies defend the reasonableness of only assuming carbon capture and storage ("CCS") costs for combined cycle gas plants ("NGCC") and argue against the utility of carbon pricing as a proxy for future carbon emission regulations.[6] However, the problem with the Companies' CCS assumptions for new NGCC units is not that it was unreasonable, but that it does not comprehensively address climate and regulatory risks. The implications and risks of emissions-intensive generation go far beyond plant-level emissions controls at a single type of facility.

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[5] Wilson, Rachel and Bruce Biewald, Best Practices in Electric Utility Integrated Resource Planning: Examples of State Regulations and Recent Utility Plans (June 2013) ("IRP differs from traditional planning in that it requires utilities to use analytical tools that are capable of fairly evaluating and comparing the costs and benefits of both demand- and supply-side resources. The result is an opportunity to achieve lower overall costs than might result from considering only supply-side options.").

[6] LG&E Supplemental Post-Hearing Comment, Sec. III.A, at 2–5.

Joint Intervenors have not argued against the reasonableness of modeling NGCC resources with carbon capture equipment in light of anticipated regulatory changes, as reflected in NREL's 2021 ATB. But that single assumption cannot account for the breadth of emissions- and climate-related risks to the Companies' business, including but not limited to accounting for fuel cost risks, inflationary pressure on emissions control equipment and reagents, and increasing emission credit expenses.[7] On this point, it appears that the Companies agree that their CCS-for-NGCC assumption does not address the only possible or plausible means of regulating climate-harming emissions.[8] The Companies even conclude, "therefore, modeling more than one potentially likely carbon regulation approach is advisable, at least when actual capital commitments are at issue."[9] For reasons already explained, Joint Intervenors take issue with the Companies trivialization of IRP modeling as something less than real-world resource planning,[10] and urge that robust modeling of more than a single regulatory risk is appropriate in planning *before* actual capital commitments are at issue. Other than that, Joint Intervenors would agree with the Companies' ultimate conclusion that future modeling *should* evaluate more than one potentially likely response to their climate-harming emissions.

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[7] *E.g.*, Direct Testimony of Mark Valach at 7, *Petition and General Investigation to Determine Reasonable Rates and Charges for Monongahela Power Company and The Potomac Edison Company on an after Jan. 1, 2023*, W.Va. Public Service Commission Case No. 22-0793-E-ENEC (Aug. 25, 2022) (explaining that FirstEnergy's cost to procure nitrogen oxides emission credits "increased from approximately $150/credit in 2020 to $40,000/credit as of today").

[8] LG&E Supplemental Post-Hearing Comment at 4 ("To be clear, the Companies are not asserting and have not asserted that the only possible or plausible means of regulating carbon emissions is requiring CCS for NGCC.").

[9] LG&E/KU Supplemental Post-Hearing Comment at 6.

[10] Joint Intervenors Supplemental Post-Hearing Comment at Sec. I, 3–16 (Aug. 22, 2022).

Setting aside the present economic and technical infeasibility of CCS,[11] there is another concern worth noting in the Companies' capital cost assumptions for SCCTs: a poorly supported 25% discount. The Companies discounted NREL's 2021 ATB capital cost for SCCT by 25% in their initial IRP modeling, based on a "cost estimate for new generation at an existing facility . . . provided by a vendor as part of a response to the Companies' 2021 Request for Proposals."[12] Respectfully, a single project bid from a single vendor is not a sufficient basis for an across-the-board discount to NREL's capital cost estimates.

In addition to more comprehensive analysis of risks accompanying carbon- and emissions-intensive resources, Joint Intervenors encourage the Companies to use better supported and more reasonable capital cost assumptions in future modeling.

III. LG&E/KU's segregated approach to demand-side resources is at odds with law and reason.

In their Post-Hearing Comment, the Companies insist that their approach to demand-side resources "fully complied" with the IRP regulation.[13] Respectfully, Joint Intervenors continue to disagree, and refer to our earlier comments on this issue.[14] Here, Joint Intervenors will correct certain misrepresentations of the factual record and briefly address the legal and practical

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[11] *E.g.*, LG&E/KU Response to Joint Intervenors Request 1-73(a) ("According to International Energy Agency's "CCUS in Power" report from November 2021, there is not an operational carbon capture system at an existing natural gas power plant in the United States.").

