COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2022 INTEGRATED RESOURCE PLANNING REPORT OF KENTUCKY POWER COMPANY	) CASE NO. 2023-00092

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KENTUCKY POWER COMPANY'S RESPONSE TO INTERVENOR COMMENTS ON THE 2022 INTEGRATED RESOURCE PLAN OF KENTUCKY POWER COMPANY

Kentucky Power Company ("Kentucky Power" or the "Company") appreciates the opportunity to respond to intervenor comments filed and entered into the record of this case on October 6, 2023, pursuant to 807 KAR 5:058, Section 11(1). Kentucky Power's comments respond to comments filed by the Attorney General for the Commonwealth of Kentucky, By and Through the Office of Rate Intervention ("AG"); Kentucky Industrial Utility Customers, Inc. ("KIUC"); Mountain Association, Appalachian Citizens Law Center, Kentuckians for the Commonwealth, and Kentucky Solar Energy Society (collectively, "Joint Intervenors"); and LS Power Development LLC ("LS Power") in accordance with the Commission's Order dated July 28, 2023.

Kentucky Power's 2022 Integrated Resource Plan ("IRP") presents a balanced, well-reasoned view of the Company's resource needs and proposed resource types, quantities, and timing to reliably meet customer needs over the next 15 years. The Preferred Plan was identified as a plan that provides a sound strategy for meeting the IRP's four stated objectives of customer affordability, rate stability, maintaining reliability, and local impact and sustainability, and represents the lowest reasonable cost plan for providing its customers with adequate and reliable service.

The Company has already initiated a critical step consistent with its Three-Year Action Plan as defined on IRP.[1] Specifically, the Company issued an All-Source Request for Proposals ("RFP") on September 22, 2023, to obtain additional resources to satisfy the needs of its customers over the IRP planning horizon and beyond. Contrary to the AG's arguments,[2] the RFP will evaluate all the resource proposals it receives on a reasonable and non-discriminatory basis. Under the present circumstances, Kentucky Power agrees with LS Power's comment that competitive procurement of resources is one way to ensure that Kentucky Power's customers are benefitting from diverse, low cost, low risk, and innovative energy resources to meet Kentucky Power's load obligations identified in the IRP.[3] Kentucky Power also agrees with the Joint Intervenors' comment indicating that Kentucky Power's initiation of an all-source RFP competitive procurement process is a positive development.[4] Furthermore, the all-source RFP is publicly available to all potential resource providers, including Louisville Gas and Electric and Kentucky Utilities ("LG&E/KU") and East Kentucky Power Cooperative ("EKPC"), to bid any resources into the RFP, making many of the criticisms from the AG and KIUC moot.[5]

The Company provides the following responses to the intervenors' comments. The Company notes that absence of comment on a particular argument of intervenors is not meant to

[1] Kentucky Power 2022 IRP Report at 183 of 1,182.

[2] E.g., AG Comments at 3 & *passim*.

[3] See generally, e.g., LS Power Comments at 3.

[4] C.f., e.g., Joint Intervenors Comments at 20.

[5] E.g., AG Comments at 3, 32-33, 36; KIUC Comments at 3.

signal agreement, but rather that the Company seeks to focus the issues to those relevant to the Commission's determination of whether the Company's submitted IRP meets the regulatory requirements for such type of document under Kentucky's regulatory framework. The Company affirms it clearly does.

KENTUCKY POWER'S RESPONSES TO INTERVENOR COMMENTS

1. Response to KIUC's Comments.

KIUC's comments concerning power market trends and risk[6] are factually without basis, and more importantly are out of place in this proceeding: the Company's IRP is required to meet a clear regulatory standard, and the IRP filed by the Company squarely meets that standard.[7] It is obvious that planning analysis and the Preferred Plan articulated in the IRP were completed at a snapshot in time, and can only be based on the information available at the time it is prepared, coupled with reasonable assumptions about both the forecasted requirements to serve Kentucky Power's customers, and the cost and availability of the resources needed to do so. According to Kentucky's clear regulatory framework, the Company's IRP is not intended, and certainly cannot be evaluated, as a substitute for certificates of public convenience and necessity ("CPCN") for specific actual proposed projects. Contrary to the focus and scope of KIUC's recommendations, the IRP is not the place for the Company to propose and ask for the Commission's review and approval of specific projects for major utility infrastructure and contracts necessary to serve its customers, as KIUC is aware.[8]

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[6] E.g., KIUC Comments at 2 & *passim*.

