COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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

COMMENTS OF
LOUISVILLE GAS AND ELECTRIC COMPANY
AND KENTUCKY UTILITIES COMPANY
ON COMMISSION STAFF'S REPORT

Filed: October 7, 2022

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I. INTRODUCTION

Louisville Gas and Electric Company ("LG&E") and Kentucky Utilities Company ("KU") (collectively, the "Companies") appreciate the thoroughness of the Commission Staff's Report ("Report") regarding the Companies' 2021 Joint Integrated Resource Plan ("2021 IRP") and respectfully submit these Comments on the Report.

Perhaps the single most overarching issue the Report addresses is the intent and purpose of an IRP. The Report's stated intention for IRPs, namely to result in "an actual plan for meeting projected load during the planning period,"[1] is a significant departure from nearly 30 years of past practice, at least with regard to the Companies' previous IRPs and the Staff's Reports thereon.[2] The Companies have always endeavored to comply with previous Staff Reports, and they understand the direction Staff desires for future IRPs. The Companies' future IRPs will be consistent with that direction.

The Companies further acknowledge the Report's other critiques and recommendations. As the Companies discuss below, there are a number of statements in the Report that the Companies believe require clarification or correction, some of which the Companies address herein, but the Companies will endeavor in future IRPs to address and comply with the critiques and recommendations in the Report.

II. CLARIFICATIONS AND CORRECTIONS

The Companies respectfully offer the following clarifications and corrections of certain statements in the Report.

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[1] Staff Report at 64. *See also, e.g., id.* at 65-66 ("Thus, Commission Staff believes that resource acquisition plans in future IRPs should be developed as if they would actually be implemented to meet the utility's projected load with the idea that this actual plan will be updated and evolve as facts and circumstances change or become more clear.").

[2] *See id.* at 65 ("Commission Staff acknowledges that previous Commission Staff reports have not found that utilities' IRPs were unreasonable despite being treated more as a planning exercise than a means to develop an actual plan.").

A. The "Accounting for Carbon Costs" Section of the Staff Report Contains a Number of Statements that Require Response.

Although the Companies accept the Report's recommendations at page 69 concerning how to address and account for carbon regulations in future IRPs, the "Accounting for Carbon Costs" section of the Report contains a number of statements that require response.

First, the statement that "LG&E/KU assumed that an existing coal unit would continue to operate beyond 2060 without CCS" is incorrect.[3] It is a misinterpretation of the Companies' statement, "[A]ll other CO_2-emitting units are assumed to retire at the end of their book depreciation lives," which statement the Companies made in the IRP solely to make clear their assumed unit retirement dates *during the IRP planning period*, not indefinitely into the future.[4] Contrary to the Report's interpretation, the statement in the IRP does not contradict the Companies' statements about what might occur with Trimble County Unit 2 *after* 2036; certainly it does not mean the Companies intend to operate Trimble County Unit 2 beyond 2050 or even 2060 if CCS is not both technically feasible and lowest reasonable cost.

Next, the Report repeatedly states that the Companies have indicated an expectation that they would not burn unabated coal *or natural gas* beyond 2050.[5] An important clarification of those statements is that the Companies' witnesses consistently stated that the Companies' commitment was not to burn unabated *coal* beyond 2050.[6] The Companies have not made a similar

[3] Report at 59.
[4] 2021 IRP Vol. I at 5-18.
[5] Report at 56 ("Further, while it was not modeled, the Companies indicated their expectation that they would not burn unabated coal or natural gas beyond 2050."); Report at 59 ("However, pursuant PPL's carbon emission plan, LG&E/KU also indicated that it does not intend to burn unabated coal or natural gas beyond 2050."); Report at 61 ("Further, given that IRP is intended to justify a resource acquisition plan and allow scrutiny of that plan, Commission Staff is concerned that LG&E/KU proposed a plan that is inconsistent with its publically stated plan not to burn unabated coal or natural gas beyond 2050 without any explanation of the inconsistencies."); Report at 61 fn. 245 ("Further, as noted above, LG&E/KU has indicated that they do not intend to burn unabated natural gas beyond 2050, which would reduce the useful life of SCCTs installed in 2035 by half.").
[6] In one portion of the video record cited in the Report, counsel asked the Companies' witness, "Is the unabatement of emissions, is that associated with a coal unit or is that associated with a natural gas fired unit," to which the witness

commitment regarding natural gas; indeed, the Companies' witnesses statements on this commitment are clear that the Companies' 2050 net zero commitment could be accomplished in part by carbon offsets;[7] it is a *net zero* carbon emissions commitment, not a *zero* carbon emissions commitment.

