COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

2022 INTEGRATED RESOURCE PLAN OF EAST KENTUCKY POWER COOPERATIVE, INC.	) CASE NO.) 2022-00098

COMMENTS OF EAST KENTUCKY POWER COOPERATIVE, INC.

Comes now East Kentucky Power Cooperative, Inc. ("EKPC"), by and through counsel, pursuant to the Commission's July 28, 2022 Order and for its written response to comments filed by the Attorney General ("AG") and the Joint Intervenors, respectfully states as follows:

EKPC RESPONSE TO AG'S COMMENTS

The AG's comments seem to be very supportive of EKPC's IRP. The AG is in agreement with EKPC that EKPC's fossil fuel generation assets should not be prematurely retired due to reliability concerns and constraints this could place on the grid. EKPC's approach is to include both fossil fuel generation and renewable generation to meet the future needs of its owner-members. The AG agrees with this "all of the above" approach.

The AG's comments had concern regarding the revised Table 8-10 that EKPC filed into the record of this proceeding on May 17, 2022. EKPC states that Table 8-10 does not provide a comprehensive view of generation resources and power purchases. EKPC has taken note of the AG's concerns with the information provided in Table 8-10 and will improve on this reporting in its future filings. EKPC is committed to fully covering its energy requirements in the most affordable and reliable manner available.

EKPC'S RESPONSE TO JOINT INTERVENORS' COMMENTS

A. RTSim

The Joint Intervenors provided comments and the Energy Futures Group ("EFG") Report. Through the comments and the EFG Report the Joint Intervenors criticize multiple areas of EKPC's IRP filing. One area of criticism was the RTSim modeling program used by EKPC. According to the resumes provided with the EFG Report, the authors of the reports have a variety of professional experience. Three of the authors appear to have modeling experience with a number of modeling programs and platforms. However, none of the authors have any experience with RTSim. In addition, two of the authors have approximately six years of experience working for state regulatory commissions. One author has regulatory experience reviewing load forecasting and capacity modeling while the other author's regulatory experience is related to energy efficiency program implementation. It is not clear from the resumes how much of that regulatory experience involved the examination and evaluation of the complete IRPs for an electric utility. Finally, the authors appear to have little to no experience in the development and preparation of IRPs as employees of an electric utility or as consultants retained by an electric utility. Thus, the authors have usually been the critics rather than the preparers. EKPC believes that RTSim provides reliable information to base its IRP filings on.

B. TRANSPARENCY

The Joint Intervenors advocate for transparency, but at the same time the Joint Intervenors do not practice what they preach. The EFG Report has multiple areas where there is no transparency in the information provided. In the EFG Report, no supporting calculations were provided for the information summarized in Table 1 on page 9 and Figure 10 on page 23. In addition, Table 2 on pages 12-13 does not contain the sources of the information provided. In this

same table, the authors omit PJM Forecast EKPC Zone Summer Peak information for two of the three listed PJM delivery years. Another example of no transparency in the EFG Report is on page 19, Figure 9. In Figure 9, the EFG Report presents the S&P Global PJM Capacity Price for PJM delivery years 2021-2022 through 2039-2040, issued May 10, 2022, however, nowhere in the accompanying narrative is it explained why the S&P Global information is the appropriate standard. In performing its due diligence, EKPC reviewed the website cited as the source for Figure 9. In reviewing this information EKPC discovered that the original version of the chart reflected capacity price forecasts showing three different assumptions and not just the lowest capacity price assumption as contained in Figure 9. Finally, the supporting calculations for the information summarized in confidential Figure 10 on page 23 were not provided. The EFG Report acknowledges that data from the Joint Intervenors' Initial Request No. 30 was used to project the estimated annual energy market revenues, but the calculations and assumptions utilized by the authors to prepare those projections were not provided.