[12] LG&E/KU Response to Staff Request 1-56. Although the Companies reported to SREA that they "did not use or rely upon any RFP responses in their 2021 IRP," LG&E/KU Response to SREA Request No. 1-1(j), that directly conflicts with the Companies' same-day response to Staff Request 1-56. Joint Intervenors assume that the response to SREA was in error and credit the Companies' 2021 RFP as the source for their 25% capital cost discount for SSCTs.

[13] LG&E/KU Supplemental Post-Hearing Comment at 11–12.

[14] Joint Intervenors' Initial Comment at Sec. III, 22–30; IRP Modeling Report at Sec. 3.2.2 and 3.6.1; Joint Intervenors' Supplemental Post-Hearing Comment at Sec. III, 20–25.

infirmities in LG&E/KU's commitment to sidelining demand-side resources in long-range resource planning.

Beginning with basic facts, no, the Companies did not directly evaluate DSM-EE programs in their 2021 IRP;[15] and the Companies' IRP analyses did not "include[] an assumed continuation of DSM-EE-programs that would achieve the same levels of demand and energy savings as those projected to be achieved by 2025 for the remainder of the IRP Planning period."[16] The IRP accounts for energy savings and demand reductions from existing DSM-EE programs through the year 2025.[17] After that, however, the IRP assumes zero incremental energy savings and demand reductions attributable to DSM-EE programs, as reflected in Table 8-12.[18] The following tables reproduce the relevant portion of Table 8-12, plainly showing no incremental contributions from DSM-EE Programs after 2025.

[15] 2021 Joint Integrated Resource Plan of Louisville Gas and Electric Company and Kentucky Utilities Company, Volume III, Resource Plan Technical Appendix, 2021 IRP Resource Screening Analysis at 3 ("2021 IRP, Vol. III") ("[T]he Companies did not directly evaluate new demand-side management ("DSM") programs in this IRP"); Response to JI Q 1.38(d) ("The Companies did not evaluate any specific programs and relied solely on evaluation of capacity factors as a means of assessing DSM potential"); Response to Staff Request 1.4a ("The Companies did not directly evaluate new DSM programs for this IRP . . ."); Response to JI 1.14b ("The current DSM Portfolio is currently only approved through the end of 2025, which is why there are no projections for incremental energy and demand impacts beyond this date.").

[16] *Contra* LG&E/KU Post-Hearing Comment at 12 (citing IRP Vol. I at 8-24 and 8-25, Table 8-13).

[17] 2021 IRP, Vol. I at tbl. 8-12 (showing zero incremental DSM energy and demand impacts after 2025).

[18] 2021 IRP, Vol. I at tbl. 8-12.

Table 8-12 Excerpt **KU and LG&E Demand Side Management Energy and Demand Impacts (Incremental)**											
DSM Energy Reduction (GWh)	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
AMS Customer Service Offering	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residential & Sm. Nonresidential Demand Conservation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WeCare	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lg.Nonresidential Demand Conservation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nonresidential Rebates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Program Development and Administration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Annual Energy Reduction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8-12 Excerpt **KU and LG&E Demand Side Management Energy and Demand Impacts (Incremental) Cont.**											
DSM Summer Peak Demand Reduction (MW)	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
AMS Customer Service Offering	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residential & Sm. Nonresidential Demand Conservation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WeCare	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lg.Nonresidential Demand Conservation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nonresidential Rebates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Program Development and Administration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Demand Reduction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8-12 Excerpt **KU and LG&E Demand Side Management Energy and Demand Impacts (Incremental) Cont.**											
DSM Summer Peak Demand Reduction (MW)	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**
AMS Customer Service Offering	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Residential & Sm. Nonresidential Demand Conservation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WeCare	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lg.Nonresidential Demand Conservation	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Nonresidential Rebates	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Program Development and Administration	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Demand Reduction	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 8-12 shows, in black and white, that the Companies assumed zero incremental energy savings and demand reductions from the existing DSM-EE programs after 2025.[19] The cumulative impact table cited in the Companies' Post-Hearing Comment confirms that fact, with no additional savings or demand reductions from DSM-EE program participation after 2025.[20]

The Companies rightly point out that the base load scenario assumed a 6% reduction owing to end-use efficiency gains and the lasting incremental DSM-EE program impacts up to the year 2025, but as explained in Joint Intervenors' Post-Hearing Comment, that assumption appears too conservative.[21] Additionally, conservative savings adjustments at the end of the forecast period are not an adequate substitute for robust resource expansion modeling that

[19] IRP Vol. I at tbl. 8-12

[20] IRP Vol. I at tbl 8-13 (providing cumulative impacts of DSM-EE Programs and showing zero increases after the year 2025).