[7] I.e., 807 KAR 5:058.

[8] The Company certainly will submit to the Commission, as required by law, for approval through CPCN proceedings the applicable actual projects and contracts that may result from the Company's RFP process – or from any other project development process, for that matter.

Adequacy of Service under the Preferred Plan

Turning to KIUC's specific recommendations and criticisms, KIUC's main position is premised on an allegation that the Company and its customers would experience service adequacy issues under the Preferred Plan.[9] This unsupported allegation in turn is premised on a mischaracterization of the Company's present reliable and continuous service to its customers.[10] Apart from the fact that the IRP process is forward looking, KIUC's accusations about the present state of Kentucky Power's service to its customers, and about the resources the Company uses to provide that service, are simply not true. The Company, through a combination of owned and contracted resources, including its contract-based membership in PJM Interconnection, LLC ("PJM"), has the power supply resources necessary to serve its customers' present and anticipated needs much more than adequately and with a high degree of reliability. KIUC's accusation cannot be reconciled with the incontrovertible fact that even under recent severe weather and market conditions the resources used by Kentucky Power to provide service to its customers are demonstrated to be reliable and dependable.

Consideration of Market Resources in the Company's IRP

The Company's IRP is guided by planning principles and reasonable assumptions that are consistent with Kentucky's regulatory requirements for the Company's triennial filing, and provides a well-researched and thought-out plan to serve the reasonably anticipated needs of the Company's customers under a broad spectrum of possible future market conditions during the IRP's planning horizon. The Company acknowledges that indeed its IRP could present a plan to address those needs following different approaches, and that there is a spectrum of appropriate

[9] E.g., KIUC Comments at 2.

[10] Id.

approaches; the fact that one approach is valid does not necessarily invalidate other reasonable approaches. However, a plan that followed KIUC's recommendations would be neither a lower cost approach, nor consistent with other Kentucky IRP regulatory requirements. The Company's Preferred Plan appropriately combines the use of owned resources, the Company's membership in PJM, and other contracted resources from the market. Its balance of costs, resources, and forecasted needs results in the lowest reasonable cost plan as shown by the analysis described in the IRP. Based on the information available at the time of its preparation, KIUC's *recent* prejudice[11] against market-based resources would deprive Kentucky Power's customers from the benefits of the Company's low-cost plan.

Evaluation of Mitchell Generating Units in the IRP

The infirmity of KIUC's recommendations is illustrated by KIUC's misapprehension of the appropriate method to evaluate Kentucky Power's access to energy and capacity for the Mitchell Generating Units to serve Kentucky Power's customers during the period from June 1, 2028, to May 31, 2029. KIUC erroneously insists that Kentucky Power's IRP should have included an assumption that the Company could rely on its rights to capacity from the Mitchell Generating Units until December 31, 2028.[12] KIUC's argument is premised on an incorrect understanding of how the Company meets its requirement to serve customers year after year. Specifically, as a member of PJM, Kentucky Power must meet capacity requirements for the 2028/2029 PJM planning year to avoid incurring additional costs to serve its customers. By meeting these PJM requirements, the Company ensures it has continued low-cost access to the reliable and diverse capacity resources that contractually Kentucky Power has as a member of PJM. It is immaterial

[11] See *infra* p. 19.

[12] KIUC Comments at 2.

whether in fact (as it indeed will) Kentucky Power has also access to energy and capacity from Mitchell for part of the 2028/2029 planning year. Regardless of the Company's access to this partial-year resource, the Company's IRP must provide a plan that satisfies the *capacity* requirements needed to serve its customers *for the whole delivery year*. It is clear and undisputed that the Company's rights to capacity from Mitchell do not meet that requirement for the 2028/2029 delivery year. It would be erroneous to assume Kentucky Power only requires capacity from January 2029 to June 2029 because it has Mitchell through the end of 2028. Such an approach would most likely result in a capacity deficit for the entire planning year, and in turn result in increased costs to Kentucky Power and its customers. The Company's IRP presents a plan that was developed with an assumption of the earliest dates when new capacity resources might be added to the Portfolio. As part of this plan, the Company has clearly presented the challenges it faces beginning after 2028 when the Mitchell resources are no longer available for the benefit of Kentucky Power's customers. KIUC's recommendations do not identify any approach that would meet these challenges in a manner less costly than the Company's Preferred Plan.

