

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

**ELECTRONIC APPLICATION OF KENTUCKY)
UTILITIES COMPANY FOR AN ADJUSTMENT)
OF ITS ELECTRIC RATES, A CERTIFICATE OF)
PUBLIC CONVENIENCE AND NECESSITY TO)
DEPLOY ADVANCED METERING) **Case No. 2020-00349**
INFRASTRUCTURE, APPROVAL OF CERTAIN)
REGULATORY AND ACCOUNTING)
TREATMENTS AND ESTABLISHMENT OF)
A ONE YEAR SUR-CREDIT)**

AND

**ELECTRONIC APPLICATION OF LOUISVILLE)
GAS AND ELECTRIC COMPANY FOR AN)
ADJUSTMENT OF ITS ELECTRIC AND GAS)
RATES, A CERTIFICATE OF PUBLIC)
CONVENIENCE AND NECESSITY TO DEPLOY) **Case No. 2020-00350**
ADVANCED METERING INFRASTRUCTURE,)
APPROVAL OF CERTAIN REGULATORY AND)
ACCOUNTING TREATMENTS AND)
ESTABLISHMENT OF A ONE YEAR SUR-CREDIT)**

**RESPONSE OF JOINT INTERVENORS TO OBJECTION OF KENTUCKY UTILITIES
COMPANY AND LOUISVILLE GAS AND ELECTRIC COMPANY TO JOINT
INTERVENORS' SEPTEMBER 17, 2021 ERRATA SHEET FILING**

Tom FitzGerald
Kentucky Resources Council, Inc.
P.O. Box 1070
Frankfort, KY 40602
(502) 875-2428
FitzKRC@aol.com

Counsel for Joint Intervenors Mountain
Association, Kentuckians For The
Commonwealth, and Kentucky Solar Energy
Society In Case No. 2020-00349, and
KFTC, KYSES and Metropolitan Housing
Coalition in Case No. 2020-00350

Joint Intervenors, by counsel, file this response to the *Joint Objection Of Kentucky Utilities Company And Louisville Gas And Electric Company To Joint Intervenors' September 17, 2021 Errata Sheet Filing* (“LGE/KU Objection”). For the reasons stated below, the LGE/KU Objection is without merit and should be overruled.

INTRODUCTION

On September 17, 2021, Joint Intervenors became aware that the undersigned counsel had inadvertently failed to include with the *Supplemental Post-Hearing Brief of Joint Intervenors*, the worksheet for the analysis on avoided carbon costs provided in tabular form in Table 1 and described in Pages 29-35 of that brief.

Upon so discovering, Joint Intervenors filed the worksheet, along with an *Errata Sheet For Supplemental Post-Hearing Brief of Joint Intervenors* that contained the following explanatory text:

Attached please find Joint Intervenors Exhibit 1, which was referenced on Page 35 of the *Supplemental Post-Hearing Brief of Joint Intervenors* but was inadvertently omitted from the September 7, 2021 filing. Exhibit 1 provides the worksheets used for the analysis provided in Table 1 on Page 35 of the brief.

Neither Louisville Gas and Electric Company (“LG&E”) nor Kentucky Utilities (“KU”) filed any objection to analyses presented on Pages 29-35 of the *Supplemental Post-Hearing Brief of Joint Intervenors*, which fully sourced and described the derivation of the three (3) carbon cost scenarios but have lodged an objection to providing the worksheet for the analysis that was referenced in Table 1 as Exhibit 1 but inadvertently omitted.

RESPONSE TO LGE/KU OBJECTION

On June 30, 2021, the Commission entered Orders in Case Nos. 2020-00349 and 2020-00350 which, in relevant part, were identical. For the purposes of this *Background*, citations shall be made to the June 30, 2021 *Order* in Case No. 2020-00350.