C. CAPACITY PRICE FORECASTS

Another area of EKPC's IRP filing that is criticized by the Joint Intervenors is EKPC's capacity price forecasts being redacted from public view. The EFG Report contends that this information is routinely published publicly in IRPs in other states. The EFG Report cite to two IRPs in Indiana and two IRPs filed in Virginia as examples of these filings. A recommendation in the EFG Report is for EKPC to provide the coal, natural gas, capacity price and energy market price forecasts directly, and not under seal, in future initial IRP filings. As part of its due diligence, EKPC reviewed the website links provided in footnote 24 of the EFG Report that cited the Indiana and Virginia IRP proceedings. In reviewing the Indiana proceeding involving Indiana Michigan Power Company's 2021 IRP, the index for Appendix Volume 3 is clearly labeled confidential

exhibits. Included within these confidential exhibits was Exhibit B – Projected Fuel Costs. Appendix Volume 3 was not publicly accessible through the provided link and brings into question the assertion that these types of costs are disclosed publicly. In the Virginia proceeding involving Appalachian Power Company's 2022 IRP, Exhibit c, Schedule 18, page 117, contained actual and projected fuel costs and purchases. The entire schedule was redacted and marked confidential. It appears from EKPC's review of the websites provided that the EFG Report may be misstating the facts of these cases and its assertion that these types of costs are routinely provided publicly in a non-redacted form.

D. MISREPRESENATION OF RESPONSES TO DATA REQUESTS

Multiple times in the EFG Report, EKPC's responses to data requests are misrepresented. On page 16 of the EFG Report, it implies that EKPC only provided coal contracts for the Spurlock Station in response to the Joint Intervenors' Initial Request 96. The Initial Request 96 asked about ***current*** coal supply contracts rather than supply contracts over a defined period of time. If the Joint Intervenors wanted additional contracts that would apply to Cooper Station, they could have requested that information in the supplemental requests, they chose not to do so. The fact that there were only coal supply contracts for the Spurlock Station is also confirmed by EKPC's responses in the Commission's six-month fuel adjustment clause review, which asks for a schedule of spot market and contract coal supplies to the Spurlock and Cooper Stations.

Additionally, on page 42 of the EFG Report the authors provided Table 4. This table shows the PJM 2021 Reserve Requirement Study Summary reflecting the Installed Reserve Margin ("IRM") approach and Forecast Pool Requirement ("FPR") approach. The EFG Report recommends that EKPC model the FPR instead of the IRM and stated that it asked EKPC about this approach. However, in Joint Intervenors' Supplemental Request 47, EKPC was asked why

thermal units were modeled on an ICAP basis rather than a UCAP basis. EKPC was not asked why it developed its reserve margin requirements based on the IRM instead of the FPR. On page 48 of the EFG Report, when discussing commitment to addressing changed circumstances, the authors were noting the significance of the recently enacted Inflation Reduction Act of 2022 ("IRA") and the potential benefits the IRA could provide to the customers of EKPC's Owner-Member Cooperatives. The EFG Report then states:

> As such, we were disappointed to see EKPC's response to Joint Intervenors' Supplemental Request 30b, which stated that "EKPC utilized the data known at the time for this filing. New data [such as direct pay tax incentives] will be reflected in future filings." We would prefer to see an indication from EKPC that it is talking to the Kentucky Office of Energy Policy about the rules that would need to be written to enable the state to take advantage of certain IRA provisions, that it is planning to reevaluate all its supply-side options given the impact of the IRA provisions on its recently issued RFP, etc. It may be that EKPC merely interpreted Joint Intervenors' Supplemental Request 30b narrowly and is doing those things. If so, we would welcome that clarification as well as an understanding of how that work can be made transparent to the stakeholders in this docket.

The Joint Intervenors' Supplemental Request 30b states, "In light of the availability of direct pay tax incentives, does EKPC expect to re-run any of the modeling in its 2022 IRP? If so, please explain EKPC's anticipated process and timeline." No clarification of the response is necessary, the answer was straight-forward to the request made. The clarification that is needed is an explanation of why the authors of the EFG Report clearly misrepresented EKPC's response and took the opportunity to level unwarranted criticism at EKPC.