[21] Joint Intervenors' Supplemental Post-Hearing Comment at 21–23.

evaluates demand- and supply-side resources and strategies on equal footing. Particularly so where, as here, the Companies provided revenue requirement estimates for only a single portfolio, based on a single modeling scenario. Because of that choice, the IRP tells us nothing about the relative cost of the least-cost portfolio in each of the nine distinct scenarios used for resource expansion modeling and tells us nothing about the ability of those least-cost portfolios to perform equally well in different future scenarios.

So, while it is true that the low load forecast reflects accelerated efficiency gains, there is no way to compare the least-cost portfolio in the various low load forecast scenarios to any other portfolio. All the IRP shows is the obvious: all else being equal, if you assume accelerated efficiency gains, energy requirements will be lower; and if you slow those efficiency gains, energy requirements will be higher. We are left to wonder about the magnitude of cost savings that *might* be realized with accelerated efficiency gains and deferred or avoided supply-side investments.

Similarly, while it is true that the 2021 IRP includes different forecast scenarios for distributed generation, the Companies present no analysis of the relative costs and benefits of the various distributed generation forecasts. Further, in the case of distributed generation, the 2021 IRP does not even claim that the forecast was anywhere incorporated into the resource expansion modeling or any particular load scenario.[22] Again, we are left to wonder about the relative cost-effectiveness of supporting greater adoption of distributed energy resources versus direct investment in supply-side generation.

[22] *See* 2021 IRP Vol. I at 5-28 to 5-29 (never stating whether or how distributed generation forecast scenarios were integrated into the Companies' resource planning analysis).

Turning to what Kentucky law requires, Joint Intervenors maintain that the IRP regulation requires utilities to evaluate existing and additional demand-side resource opportunities. Somewhat incredibly, the Companies cite no fewer than ten subparts of the IRP regulation addressing demand-side resources,[23] yet insist it is consistent with that regulation to include no direct analysis of additional or expanded demand-side potential. With this position, the Companies forget that "[t]he Commission's goal in establishing the IRP process was to ensure that all reasonable options for the future supply of electricity were being examined in order to provide ratepayers a reliable supply of electricity that was cost-effective."[24] Commission Staff, in turn, have made it a goal "to ensure . . . [a]ll resource options are robust and are fully and fairly evaluated," *inter alia*.[25] With respect to the Companies in particular, Staff plainly recommended that future IRPs, including this current IRP, "review new possible cost-effective DSM-EE programs and seek ways to expand the current approved DSM-EE plan;" and that the Companies "continue exploring cost-effective DSM-EE as a method to avoid costly capital investments[.]"[26]

In light of the regulatory and common-sense expectation that demand-side resource opportunities are explored fully and fairly in IRP analyses, Joint Intervenors find LG&E/KU's insistence on marginalizing those resources to allow exclusive focus on supply-side generation

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[23] LG&E/KU Post-Hearing Comment at 12, n.25 (citing 807 KAR 5:058 Secs. 5(4), 7(2)(g), 7(4)(d), 7(7)(e)(4), 7(7)(g), 8(2)(b), 8(3)(e), 8(4)(a), 8(4)(b), 8(5)(c)).

[24] Staff's Report on LG&E/KU's Joint 2018 IRP at 1, Case No. 2018-00348 (July 20, 2020) https://psc.ky.gov/pscscf/2018%20Cases/2018-00348//20200720_PSC_ORDER.pdf.

[25] Staff's Report on LG&E/KU's Joint 2018 IRP at 2.

[26] Staff's report on LG&E/KU's Joint 2018 IRP at 20, 23.

troubling and inadequate. If least-cost planning is the goal, there is no reasonable argument to support making no direct examination of demand-side potential in long-range resource planning.