For the purposes of this IRP, the model was offered market capacity resources as a proxy to fill the Company's capacity requirements for the 2028/2029 delivery year and beyond. Significantly, however, the Company's IRP analysis does not at all preclude the Company from identifying other longer term, firm resources, including transactions with existing generators, that might also respond to an All-Source RFP that could also fill this need outside of the context of the IRP. In practice, the results of the Company's current RFP are expected to be directly informative about real-world practical options available to the Company, and their cost.

Finally, KIUC's references to what may result from an offer to sell Kentucky Power's interest in the Mitchell Generating Units beyond 2028[13] are not relevant to the evaluation of the Company's IRP. KIUC's references are particularly out of place because the Commission has been clear that it did not authorize the Company to invest in the upgrades necessary for Kentucky Power to obtain energy and capacity from the Mitchell Plant beyond 2028. It should be equally clear that neither the Company nor the Commission has the authority to compel any potential buyer, whether affiliated or unaffiliated to Kentucky Power, to either acquire Kentucky Power's property interest in the plant, or pay any particular price for that property interest. The point is irrelevant for purposes of the Company's IRP, because the only reasonable assumption for planning purposes is that the Company will no longer have a right to capacity and energy from the Mitchell plant beyond 2028, consistent with the order from the Commission denying authorization to make the investments required to continue having those rights beyond 2028.

<u>Hedging of Energy Markets</u>

While the Company agrees in principle that, consistent with market conditions, it is appropriate to consider hedging of risks in electric power markets, in the context of the Company's IRP KIUC's arguments about unhedged market pricing risks is misplaced.[14] In the Company's IRP, these risks are tempered in the modeling by the addition of solar and wind resources with energy production at zero fuel cost. KIUC's additional criticism that resources could be located outside of Kentucky,[15] like those of the AG further discussed below, overlook that Kentucky Power's customers would significantly benefit from the federal tax credits on energy produced, resulting

[13] KIUC Comments at 2-3.

[14] KIUC Comments at 2-3.

[15] KIUC Comments at 2-3

in a reduced overall cost. This fact is shown in the Company's modeling where wind resources were selected in all Portfolios as part of a lowest possible cost plan. Furthermore, although the IRP analysis assumed renewable energy credits ("RECs") to be retired, in practice these REC assets are a fungible commodity that the Company would look to monetize to reduce the overall cost of service from the underlying asset.

KIUC's conjectural comments regarding a potential transaction involving Kentucky Utilities' ("KU") Ghent Unit 2[16] ignores that the Company's IRP does not restrict itself to contracts with specific entities involving specific resources – particularly not one as conjectural as the one proposed by KIUC. Second, from a practical point of view the recommendation is of no consequence. The Company's current RFP provides an opportunity for any such qualifying resource, including potentially KU's Ghent Unit 2, to participate in the RFP if desired. Such a proposal would be evaluated along with all other received proposals, and certainly could be selected if it was determined to be a suitable option preferrable to other options. However, having access to such a resource is no substitute for the Company's reliance in the other resources it has, including the Company's membership in PJM. Overreliance on such resource, as advocated for by KIUC seeking to exclude the proven reliable resources Kentucky Power currently has as a member of PJM, would not be to the benefit of Kentucky Power's customers. It would lead to potentially higher costs, lesser fuel diversity, and eroded power supply reliability, as recently illustrated by Winter Storm Elliot.

[16] Id.

IRP Modeling of a Natural Gas Generating Unit Resource in the Plan

KIUC is also without basis in its criticism of the Company's modeling of a NGCC unit resource in this IRP.[17] As explained in detail in the IRP, the selection of resources in the modeling is driven by the relative economics of various generating technologies available in a given year. This includes wind, solar, and natural gas resources among other resource options.

As explained earlier, Kentucky Power's need for capacity resulting from the termination of its right to receive power from the Mitchell Generating Units begins effectively June 2028. It is also beyond reasonable disagreement that this termination results in a need for capacity to meet the Company's capacity obligations for the whole PJM 2028/2029 Planning Year. The model considered the lowest total costs to address the capacity need after 2028 resulting in the selection of wind and solar resources in the various least-cost optimized portfolios.

KIUC mischaracterizes the Company's analysis by arguing that the NGCC was simply stacked on top of the wind resources.[18] The Company's analysis did nothing of the sort, and in fact, did the exact opposite. In response to stakeholder feedback (including KIUC's), the Company included an NGCC resource to be on-line by the 2029/2030 PJM planning year, and then optimized the selection of all other resources. The model still selected a mix of solar and wind resources in the near and mid-term of the Portfolio. While an NGCC can provide energy and capacity value to the portfolio, the modeling clearly indicates that integrating renewable resources with their associated federal tax credits provides more value to Kentucky Power costumers than the approach recommended by KIUC.