Finally, in discussing Demand Response on page 62, the EFG Report recommends that EKPC actively promote the interruptible rate tariff to commercial customers and if there is a continued lack of interest the tariff should be revised to promote participation. Later on page 63 the EFG Report states, "EKPC's response to Joint Intervenors' Supplemental Request 17, this interruptible tariff is administered by EKPC Staff, which is common, but does not have any participants." EKPC's actual response to Supplemental Request 17 states:

> The only demand response programs offered by EKPC and the owner-members are the interruptible program and direct load control program for commercial members. Due to the complex nature of the interruptible program along with the required three-party agreement and Commission approval for each participant, EKPC will continue to administer the interruptible program utilizing EKPC staff. *The direct load control program for commercial members has no participants*. (emphasis added)

Clearly the authors of the EFG Report did not accurately represent EKPC's response. Such misrepresentations by the authors of the EFG Report brings into question just how much reliance can be placed on the conclusions contained in the EFG Report and the overall comments offered by the Joint Intervenors.

E. SNAPSHOT IN TIME

On page 13 of the EFG Report is the following statement: "EFG works on IRPs across many jurisdictions and understands that even best-in-class IRPs are snapshots in time, built upon the best information available at the time." EKPC was initially encouraged that the authors of the EFG Report at least acknowledge this foundational concept of an IRP – that it reflects a snapshot in time utilizing the best information available at that time. However, numerous comments and criticisms leveled by the authors of the EFG Report clearly demonstrate that they had no intention of preparing their report in a manner consistent with this foundational concept.

Beginning on page 15 and running through page 20 of the EFG Report, the authors criticize EKPC's forecasts for coal prices, natural gas prices, energy market prices, and capacity prices. EKPC developed its forecasts in the fall of 2021. The authors of the EFG Report based their criticisms of the various forecasts utilizing current coal contract pricing reviewed in October 2022, NYMEX natural gas price quotes as of October 2022, PJM AEP Dayton Hub LMP for September 2022 for energy market pricing, and the S&P Global PJM capacity reported in May 2022. If the authors were going to be consistent with their earlier statement, "IRPs are snapshots in time, built

upon the best information available at the time," the evaluations of the reasonableness of EKPC's various forecasts should have been made comparing information that was available in the fall of 2021. Using EFG Report's foundational concept, information available in May, September, or October 2022 should not be the evaluation standard.

The authors' most egregious abuse of the concept "IRPs are snapshots in time, built upon the best information available at the time," appears on pages 39 and 40 of the EFG Report. Here the authors recommend that EKPC update the costs of solar resources to include the impacts from the IRA and include the impacts of the IRA which allow standalone battery storage projects to receive the Investment Tax Credit. The IRA was introduced in the U.S. House of Representatives on September 27, 2021 and became public law effective August 16, 2022. The President issued Executive Order 14082 on September 12, 2022 to begin the implementation process for the IRA. Numerous federal agencies began seeking public input on implementation of various sections of the IRA in October 2022. State governments are also in the beginning stages of determining implementation. Consequently, at this time, no one can accurately know what the various impacts of the IRA are going to be, whether that is the costs of solar resources or income tax treatments of battery storage projects. At the time EKPC was developing and preparing the 2022 IRP, information on the final provisions and impacts of the IRA would not have been available. Thus the impacts of the IRA should not be included in the "snapshot" that EKPC's 2022 IRP represents. Since the IRA is a ten-year plan, the impacts of the IRA should be, and will be to the extent possible, considered by EKPC in future IRPs, beginning with the 2025 filing.

F. LOAD FORECAST

The Joint Intervenors state that EKPC has not explained why its load forecast projects compound annual growth rates that significantly outpace actual historical growth rates. EKPC's

load forecast made a significant jump due to its largest industrial customer expanding its operations with a new smelting line in 2022. This doubled its operations load. If that load addition is removed from the forecast, the remainder of the EKPC load growth is very much in line with current load trends. Contrary to the Joint Intervenors' comments, EKPC's load forecast is not projecting unreasonable growth expectations but rather is reflecting an actual change that has occurred at a large industrial load site.