Joint Intervenors note that the Companies' comments on having dedicated DSM-EE staff, meeting with their DSM-EE Advisory Group, and obtaining approval to increase a certain DSM-EE program budget,[27] each favor analysis of demand-side potential in IRP modeling. First, with dedicated staff continually managing and evaluating DSM-EE programs, there should be little to no difficulty *integrating* that staff's knowledge and expertise into long-range resource planning.

Second, the DSM-EE Advisory Group offers an established forum through which the Companies' IRP modeling of DSM-EE potential can be improved in collaboration with stakeholders. For example, *had* the Companies discussed IRP modeling with their DSM-EE Advisory Group, Joint Intervenors' representatives assuredly would have urged some integrated analysis of demand-side potential, including engaging experts able to educate the Companies on how their existing modeling software can perform that analysis.[28]

Third, while Joint Intervenors applaud the Companies' move to increase the budget for a cost-effective program in light of greater than anticipated customer interest, that anecdote does not excuse the Companies' failure to directly evaluate new or expanded DSM-EE program potential as part of the IRP. The anecdote demonstrates leadership from customers, to which the Companies appropriately responded. The Companies should also be searching out opportunities where its superior system knowledge and software tools can lead the way to identifying even more cost-effective potential for the system and individual customers to save money through demand-side management.

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[27] LG&E/KU Supplemental Post-Hearing Comment at 16.

[28] *See e.g.*, Energy Futures Group Report at Sec. 3.6.1.

IV. The 2021 IRP does not support investment in natural gas combined cycle generation or any other resource.

Natural gas combined cycle generation cannot be found in any of the nine portfolios reported as "least-cost" in the Companies' 2021 IRP.[29] Yet, the Companies' Post-Hearing Comment claims "it is reasonable to expect that NGCC technology may be an integral part of the Companies' economical generating fleet for the foreseeable future, particularly in the absence of a CCS requirement for new NGCC units."[30] If the Companies are referring here to the fact that their existing portfolio includes Cane Run Unit 7—a combined cycle gas plant expected to operate throughout the IRP planning period—they may be right.[31]

Beyond that, however, there is very little analysis supporting the selection of any new resource in this IRP, much less an NGCC. Only a single modeling run, conducted in response to an information request and unsupported by modeling files necessary for independent review, suggests that NGCC without CCS may be part of a least-cost portfolio. Even without seeing the modeling files, there are known flaws in that modeling, including but not limited to the following:

(1) There is no indication that the Companies' modeling evaluated demand-side resource potential.

(2) There is no indication that the Companies' modeling used updated fuel cost forecasts, and the Companies' original fuel cost forecasts are significantly understated, causing the model to underestimate the potential fuel cost risks.

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[29] 2021 IRP Vol. I at 5-43, tbl. 5-19.

[30] LG&E/KU Supplemental Post-Hearing Comment at 6.

[31] Joint Intervenors offer that continued operation of Cane Run 7 may be economical over the coming fifteen years, but to be clear, that opinion is not based on the Companies' 2021 IRP. As articulated throughout this proceeding, based on independent expert review of the Companies' modeling, Joint Intervenors maintain that the Companies' analysis was inadequate and should not be relied on as the basis for any resource decisions. This is particularly so with respect to carbon-emitting and fuel-intensive supply-side resources as well as all demand-side resources.

(3) It appears the Companies only re-modeled the base load/base fuel scenario, with no testing of portfolios or re-optimizations in other scenarios.

Even without digging further into modeling files, on its face, the caliber of this single discovery response is far from adequate to support a resource decision. Rather than reflecting the reasonableness of any given resource decision, it suggests a foregone conclusion that the Companies would like to invest in combined cycle gas generation.[32]

V. The Companies engagement here reflects a disheartening search for the regulatory minimum instead of a robust least-cost planning effort.

Looking back across the course of proceedings here, Joint Intervenors observe that much of the Companies' engagement appears focused on searching out the regulatory minimum. The Companies have argued against the notion that they are expected to produce a plan, including strenuous argument against binding resource plans; rejected the suggestion that pre-filing stakeholder meetings can be a productive part of informal IRP proceedings; argued against the Commission taking any action concerning the IRP; offered questionable distinctions between IRP planning and "real-world" planning; and maintained against reason and law that evaluation of new or expanded demand-side potential has no place in IRP analyses. Dishearteningly, that list is not comprehensive.