[17] KIUC Comments at 4-5.

[18] Id.

2. Response to the Attorney General's Comments.

Exclusion of Renewable Generation Resources Outside of Kentucky

The AG's recommendations center around a core recommendation that Kentucky Power be required to meet the energy and capacity needs of its customers relying primarily and heavily on fossil-fueled resources from within the Commonwealth of Kentucky.[19] This core recommendation simply cannot be reconciled with the explicit requirement under 801 KAR 5:058, Section 8(1) that the Company's IRP "shall include the utility's resource assessment and acquisition plan for providing an adequate and reliable supply of electricity to meet forecasted electricity requirements at the lowest possible cost."[20] There is no planning scenario, based on current data and reasonable assumptions about the requirements necessary to serve Kentucky Power's customers and the resources available for the Company to do so, in which the AG's recommendations could even remotely satisfy 801 KAR 5:058, Section 8(1).

The basic flaw in the AG's argument can be illustrated by considering the AG's comment that "import[ing] intermittent resources from outside the Commonwealth does not provide the reliable electricity Kentucky law requires."[21] The AG's argument is incorrect both as to law and as to fact, and mischaracterizes the Company's Preferred Plan.

First and foremost, Kentucky law requires that the Company's IRP plan considers low cost as a guiding principle.[22] The Company's Preferred Plan and the Company's IRP do exactly that. In simplest terms, the Company's IRP proposes that the Company rely on a combination of its

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[19] E.g., AG Comments at 3 & *passim*.

[20] 801 KAR 5:058, Section 8(1).

[21] AG Comments at 1.

[22] 801 KAR 5:058, Section 8(1).

owned resources, its contract-based membership in a robust regional transmission organization, and market-based resources made accessible through Kentucky Power's rights to use the transmission system to which it is interconnected to serve its customers. This combination, as clearly modeled by the Company's IRP analysis, results in a plan that provides a demonstrated adequate and reliable supply of electricity to meet forecasted electricity requirements at the lowest possible cost. This is in stark contrast with AG's recommendations, which would result in exactly the opposite.

Second, and equally important, it is unequivocal that Kentucky law requires that the Company's IRP presents a plan to provide adequate and reliable electricity to its customers. Indeed, the Company's IRP Preferred Plan and the Company's IRP analysis are premised on the same core principle that guides the Company's performance in real life in providing adequate and reliable electricity to its customers. Since 2004, when the Commission authorized Kentucky Power to become a member of PJM, the Company has continuously provided its customers a reliable and dependable supply of energy and capacity, even under strenuous weather and market conditions. The Company has done so using a combination of its owned resources, its membership in a robust regional transmission organization, and market-based resources made accessible through Kentucky Power's rights to use the transmission system. The AG's prediction about higher rates and less reliable service under the Company's Preferred Plan bears no connection with the facts.[23]

The AG's underlying suggestion to require the Company to provide a plan that relies primarily on dispatchable fossil-fueled from within the Commonwealth would arbitrarily discriminate against resources available through PJM and particularly renewable resources from

[23] AG Comments at 1 & *passim*.

outside the Commonwealth.[24] Such a plan would counterproductively isolate Kentucky Power's customers from the broader grid accessible through PJM. The AG's suggested approach would deprive Kentucky Power's customers from the benefits they currently receive from being part of the PJM balancing authority, including transmission and energy supply reliability as well as resource diversity and adequacy benefits.

The AG's comment similarly misses the mark when it criticizes Kentucky Power's Preferred Plan for taking advantage of wind resources that (as Kentucky Power has acknowledged) would likely be located outside the Commonwealth.[25] The analysis is clear that Kentucky Power customers would be the beneficiaries of estimated lower costs with these resources included in the Portfolio.[26] Their exclusion from consideration, as recommended by the AG, would increase the estimated costs to serve customers.

The AG's related recommendation that the Company be required to "engage in robust transmission planning for planned projects such that all costs are considered before a decision is made with respect to generation investments"[27] is superfluous. First, the Company's IRP does already include an appropriate level of information about transmission planning,[28] which is a very high-level and discrete snap-shot of the extensive and robust electric transmission planning conducted by PJM and by the Company as a member of the AEP system. It would not be an appropriate or useful focus for the IRP to attempt to replace the transmission planning and analysis

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[24] Id.