In those June 30, 2021 Orders, the Commission deferred final action on the net-metering and the cogeneration tariff issues but made certain findings and preliminary conclusions that bear on the final review and either approval or disapproval of the NMS-2 Tariffs proposed by Louisville Gas & Electric Company (“LG&E”) and Kentucky Utilities Company (“KU”). Relevant to the LGE/KU Objection, the Commission noted that:

The record does not offer quantification from LG&E or from the Intervenors for several compensation rate components that the Commission considers are necessary to adequately compensate NMS-2 customers. As the law clearly requires, following the initiation of this proceeding by LG&E, it is the Commission’s obligation to determine the appropriate compensation rate for net metering. Therefore, the Commission finds that the existing record is insufficient to support a conclusion whether the proposed NMS-2 export compensation rate is fair, just and reasonable.

* * *

We reiterate here that, while the Intervenors do not have the burden of proof on the net metering successor rate, the Commission granted the parties’ requests for permissive intervention in this proceeding so that they could present issues and develop facts that assist the Commission in rendering its decision. **We encourage the parties that were granted permissive intervention to draw upon their expertise to quantify issues they present and facts they develop to assist the Commission to the greatest degree possible.**

Because the record is insufficient to support a finding that the NMS-2 export compensation rate is fair, just and reasonable, the Commission finds that a decision regarding NMS-1 and NMS-2 should be deferred to afford the parties the opportunity to develop a thorough, robust record with sufficient evidence to support a finding that LG&E’s proposed Tariff NMS-2 rates are fair, just and reasonable.

The Commission is cognizant that it must issue a decision on this issue on or before September 24, 2021, which is the statutory due date established by KRS 278.190(3), and will timely establish a procedural schedule for investigating NMS-1 and NMS-2. The procedural schedule will consist of supplemental information requests, supplemental testimony, supplemental rebuttal, and a hearing. Parties are advised to submit supplemental testimony related to avoided energy cost, ancillary services cost, generation capacity cost, transmission capacity cost, distribution capacity cost, carbon cost, environmental compliance cost, and, separately, job benefits as they relate to calculating the NMS-2 export compensation rates.

June 30, 2021 *Order* Case No. 2020-00350, pp. 37-39. (Emphasis added).

The discussion and recommendation of Joint Intervenors in their *Supplemental Post-Hearing Brief* at Pages 29-35 on avoided costs of carbon, was provided in direct response to the request of the Commission that all parties, including those granted permissive intervention, *quantify* the costs avoided to the extent possible.

Neither Table 1, nor the worksheet to which the LGE/KU Objection is directed, introduced any new data or testimony. Instead, the *Errata* filing provided the worksheet reflecting the analyses presented and fully sourced in the *Supplemental Post-Hearing Brief of Joint Intervenors*. The sources of the data and bases for any assumptions were discussed at length in the brief, and the analysis was transparent, as the Commission encouraged in the May 14, 2021 KPC Order in Case No. 2020-00174.

The Joint Intervenors' worksheet is adapted from that produced by the PSC in the May 14, 2021 *Order* in the Kentucky Power Company No. 2020-00174, which was used by the Commission for calculating Avoided Cost Components. The Joint Intervenors' analysis, as reflected in the worksheet utilized data specific to LGE-KU which the companies provided in response to data requests propounded by Joint Intervenors.

The LGE-KU Emissions Data was drawn from the companies' Response to Supplemental Data Request from Joint Intervenors, Question 6, August 2, 2021.

The LGE-KU Load Forecast Data is from Companies' Response to Supplemental Data Request from Joint Intervenors, Question 9, August 2, 2021.