G. COMMODITY FORECASTS

The Joint Intervenors' comments state that EKPC's IRP lacks transparency and relies on unreasonably stale data and opaque methodologies with regard to commodity forecasts. EKPC did not use stale data or opaque methodologies in its commodity forecasts. With respect to the IRP, standard index values are utilized in developing future prices for fuels, operations and maintenance, labor and other values. In developing the commodity forecasts, EKPC utilizes information developed by ACES. The information provided by ACES is developed by utilizing current market trade information along with long-term indices. This method provides a more robust view than simply taking one index at face value.

H. COOPER STATION

As EKPC has indicated in its response to data requests in this IRP proceeding, the impacts of the unavailability of Cooper Station generation were analyzed in 2007, and the results indicated that the power injections provided by these generating units, along with the hydroelectric generating units at Wolf Creek Dam, were critical to the area. EKPC implemented prudent steps to ensure continued operation of the units to maintain both power-supply and transmission-system reliability when faced with the possibility of reduced water levels on Lake Cumberland.

Again in 2015, changes at Cooper Station increased the likelihood of unavailability of both Cooper Station units simultaneously due to the connection of the Cooper Unit 1 emissions system to the scrubber system that had been installed on Cooper Unit 2 in 2012. EKPC therefore began considering a simultaneous outage of both of those units in its transmission-planning studies in order to adequately plan for times when either a planned or unplanned outage of the scrubber system at Cooper would require both units to be taken offline. Therefore, EKPC has taken steps to design its transmission system to withstand a single transmission element outage in the area (such as a major transmission line or transformer) along with both Cooper Units offline, ***based on assumed system conditions available in the power-flow models.*** Contrary to the comments provided by the Joint Intervenors, EKPC has always planned its system for the unplanned outage of at least one generating unit at Cooper Station, and has done so for simultaneous outages of both units since 2015.

To be clear, this planning process is not simulating transmission-system performance for retirement of Cooper Station. Once a generating unit is retired, it is no longer in the transmission-planning models used for system studies. In that case, per EKPC planning-criteria, studies in a particular area would then simulate the next worst-case generating unit outage in conjunction with a single transmission element out of service. For this region, the worst-case generating unit outage if Cooper Station is retired would be an outage of the LG&E/KU E.W. Brown Unit #3 due to its size and proximity to the area. EKPC's normal planning process does not consider an outage of both Cooper Station units and Brown Unit #3, since this goes beyond EKPC's planning criteria. This will become the critical generating-unit outage scenario when the Cooper Station units are retired. EKPC recently decided it would be prudent to perform analysis for this scenario – that is, both Cooper Units offline along with the Brown Unit #3 offline – in order to determine potential

impacts and possible mitigating transmission upgrades, which were identified in response to Request No. 22 of the Joint Intervenors' Supplemental Request for Information Dated August 30, 2022.

It is interesting that the Joint Intervenors' comments include a footnote (number 40 on page 17) referencing EKPC's agreement that regional transmission planning processes are an important component of ensuring reliability, yet these comments do not recognize the fact that PJM's own regional planning has not identified the need for transmission expansion or upgrades in the southern Kentucky area; in fact, EKPC's transmission-planning processes are much more cognizant of the criticality of the Cooper generation in the area, and therefore require studies of potential system performance issues and identification of transmission-system projects to address these issues. Contrary to the comments of the Joint Intervenors, EKPC has not turned a "blind eye" to the possibility of the Cooper units being unavailable at times, and has designed the transmission-system to continue to operate adequately during those periods, based on the assumed system conditions. However, the system cannot be planned for the infinite number of possible scenarios that occur in the real-time operations of the interconnected electric-system, so at times system conditions are such that potential thermal overloads or inadequate voltage levels exist. This is where the Cooper Station generating units provide critical value – they are available to provide power injections during these times to avoid or mitigate such real-time operational issues.