[25] Id.

[26] Kentucky Power 2022 IRP Report, Figure 82, at page 176 of 1,182.

[27] AG Comments at 37.

[28] Kentucky Power 2022 IRP Report, pages 65-81 of 1,182.

that the Company and PJM already do for the purpose of maintaining the electric grid reliability and enable the delivery of power resources across the PJM footprint. Second, the IRP already considers the delivered cost of capacity and energy resources to serve Kentucky Power's customers. The IRP appropriately already takes into consideration the deliverability of the resources modeled, all of which are accessible to Kentucky Power through the transmission system of which it is part. As previously discussed, this transmission system is the subject of robust regional planning. The analysis that the AG requests, therefore, would not add valuable information beyond what the IRP already considers.

IRP Planning to Meet Winter Peak Requirements

Similarly, the AG's arguments concerning the fact that Kentucky Power's load peaks in the winter turn the facts on their head.[29] It has been a tremendous benefit to Kentucky Power's customers that the Company has been able to limit its capacity costs to those necessary to meet its summer peak (or more precisely, its contribution to PJM's summer peaking requirements, which in fact may be lower than the Company's own summer peak) because the Company as a member of PJM and the AEP system can rely on PJM to meet its higher winter peaking requirements. It would be more costly for the Company to rely exclusively, or even primarily, on its owned resources to serve its winter peaking load, instead of relying on its contractual rights as a member of PJM to take advantage of the capacity margin and energy available in PJM markets. Contrary to the AG's position, taking advantage of Kentucky Power's membership in PJM to meet Kentucky Power's customers' winter peak needs is, and historically has been, a benefit to customers, not at all a detriment.

[29] E.g., AG Comments at 7-8.

In that regard, the Company has demonstrated that its Preferred Plan provides a portfolio that thoroughly meets the forecasted requirements to provide adequate and reliable service to its customers at the lowest possible cost. Contrary to the AG's arguments,[30] there is no conflict between the Company's obligation to provide adequate and reliable electric service to its customers, and the Company's approach to do so with a combination of its owned resources and its membership in PJM. Therefore, the point is not that the Company only would have to meet its PJM capacity obligations as a member of PJM; to the contrary: the point is that by doing so Kentucky Power ensures that through its membership in PJM it has capacity and energy resources that are dependably and reliably sufficient to meet the requirements of its customers, particularly when combined with the Company's owned resources.

All of the Above Approach to Resource Selection

The Company has acknowledged the AG's feedback received during the stakeholder meetings and considered that feedback thoroughly. The feedback specifically received as stated in the reference written comments stated in part:

> The Attorney General urges Kentucky Power to select a resource planning proposal that allows for reliable service at affordable rates. In order to achieve this end, Kentucky Power should employ an "all of the above" energy strategy that considers all resource types for selection and chooses the lowest-cost resources that allow the utility to operate reliably for the benefit of its customers.[31]

The Company's IRP is consistent with that feedback. The Company's IRP is premised on an "all of the above" energy strategy, and the Company's IRP resource selections were based on least-cost available resources. Moreover, the resources included in the Company's Preferred Plan were informed through a thorough review and analysis of many different Least-Cost Portfolios as

[30] E.g., AG Comments at 8.

[31] See Company's Response to Joint Intervenors' data request 1-82 Attachment 2, p. 8 of 47.

well as additional semi-optimized plans analyzed based on feedback from stakeholders (including the AG) in January 2023.

Of particular note, the AG's criticism of the inclusion of intermittent resources in the plan cannot be reconciled with the fact that under the Company's Preferred Plan these renewable resources provide Kentucky Power customers the benefits of lower costs as a result of current federal law from robust tax credits for energy production from zero fuel cost resources. It is irrelevant whether one agrees or disagrees with the underlying policies served by those tax credits; it is obvious that customers of Kentucky Power will have access to lower cost power if the Company includes these renewable resources in its resource plan mix, as the Preferred Plan does.

The AG errs also by seeking to prejudice out of state renewable resources included in the Preferred Plan's portfolio by extrapolating the General Assembly's policy justification for Senate Bill 4 ("SB 4").[32] The Commission's evaluation of the Company's IRP does not require reconciling the requirements of SB 4 with the requirements of 801 KAR 5:058, Section 8(1), for the simple reason that the Company's owned resources as modeled in the IRP do not include any resource retirement subject to SB 4. On the contrary, the IRP appropriately models the continued operation of the Big Sandy 1 Generating Unit to 2041, and appropriately models the termination of the Company's right to capacity from (not retirement of) the Mitchell Generating Units at the end of 2028.