The Carbon Price is from the *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990, Interagency Working Group on Social Cost of Greenhouse Gases*, United States Government, February 2021, Appendix Table A-1. Joint Intervenor witness James Owen referenced and supported the use of this

document in his *Supplemental Direct Testimony on Behalf of the Joint Intervenors*, filed on July 13, 2021, at p.8, recommending that:

The cost of carbon should be updated from the pricing used in the Kentucky Power case, to correspond to the most up-to-date science and federal policy. A detailed discussion of the social cost of carbon can be found in a recent report from the United States Government’s Interagency Working Group (“IWG”) on Social Cost of Greenhouse Gases, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide Interim Estimates under Executive Order 13990 (February 2021)*. (Footnotes omitted)

The document from the IWG explains the need to consider a range of discount rates when considering the social cost of carbon and other greenhouse gases. As stated in the *Technical Support Document*, “The three discount rates selected by the IWG in 2010 are centered around the 3 percent estimate of the consumption interest rate published in OMB’s Circular A-4 in 2003. That guidance was based on the real rate of return on 10-year Treasury Securities from the prior 30 years (1973 through 2002), which averaged 3.1 percent. Over the past four decades there has been a substantial and persistent decline in real interest rates...” Table 1 shows the Social Cost of CO₂ from 2020 – 2050, under three discount rates.

Table 1: Social Cost of CO₂, 2020 – 2050 (in 2020 dollars per metric ton of CO₂)²¹

Emissions Year	Discount Rate and Statistic			
	5% Average	3% Average	2.5% Average	3% 95 th Percentile
2020	14	51	76	152
2025	17	56	83	169
2030	19	62	89	187
2035	22	67	96	206
2040	25	73	103	225
2045	28	79	110	242
2050	32	85	116	260

Based on the guidance in the IWG document, I therefore recommend that the 3 percent discount rate be used for estimating the cost of carbon in the net metering analysis. (Note, this would also be consistent with the environmental discount rate used in the Minnesota Value of Solar Methodology.)

Using the 3 percent discount rate would lead to a price on carbon starting at \$51 in 2021. Note that such pricing is realistic in the global energy market. In the European Union Emissions Trading System, the carbon price was \$49.78 as of July 12, 2021.

With respect to the Discount Rate, as James Owen discussed in his Supplemental Direct Testimony (July 13, 2021), the guidance from the Interagency Working Group's Technical Support Document (“IWG report”) advises using a discount rate of 3% or lower in matters

involving long-term, intergenerational impacts. The IWG report offers annual carbon prices at three discount rates (2.5%, 3% and 5%). Based on the IWG's guidance, scenarios using discount rates of 3% and 2.5% were used for establishing the price of carbon. Second, a utility discount rate is used in calculating the avoided cost of carbon. The Commission used a 7% discount rate in the Kentucky Power case. Hayibo and Pearce, whose study is a matter of record, note that discount rates can range from the inflation rate (around 2%) up to 9% and utilities often choose higher values (see p.5). In Scenarios 2 & 3 of the worksheet, social discount rates of 3% and 2.5%, respectively, were used in determining the price of carbon and the utility discount rate was kept at 7% in all scenarios, following the rate used by the Commission in the Kentucky Power case.

In sum, the quantification proposed in the *Supplemental Post-Hearing Brief of Joint Intervenors* in direct response to the invitation of the Commission that the parties provide such quantification of avoided cost components, introduced nothing new to the record, but rather utilized data produced by the company, sources referenced and utilized by Joint Intervenors' witness Owen, and the methodology utilized by the Commission in Case No. 2020-00174 with respect to quantifying avoided cost components.

The LGE/KU Objection, shorn of its obligatory and offensive rhetoric,¹ argues that the errata sheet "introduces and performs an analysis on evidence from an Interagency Working Group

¹ There is nothing in statute or regulation that in any manner prohibits or constrains a party from responding to the brief filed the same day by another party in a pending case, and the suggestion that Joint Intervenors or their counsel "strain[ed] the bounds of permissibility" in so doing, is without basis. Simultaneous briefing is distinguished from sequential briefing; it is not "instantaneous."