Despite what the Joint Intervenors' attempt to portray in their comments, EKPC has implemented several transmission upgrades since 2007 that are driven – at least in part – by projected system thermal and voltage issues due to the outage of one or both Cooper units, and we have identified several additional upgrades that are needed in the upcoming years due to outages of both Cooper units (see responses to Joint Intervenors' DR2 Request No. 25). The Joint

Intervenors' want to suggest that EKPC has not acted prudently by not studying the issue that was first identified in 2007 in the intervening fifteen years. The scope and impacts of that particular issue that arose in 2007 were specific to the concerns with the structural integrity of the Wolf Creek Dam, resulting in potential unavailability of both the Cooper Station and Wolf Creek generating units. That particular issue was addressed in a two-fold manner: (1) EKPC modified its cooling water intake system to ensure continued operation in the event that the lake level was lowered, and (2) the U.S. Army Corps of Engineers performed necessary structural work on the dam to allow normal water levels to be maintained, allowing normal operation of the hydroelectric units at Wolf Creek. Therefore, those same issues are not prevalent today, and therefore do not need to be studied. Since 2015, EKPC has studied a simultaneous outage of both units at Cooper Station in conjunction with a transmission element outage, in recognition of the possibility of a planned or unplanned outage of the emissions-control system requiring both units to be taken offline.

Much of the confusion that the Joint Intervenors depict in their comments appears to be based on their lack of understanding of the differences in real-time operational issues that arise based on the specific system conditions versus the transmission-planning process based on specific "snapshot" models simulating a defined set of conditions. EKPC's responses provided to various data requests are not inconsistent, as the Joint Intervenors claim. Rather, EKPC provided comments that are specifically responsive to each unique request submitted, some involving transmission-planning studies, some involving the specific concerns that arose in 2007 due to the Wolf Creek Dam issue, and some involving ongoing real-time operational concerns. It is uncertain if the Joint Intervenors adequately reviewed and processed the EKPC responses to the data requests based on the following statement on page 24 of the Joint Intervenors' comments:

> *"Perhaps these changes explain why, for example, EKPC did not experience a load-shedding event when both Cooper Station units tripped offline in February 2021 during a major ice storm that also caused several transmission line outages in the area – the then-current transmission system and resources connected to EKPC's system were quite different than they were at the time of Witness Lamb's 2007 testimony."*

This is in reference to EKPC's response to the Joint Intervenors' Supplemental Data Request No. 21e, in which EKPC noted that load-shed was required in the area while the Cooper Units were offline, although it was LG&E/KU load only that was shed, and furthermore, that EKPC was in the process of beginning to shed load until one of the units at Cooper was brought online. Therefore, the February 2021 ice storm incident is an example illustrating the importance of the Cooper generation to the area rather than an example showing that it is not needed. EKPC also provided in its response to the Joint Intervenors' DR2 Request #21d an indication of the substantial number of hours that PJM has called on at least one of the Cooper units to be online (more than 400 hours for Unit #1 and more than 700 hours for Unit #2) specifically for transmission reliability reasons since May of 2021. This provides another strong indication of the value and necessity that EKPC's independent regional transmission operator places on these units to support the transmission system in the area.

The assertion that EKPC is losing millions of dollars at its Cooper Station each year assumes that EKPC has fully depreciated the asset. Prematurely retiring an asset with remaining book value leaves a financial burden on ratepayers to continue payment on an asset from which it receives no value. EKPC disagrees with the methodology and assertion from the Joint Intervenors concerning its need to retire Cooper Station.

This 1st day of November 2022.

Respectfully submitted,

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CERTIFICATE OF SERVICE

This is to certify that the foregoing electronic filing was transmitted to the Commission on November 1, 2022; that there are currently no parties that the Commission has excused from participation by electronic means in this proceeding; and that pursuant to prior Commission Orders, no paper copies of this filing will be made.

Counsel for East Kentucky Power Cooperative, Inc.