The AG's policy argument concerning dispatchable and intermittent resources also ignores the key principle applicable to the Commission's review of the Company's IRP: that the plan take low cost as a fundamental guiding parameter. The policy objectives applicable to the Commission's evaluation of the IRP are straight forward, and decidedly do not involve the

[32] Senate Bill 4, 2023 Regular Session, codified at KRS 278.262 and KRS 278.264.

discrimination of low-cost resources on the basis of whether they are fossil fueled, renewable, in state, or out of state. Ultimately, there is no inconsistency between this basic principle governing the Commission's evaluation of the Company's IRP and the legislature's policy as articulated in SB 4.

Exclusion from IRP Analysis of Benefits as a Member of PJM

The AG suggests the benefits of being in the RTO should not be considered as part of its resource planning drivers.[33] The AG's suggestion ignores the fundamental fact that the Company is a member of PJM, and therefore as a member of PJM the Company has contractual rights that give it access to use the excess capacity in the PJM wholesale energy markets to meet its customers' needs. There is no reason to ignore these obvious and tangible benefits.

The AG's related argument that the IRP is deficient and that the Company's resource planning is insufficient is premised on a false dichotomy. There is no conflict between the Company's obligations to provide adequate and reliable service and the Company's obligations as a member of PJM. On the contrary, the Company has the contractual right to a broad and deep set of resources that the Company uses to meet its obligations under Kentucky law as a result of meeting its contractual obligations as a member of PJM.

As authorized by the Commission, the Company is a PJM member, and as a PJM member the Company has contractual rights to capacity and energy resources available through PJM. As a PJM member the Company also must meet its contractual capacity obligations in order to avoid incurring additional costs associated with its contractual capacity requirements. Those capacity obligations are based on the overall peaking requirements of the broader PJM region. It is clear

[33] AG Comments at 3, 8-9.

that as a PJM member, Kentucky Power benefits from the large and diverse PJM resource portfolio that provides resource adequacy over a large region.

Specifically, it is to the benefit of Kentucky Power and its customers that, as a result of the broad diversity in electrical use over the large PJM footprint, not all areas in PJM peak at the same time of the year. This in turn results in resources in one area of the system being available to serve other areas at different discrete peak times in different parts of PJM. In this manner, Kentucky Power customers benefit from the Company's PJM membership by realizing lower regional costs and a diverse and varied resource fleet that spreads generator outage risk across a larger collection of generators. The fact that Kentucky Power is a winter peaking utility is a great example of the benefits Kentucky Power ratepayers enjoy without compromising reliability as the Company has access to the wholesale energy market to meet demands greater than Kentucky Power's contractually required summer reserve margin in PJM.

Feasibility of PPAs with Generators in Kentucky

The AG's recommendation that the Company investigate the feasibility of entering into purchase power agreements ("PPA") with LG&E/KU and/or EKPC is clearly outside the scope of the Commission's review of the Company's IRP. The Company's IRP does not involve, and is not required to involve, a decision to enter into specific PPAs or to contract with specific parties. Moreover, from a practical point of view the AG's recommendation is untimely. The Company has acknowledged that it currently has an All-Source RFP publicly available to all potential resource providers. If LG&E/KU or EKPC wish to bid any resources into that RFP they are welcome to do so and any such bid will be evaluated in the same manner as all other conforming bids received.

The IRP is a plan that identifies a portfolio of resources that balances the cost to serve customers and the forecasted requirement to serve customers. As part of PJM, the Company is able to integrate the benefits of energy rich renewable resources that are eligible for robust tax credits that ratepayers immediately benefit from. The diverse portfolio of resources across a large regional footprint, backed up with robust transmission resources to move energy across the region provides the Company and customers the broad benefits of zero fuel cost renewable energy resources while also integrating flexible natural gas resources as part of its specific diverse portfolio of resources. The diverse portfolio of resources in the Company's Preferred Plan includes 825 MW of installed dispatchable Kentucky sited resources in 2037 relative to a PJM coincident peak load of 937 MW and a PJM capacity obligation of 1,022 MW.