Similarly, the Report misreports what one of Companies' witnesses stated regarding gas-fired units and the Companies' 2050 net zero carbon emissions commitment, stating, "[The Companies'] witness also indicated that it [the Companies] required CCS for any new NGCC units due to the expectation that natural gas units without CCS would be taken out of service in 2050 *to meet the carbon emission plan*."[8] The question asked of the witness was, "What would happen with these gas units at that time if there is no carbon capture, would they be taken offline?"[9] It was unclear to precisely which gas units the question intended to refer, but the witness's response was clear: the witness referred only to the Companies' existing gas units, not those that might be built in the future, and stated that the Companies' existing gas-fired fleet would likely be ready to retire in the 2050 timeframe due to the age of the units.[10] Notably, the witness did *not* say that the Companies intended to retire or anticipated retiring all of their existing gas-fired units by 2050 "to meet the carbon emission plan."

All of these corrections and clarifications relate closely to a more overarching correction and clarification the Companies desire to make, namely to correct the Report's misimpression that

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responded, "The commitment that they have is related to Trimble County Unit 2 and coal only." Jul 12, 2022 HVT at 11:44:42-11:44:56.

[7] *See*, *e.g.*, Jul 12, 2022 H.V.T. at 11:44:00-11:44:20; PPL's 2021 Climate Assessment Report, "Energy Forward," at 4 ("We view our path to net-zero emissions on a continuum, with a primary focus on eliminating our gross emissions, leveraging technology to remove emissions where they cannot be eliminated due to cost or reliability constraints, and finally, considering carbon offsets for any remaining emissions as the least-preferred option."), available at https://www.pplweb.com/wp-content/uploads/2022/01/PPL_Corp-2021-Climate-Assessment_2022-01-04.pdf.

[8] Staff Report at 60 (emphasis added), *citing* July 12, 2022 HVT at 11:53:00-11:54:20.

[9] July 12, 2022 HVT at 11:53:09-11:53:19.

[10] July 12, 2022 HVT at 11:53:21-11:54:20.

there is some quantifiable factor or set of factors that led to the Companies' 2050 net zero carbon emissions commitment (and the related commitment not to burn unabated coal beyond 2050).[11] As at least one of the Companies' witnesses explained at hearing, there is a broad consensus among electric industry participants, investors, and other observers that 2050 is a date by which electric utilities will likely need to have net zero carbon emissions and beyond which burning unabated coal will not be feasible.[12] As the witness further noted, there is no particular analysis, factor, or set of factors that has resulted in this consensus view concerning 2050;[13] doubtless there are any number of items or intuitions driving various participants' and observers' views. To the extent those views are informed by economics, fuel supply issues, and environmental regulations, the 2021 IRP already accounted for all of those items *during the IRP planning period* in accordance with the requirement in the IRP regulation. But the Companies can assure the Commission Staff that, contrary to what seems to be an implicit assumption throughout the "Accounting for Carbon Costs" section, there is not a hidden quantifiable factor or set of factors that drives the Companies' 2050 commitments but was excluded from the 2021 IRP.

B. Other Corrections and Clarifications.

Two items in the Report concerning how the Companies modeled their DSM-EE programs in the IRP deserve comment. First, the recommendation that "the Companies should not assume that current DSM-EE programs will not be renewed" appears to assume that the Companies made

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[11] *See, e.g.,* Report at 60:

> There may not be a particular projected statute, regulation, or market circumstance that would require compliance with PPL's carbon emission plan by 2050. However, the Companies indicated that their commitment to the carbon emission plan through 2050 was based on an analysis of potential environmental regulations, potential technology developments, and potential issues obtaining coal. While such an analysis would understandably be subject to uncertainty, as LG&E/KU's witness noted, if the Companies felt their analysis justified their commitment to the carbon emission plan, they should have incorporated their commitment into the IRP and explained the basis for their analysis and the uncertainties associated with it.

[12] July 13, 2022 HVT at 16:54:30-16:59:55.

[13] *Id.*

such an assumption in their 2021 IRP,[14] which is incorrect: the Companies assumed that the same level of DSM-EE savings would persist beyond the end of the current DSM-EE Program Plan, which necessarily assumes the continuation of DSM-EE programs. Second, the Report's recommendation that "it would be reasonable for the Companies to model increased participation in current programs up to their current limits" appears to assume that the Companies did not make such an assumption in their 2021 IRP.[15] The 2021 IRP did assume full participation in the current DSM-EE programs at projected levels for the remainder of the DSM-EE Program Plan (i.e., through 2025), and then it effectively assumed the same peak level of participation in the existing programs (or some equivalent) for the remainder of the IRP planning period.[16] These corrections and clarifications notwithstanding, the Companies understand and will consider the Report's recommendations regarding DSM-EE programs in their future IRPs.