With respect to the accusation that the filing of the worksheet referenced in but inadvertently omitted from the brief that was timely filed, showing how the calculations explained at length and reflected in Table 1 had been derived, is "an effort to circumvent the Commission's August 19, 2021 Order," the undersigned counsel can only assure the Commission that the failure was

report that appears nowhere in the record.” As noted above, and as **acknowledged** by LGE/KU in fn. 3 of the LGE/KU Objection, witness Owen discussed the guidance from the Interagency Working Group's Technical Support Document regarding the IWG's recommendations concerning the calculation of the avoided cost of carbon. The report is referenced by Owen, discussed at length, and is a matter of record.²

The *Supplemental Post-Hearing Brief of Joint Intervenors* explained the basis for the recommendations reflected in Table 1:

Using the worksheet prepared by the Commission in the Kentucky Power Case to calculate the avoided carbon cost, Joint Intervenors have calculated LG&E-KU's avoided carbon cost under three scenarios, using the Companies' forecast customer load and carbon emissions through 2045. Table 1 shows the range of avoided costs of carbon under three carbon pricing scenarios.

The worksheet referenced as Exhibit 1 to the Brief and inadvertently omitted, simply reflects those calculations.

indeed inadvertent and was corrected immediately upon discovery. Counsel can only express a profound disappointment in the accusation and indeed in the tenor of the LGE/KU Objection. ² In footnote 3, KU-LGE state: “But Mr. Owen’s testimony does not include the annual social cost of carbon data used in this new analysis, the new analysis itself, or the results of the new analysis; rather, all of that information was included for the first time in the purported “errata sheet” or the Joint Intervenors’ Supplemental Post-Hearing Brief.” In fact, in Mr. Owen’s testimony, his Table 1 on p.9 provided a summary of the social cost of carbon data from the IWG report, summarizing in 5-year increments from 2020 to 2050. The worksheet in Exhibit 1 did, in fact, use this same data. In the Appendix to the IWG report referred to and relied upon by Owen, the carbon pricing figures are expressed in annual (rather than 5-year) increments, and this was used in the worksheet. LGE-KU are correct that Mr. Owen did not provide the analysis or the results of the analysis in his testimony. However, he referenced the study used by Joint Intervenors in undertaking the analysis presented in the Supplemental Post-Hearing Brief, using data provided by the companies during the discovery process, and the same worksheet generated by the Commission for this purpose of calculating avoided costs in the KPC case. The Commission asked all Intervenors to quantify avoided cost figures, and Joint Intervenors did so, identifying in the body of their brief the methodology and sources, and providing in the worksheet the actual calculations.

The LGE/KU Objection to the filing of the worksheet inadvertently omitted from the September 17, 2021, is wholly without merit and should be rejected by the Commission.

CONCLUSION AND PRAYER FOR RELIEF

For the reasons stated above, Joint Intervenors respectfully request that this Commission accept the filing of the worksheet in question, overrule the LGE/KU Objection, and for any and all other relief to which Joint Intervenors may appear entitled.

Respectfully submitted,



Tom FitzGerald
Kentucky Resources Council, Inc.
P.O. Box 1070
Frankfort, Kentucky 40602
(502) 551-3675
KBA No. 22370
fitzkrc@aol.com

Counsel for Joint Intervenors
Mountain Association, Kentuckians For
The Commonwealth, and Kentucky Solar
Energy Society In Case No. 2020-00349
and Metropolitan Housing Coalition,
Kentuckians for the Commonwealth, and
Kentucky Solar Energy Society in Case
No. 2020-00350

Certificate of Service

This is to certify that the electronic version of the foregoing *Response Of Joint Intervenors To Objection Of Kentucky Utilities And Louisville Gas And Electric Company To Joint Intervenors*

September 17, 2021 Errata Sheet Filing has been transmitted to the Commission on September 21, 2021; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that in accordance with the July 22, 2021 Commission Order in Case No. 2020-00085, no hard copy of this filing will be filed.

A handwritten signature in black ink, appearing to read 'Tom FitzGerald', with a long horizontal line extending to the right.

Tom FitzGerald