Consideration of Greenhouse Gas Emission Reductions

The AG infers that the Company's Preferred Plan was influenced by Kentucky Power's parent company's environmental, social, and governance ("ESG") emissions targets.[34] The AG's argument is without basis. As described in section 7.2.4 of the IRP, the analysis does consider the relative exposure of greenhouse gas emissions reductions of the various portfolios. Importantly, however, greenhouse gas reductions were not influenced through any kind of constraint or target in the modeling. The emissions reductions identified in the IRP portfolios are a result of the selection of resources in the portfolios and their respective economic dispatch within the model. For this IRP, the Company did not exclude the consideration of renewable resources, and the analysis showed that these renewable resources are part of a Preferred Plan to serve Kentucky Power's customers.

[34] AG Comments at 33.

Consideration of Changing Market Conditions

The AG again misses the mark when it asks that Kentucky Power be required to study whether changing market dynamics would make advantageous for Kentucky Power's customers to "avoid[] increasingly costly market purchases and instead, directly generating the energy needed to serve ratepayers."[35] The AG's recommendation ignores that (a) such analysis is exactly what the Company already studies in its IRP process, (b) it is erroneous to assume that market purchases result in higher costs to customers compared to generating energy, and (c) that having the ability to generate energy and to take advantage of lower cost market purchases are not mutually exclusive. It is a mischaracterization to describe market purchases as increasingly costly; markets fluctuate, and importantly the costs associated with generating electricity (including variable, fixed, and capital costs) also fluctuate.

The Company also notes that there is a notable discrepancy between the AG's current position and that advanced by both the AG and KIUC in the previous Kentucky IRP proceeding, as recently as in 2019. In that most recent IRP proceeding the AG and KIUC strongly advocated for the Company to avail itself of more low-cost market energy and short term capacity purchases rather than adding additional generation supply assets.[36] As circumstances have evolved since then, the Company has concurred with that assessment, at least as to a relatively short period of time, while the Company established, consistent with the Preferred Plan, other long-term resources expected to result from the current Company RFP. Indeed, this has been to the benefit of Kentucky

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[35] AG Comments at 3; see also id. at 36-37.

[36] See AG-KIUC's Joint Review of Kentucky Power's 2019 Integrated Resource Plan at 6-11, *In The Matter Of: Electronic 2019 Integrated Resource Planning Report Of Kentucky Power Company*, Case No. 2019-00443 (Feb. 25, 2021).

Power's customers, as Kentucky Power's approach over the period has benefitted from low and stable prices in the PJM wholesale energy market from 2009 through Q4 of 2021. High commodity prices and other macro-economic factors caused market energy prices to be much higher than normal from Q4 of 2021 through December of 2022. Commodity and market energy prices have returned to their pre-Q4 2021 levels in 2023. It would be arbitrary and contrary to undisputed facts to disregard all of the value the Company's customers have received from the option to utilize PJM energy markets over the past decade and more.

In any case, the AG's recommendation is superfluous: the Company has a robust IRP process, and analysis of changing market dynamics and the relative costs of generating energy and market purchases is well within what the Company presently analyzes in its IRP modeling and planning horizon. Indeed, at a fundamental level the IRP already has done that analysis by relatively comparing all available sources of energy supply in the going forward IRP period to create a least reasonable cost plan.

3. Response to LS Power's Comments.

The Company agrees with LS Power that presently, and under current conditions, the Company's recent All-Source RFP for approximately 875 MW of PJM-accredited summer capacity and approximately 1,300 MW of PJM-accredited winter capacity[37] is an appropriate method for Kentucky Power to expand its power supply resources. This expansion will help ensure that Kentucky Power's customers continue to benefit from low cost, low risk electric power, as they have for decades. Kentucky Power's Preferred Plan identified a need for a diverse mix of resources including renewable resources with available federal tax credits to mitigate costs along with flexible, dispatchable natural gas resources. The Company is actively proceeding with its

[37] https://www.kentuckypower.com/business/b2b/energy-rfps/2023-all-source-rfp

All-Source RFP to identify available resources to consider for the purposes of meeting the needs identified in this IRP.

The Company highlights that its Preferred Plan is a diversified portfolio that includes more than 80% of its capacity in dispatchable resources while also integrating clean renewable resources. The result is a plan that provides dependable power supply resources while also taking advantage of available federal tax credits to the benefit of customers.