Joint Intervenors are left with the impression that the Companies have mistaken the relatively informal character of this IRP proceeding as a justification for making a half-effort at long-range resource planning. That impression stems from the Companies' habit of pointing to

[32] The Companies' foregone conclusion favoring natural gas combined cycle generation is reflected in their latest CCGT project submitted to their Generation Interconnection queue, along with similar CCGT projects bid into that queue in January 2021.

the informal character of the planning review process and lack of direct Commission orders as warrant for their many simplifying assumptions and lack of seriousness in their process and methodology.[33] Joint Intervenors submit that the Commission's intent in adopting an IRP regulation that provides for informal and collaborative processes was *not* to invite utilities to treat long-range resource planning lightly. To the contrary, the analysis should be every bit as robust, so that our collaboration (and that of all parties) in this non-adversarial context can be meaningful and contribute to real least-cost outcomes for customers.

The Companies take a different view, seeming to urge a distinction between the IRP process and their actual planning. The Companies describe their actual planning as a continual, ongoing process leading to real world decisions, and the IRP is a "snapshot" of something less rigorous and somehow removed from that real planning effort.[34] That distinction goes too far, undermining the IRP regulation and frustrating what should be a transparent and collaborative long-range planning practice. In the Companies' own words, "the Commission enacted the IRP regulation and instituted IRP proceedings to assure ratepayers that electric utilities' planning methods for low-cost, reliable resources was occurring,"[35] and unfortunately, that goal has not been realized here. Simplifying assumptions moved entire categories of low-cost, reliable resources out of the 2021 IRP analysis,[36] preventing identification of a lowest-cost resource plan and stymying review by regulators and stakeholders alike.

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[33] *E.g.*, LG&E/KU Response Comment at 14 ("because IRP proceedings do not result in substantive Commission orders, binding resource decisions, investment commitments, or ratemaking, it is appropriate that the analysis and effort that goes into an IRP should be proportional to its import and effect").

[34] *E.g.*, LG&E/KU Response Comment at 13–14.

[35] LG&E/KU Response Comment at 13–14.

[36] Simplifying assumptions were made for economic retirement of existing resources, DSM-EE programs beyond those currently-approved, and distributed generation resources.

The IRP regulation is not and should not be interpreted as an invitation for the Companies to skip integrated evaluation of (1) economically optimal retirements for existing units and (2) new and expanded DSM-EE Program potential, along-side (3) evaluation of potentially cost-effective supply-side resources and (4) including distributed energy resources owned by customers and/or the utility. Integrated evaluation of those four big pieces of the long-range resource puzzle must happen in every IRP, as made plain in the lengthy IRP regulation.[37]A prudent utility would do nothing less than that sort of integrated long-range resource planning.

CONCLUSION

Joint Intervenors conclude with appreciation for this opportunity to independently review and provide comments on the Companies' Joint 2021 Integrated Resource Planning exercise. As reflected by the many members of the public testifying at the public hearing, the Companies' resource decisions are of great interest to their customers and the general public. Joint Intervenors continue to encourage the Companies to ground their planning in an understanding of customer needs and to keep customer impacts at the forefront when making resource decisions.[38]

Joint Intervenors also reiterate gratitude for the Companies' willingness to confer informally with modeling experts during the discovery period and to respond to all parties' information requests. That engagement critically enabled Staff and all Intervenors to be better informed and able to collaborate in service of achieving Kentucky's least-cost planning goals. It is Joint Intervenors' sincere hope that calls for full and fair analyses of all potentially cost-

[37] 807 KAR 5:058.

[38] Joint Intervenors' Initial Comment at Sec. II, 8–22.

effective resources and comprehensive accounting of risk are given due consideration by the Companies going forward.

Respectfully submitted,

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CERTIFICATE OF SERVICE

In accordance with the Commission's July 22, 2021 Order in Case No. 2020-00085, Electronic Emergency Docket Related to the Novel Coronavirus COVID-19, this is to certify that the electronic filing was submitted to the Commission on September 6, 2022; that the documents in this electronic filing are a true representations of the materials prepared for the filing; that no hard copy of this filing will be made; and that the Commission has not excused any party from electronic filing procedures for this case at this time.

Tom FitzGerald