The next clarification the Companies desire to offer concerns the Report's statement, "[A]lthough the winter reserve margin is at the lower end of the winter target, a 45 percent summer reserve margin appears to be excessive and could present an excessive burden on ratepayers."[17] This misunderstands the contribution that solar facilities add to a portfolio, which is not primarily to support serving load at peaks or ensure adequate generation at any given moment, but rather to provide economical energy whenever conditions allow it. Notably, the Companies' generation planning model selected that level of solar resources precisely to optimally reduce total system cost and therefore revenue requirements, not to "present an excessive burden on ratepayers." Thus, this is an example of the diminishing value of reserve margin as a simple metric for evaluating

[14] Staff Report at 67.
[15] *Id.*
[16] *See, e.g.*, IRP Vol. I at 8-21 – 8-26.
[17] Staff Report at 64.

resource sufficiency and economics in utility fleets with increasing penetrations of intermittent resources like wind and solar that might provide low-cost energy but are not dispatchable.

The Companies' final clarification concerns the Report's statement that the IRP's "Steps to be Taken During Next Three Years to Implement Plan" should have included a reference to a request for proposals ("RFP") given the Companies' anticipated capacity shortfall in 2028 and the Companies' issuance of an RFP in June 2022.[18] The Companies would note only that, although they did anticipate filing an RFP at some point prior to October 2024, they did not know the precise timing of the RFP when they filed the current IRP in October 2021. As the Companies stated at hearing, the Good Neighbor Plan, which was unknown at the time of the IRP filing, affected the RFP issuance.[19] With that clarification, the Companies will note in future IRPs if they anticipate issuing a supply-side RFP at any point in the following three years.

III. CONCLUSION: THE COMPANIES ACCEPT THE REPORT'S RECOMMENDATIONS

Qualified by the corrections and clarifications above, the Companies accept and will endeavor to implement all of the recommendations set out in the Report regarding the Companies' future IRPs. Certain recommendations in the Report do not apply to IRPs *per se*, such as the recommendation, "LG&E/KU should file to expand or revise its current 2019-2025 DSM/EE Plan if its ongoing resource assessments indicate that doing so is the least-cost option for meeting its projected load."[20] The Companies will also seriously consider such recommendations in their future decisions.

One recommendation the Companies have already addressed, though not in this proceeding, is the recommendation that "since the Inflation Reduction Act likely affected the cost

[18] Staff Report at 65.
[19] *See, e.g.*, July 12, 2022 HVT at 14:11:00-14:11:10.
[20] Staff Report at 68.

of proposals received, … LG&E/KU should obtain updated proposals reflecting those cost changes ….”[21] A number of the RFP respondents did include anticipated Inflation Reduction Act (“IRA”) effects in their bids, some provided updated bids related to the IRA, and others have provided proposal adjustments due to the IRA in the course of their interaction with the Companies during the proposal review process. Notwithstanding this information, the Companies also issued a request to all respondents to confirm that they have incorporated the effect of the IRA in their proposals or provide updated proposals to do so, and the deadline for receiving responses and updated proposals has passed. All respondents have now had the opportunity to provide proposals that include IRA effects. Therefore, the Companies have already fully addressed this recommendation.

Finally, the Companies understand the change in direction indicated by the Report’s recommendations to have each future IRP be “an actual plan for meeting projected load during the planning period.”[22] But as the Companies noted in their Supplemental Post-Hearing Responsive Comments, although the Companies already endeavor to use as much real-world data and experience as possible in their IRP modeling, analysis, and projections, certain data are necessarily not “real-world” in the sense that they are not immediately actionable, e.g., using NREL cost projections for various resource options rather than RFP responses because triennial RFPs for planning exercises are unlikely to yield reasonable results.[23] In addition, the IRP regulation’s requirement of a 15-year planning period necessarily constrains how real-world the IRP can be

[21] *Id.* at 66.
[22] Staff Report at 64. *See also, e.g., id.* at 65-66 (“Thus, Commission Staff believes that resource acquisition plans in future IRPs should be developed as if they would actually be implemented to meet the utility’s projected load with the idea that this actual plan will be updated and evolve as facts and circumstances change or become more clear.”).
[23] Companies’ Supplemental Post-Hearing Responsive Comments at 3.

relative to a CPCN level of analysis, which typically extends to 20 years or more.[24] Those constraints notwithstanding, the Companies will endeavor to satisfy the Report's recommendations in future IRPs.

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Respectfully submitted,

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[24] *See, e.g., Joint Application of Louisville Gas and Electric Company and Kentucky Utilities Company for Certificates of Public Convenience and Necessity for the Construction of a Combined Cycle Combustion Turbine at the Green River Generating Station and a Solar Photovoltaic Facility at the E.W. Brown Generating Station*, Case No. 2014-00002, Direct Testimony of David S. Sinclair Exh. DSS-1, 2013 Resource Assessment (Jan. 17, 2014) (providing data and analyzing various relevant factors over 20 years to almost 30 years).

CERTIFICATE OF COMPLIANCE

In accordance with the Commission’s Order of July 22, 2021 in Case No. 2020-00085 (Electronic Emergency Docket Related to the Novel Coronavirus COVID-19), this is to certify that the electronic filing has been transmitted to the Commission on October 7, 2022; and that there are currently no parties in this proceeding that the Commission has excused from participation by electronic means.

Counsel for Kentucky Utilities Company and Louisville Gas and Electric Company