Finally, LS Power also correctly indicates that there are existing resources in Kentucky Power's service territory. The Company confirms that Kentucky Power will evaluate all resources that respond to the Company's current RFP for energy and capacity resources. The Company views the results of its current RFP to be key in achieving the Company's IRP objectives, which as explained previously focus on providing effective and reliable service to its customers at affordable costs.

4. Response to Joint Intervenors' Comments.

The Joint Intervenors are without basis in their blanket accusation that the Company's IRP falls short of identifying the best strategies for meeting its four stated objectives of customer affordability, rate stability, maintaining reliability, and local impact and sustainability. To the contrary, the Company's Preferred Plan clearly and thoroughly meets the Company's objectives for this IRP and provides a "least regrets" portfolio of diverse resources for the near and mid-term, taking advantage of federal tax credits for some renewable resources while integrating additional dispatchable natural gas resources. In fact, the IRP evaluated a mix of resources and their relative costs to identify a series of different least-cost portfolios within the parameters of required and available resources modeled. The costs were informed by the EIA AEO 2022 cost benchmark and NREL learning curves for different scenarios. The resources selected as part of least-cost optimized portfolios relied consistently on a mix of natural gas and renewable resources. The

Company's Preferred Plan was informed by robust and credible information available at the time, and used this information through all modeling and analysis within the IRP, to provide a high level of confidence and substantive evidence that the Preferred Plan represents a least regrets and lowest possible cost plan.

The Company has conducted the preparation of the IRP according to Commission regulations, and contrary to Joint Intervenors' protestation about lack of transparency, the Company in fact went beyond those minimum requirements, as demonstrated by its facilitation of two stakeholder meetings and its consideration of the input obtained in those meetings. These meetings were held with the expressed interest to be transparent in the Company's efforts to conduct this IRP. The Company looks forward to working with stakeholders, including the Joint Intervenors, during future IRPs.

Distributed Energy Resources

Turning to specifics, the Company acknowledges that distributed energy resources ("DER") were not included as part of the economic selection of resources, although it also notes that these resources were considered inherent to the Company's load forecast. Although there might be differing opinions on the growth and net impact to the Company's capacity position, the actual effects of DERs is still yet to be fully understood.

The Company also highlights that it has requested Commission approval in its base rate case of a distributed Solar Garden Program. If this program is approved and economic projects come to fruition, their impacts will be included in future IRPs.

Finally, the Company has reviewed the information from Energy Futures Group referenced in the Joint Intervenors' comments. While the Company continues to work with its distribution planning team to further realize co-benefits within its territory to consider in future resource planning efforts, the Company will consider their other feedback in the preparation of future IRPs. However, the Company also highlights that it is incorrect to state that the IRP analysis did not allow battery storage resources to compete in the model until the year 2035. Contrary to the assertion advanced by the Joint Intervenors, battery storage was made available for economic selection in the optimized portfolios in 2026.

PAYS Program and EFG Report

On the other hand, the Joint Intervenors' recommendations involving the PAYS program are neither pertinent to the IRP analysis, nor well-suited for Kentucky Power's offerings to customers. Importantly, the PAYS program is not a DSM/EE program; it is an on-bill financing program through which Kentucky Power would front the costs for the EE improvements on behalf of customers, both undermining customers' involvement and engagement with the measures, and exposing the Company and non-participating customers to bear costs that may be inefficient, or even wasteful. Further analysis of such a program is not appropriate in the review of the Company's IRP.

Similarly, while the Company has not fully evaluated the EFG report, this much is clear: the appropriate place to consider any best practices or recommendations for new DSM/EE programs is in the Company's upcoming DSM/EE application.

Competition, Objectivity and Transparency of RFP Process

Finally, leaving aside that specifics about the Company's current RFP are not a proper subject of the Company's IRP evaluation, the Joint Intervenors cannot factually support their accusation that the Company's current RFP is not sufficiently competitive, objective, and transparent. Joint Intervenors' position cannot be supported in the face of the mere fact that the RFP is indeed an All-Source RFP. The Company affirms that it will evaluate all resources responding to the RFP with conforming bids based on the criteria included in the publicly available RFP, which prominently include (but are not limited to) economic criteria.

CONCLUSION

As required by 807 KAR 5:058, Kentucky Power evaluated its future resource planning obligations building on reasonable load forecasts, demand-side resource options, as well as supply-side alternatives. Following its review and evaluation, Kentucky Power included its preferred resource plan that represents a balanced generation portfolio. Kentucky Power's 2022 IRP Report complies with the requirements of 807 KAR 5:058.

Respectfully submitted,

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