COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of*:*

ELECTRONIC TARIFF FILING OF BIG RIVERS	**)**	**Case No.**
ELECTRIC CORPORATION AND KENERGY	**)**	**2023-00312**
CORP. TO REVISE THE LARGE INDUSTRIAL	**)**	
CUSTOMER STANDBY SERVICE TARIFF	**)**	

REBUTTAL TESTIMONY

OF

TERRY WRIGHT, JR.

ON BEHALF OF

BIG RIVERS ELECTRIC CORPORATION

FILED: January 9, 2024

REBUTTAL TESTIMONY

OF

TERRY WRIGHT, JR.

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, ADDRESS AND POSITION.

A. My name is Terry Wright, Jr. My business address is 710 West 2nd Street, Owensboro, Kentucky. I am Vice President of Energy Services for Big Rivers.

Q. PLEASE BRIEFLY DESCRIBE YOUR EDUCATION AND WORK EXPERIENCE.

A. I have a Bachelor of Science Degree in Mathematics with a minor in Computer Science from Missouri State University. I also have a Master's Degree in Mathematics from Missouri State University and a Master's Degree in Finance, focus in Financial Risk Management, from the University of Tulsa. Over the course of my career, I have worked in multiple Independent System Operators (ISOs) with the majority of my work focused in MISO, SPP, and ERCOT. I was the Manager of Market Operations at Empire District Electric where I managed a group of Day-Ahead Traders, Real-Time Traders, and a gas trader in the SPP Market. At Cooperative Energy, I held various progressive roles over my tenure there, which included Power Supply Analyst, Power Marketing Manager, and Director of Power Marketing and Fuels. This involved managing a group of Power Traders/Schedulers in the MISO Market. At Big Rivers, I was hired on as the Director of

Resources and Forecasting and was subsequently promoted to Vice President of Energy Services.

Q. PLEASE SUMMARIZE YOUR DUTIES AT BIG RIVERS.

A. At Big Rivers, I am responsible for managing a team that handles our MISO/SPP Capacity Position, our Day-Ahead Generation Offers, our Day-Ahead Load Forecast, and our bilateral and ISO settlements.

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION (THE "COMMISSION")?

A. I filed testimony and sponsored responses to information requests in Big Rivers' pending two-year FAC review proceeding, Case No. 2023-00013, *An Electronic Examination of the Application of the Fuel Adjustment Clause of Big Rivers Electric Corporation from November 1, 2020 through October 31, 2022* (hearing held January 4, 2024). I also sponsored responses to requests for information in Big Rivers' pending IRP review proceeding, Case No. 2023-00310, *Electronic 2023 Integrated Resource Plan of Big Rivers Electric Corporation*.

Q. ARE YOU FAMILIAR WITH THE FILINGS MADE IN THIS CASE BY BIG RIVERS AND THE INTERVENORS, DOMTAR PAPER COMPANY, LLC ("DOMTAR") AND KIMBERLY-CLARK CORPORATION ("KIMBERLY-CLARK")?

A. Yes, I am generally familiar with Big Rivers' proposed tariff, testimony, and data request responses filed in this case, as well as the data request responses and testimony filed on behalf of Domtar and Kimberly-Clark in this case.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to confirm and clarify the design of the proposed tariff and further underscore why it is a reasonable, appropriate approach to providing standby service to customers with their own generation. In particular, I will reference and rebut the testimony provided by Mr. Larry Blank on behalf of Kimberly-Clark and Mr. Stephen J. Baron on behalf of Domtar.

Q. AT THE OUTSET, PLEASE PROVIDE A BASIC OVERVIEW OF BIG RIVERS' MEMBERSHIP IN MISO.

A. As a cooperative utility with member and non-member load obligations, for each planning year, Big Rivers offers all of its generation capacity for sale into MISO and purchases all of its load requirements from MISO.

Q. HOW DOES BIG RIVERS DETERMINE THE AMOUNT OF CAPACITY IT MAY OFFER FOR SALE INTO MISO IN A FUTURE PLANNING YEAR?

A. The amount of capacity that Big Rivers may offer for sale into the MISO Capacity Auction is determined by an evaluation of Big Rivers' generating units under a proprietary model built by MISO. MISO evaluates each unit and determines its Seasonal Accredited Capacity ("SAC") value, which is based on historical performance with a particular focus on how well the unit performed during Resource Adequacy (RA) hours for each season. Resource Adequacy hours (max of 65 hours) represent the periods of highest risk and greatest need during a season throughout the year. They include Emergency Declaration Periods and hours when operating margin, a measure of available supply capacity above demand and reserve requirements, is at its lowest. For Planning Year 24-25, these Resource Adequacy

hours make up 70% of our Resource Accreditation, and for Planning Year 25-26, they will make up to 80% of our Resource Accreditation. That means that the bulk of our Resource Accreditation for each season is now based on a limited number of hours, so poor performance during those hours can significantly affect our Accreditation.

Q. HOW DOES BIG RIVERS DETERMINE THE AMOUNT OF CAPACITY IT MUST PURCHASE FROM MISO IN A FUTURE PLANNING YEAR?

A. The amount of capacity that Big Rivers must purchase from MISO is determined by (i) Big Rivers' load requirements, and specifically, its peak system demand (*i.e.*, the amount of power that is necessary to provide full service during the hour of highest system use during the future planning year), plus (ii) MISO's Planning Reserve Margin.

Q. DO BEHIND-THE-METER GENERATORS, LIKE THOSE OPERATED BY DOMTAR AND KIMBERLY-CLARK, IMPACT A UTILITY'S PEAK SYSTEM DEMAND?

A. No. Under the proposed LICS design, generators are completely separated from the load and receive their own resource accreditation from MISO and thus do not impact peak system demand. This is similar to how Big Rivers operates in the MISO market today. We submit our net peak demand to the market and then receive a separate accreditation for our generating resources. Under the proposal put forth by Domtar and Kimberly-Clark, there would be a blurring of accreditation for resources within our system peak load where Big Rivers may be required to give Domtar and Kimberly-Clark an "accreditation" on their units by artificially reducing our system peak demand. The problem with this approach is that if we assume behind-the-meter generators will be online at the time of greatest system

need, and they are not, then our actual load will be significantly higher than our submitted load; this inconsistency notably increases reliability risks.

Q. COULD BIG RIVERS ACQUIRE LESS CAPACITY FROM MISO IN A FUTURE PLANNING YEAR IN RELIANCE ON A BEHIND-THE-METER GENERATOR?

A. No, not without significant and unacceptable risk. As long as a behind-the-meter generator is subject to forced outages (and all are, thus necessitating standby service), Big Rivers must plan for the capacity to serve its full load irrespective of the behind-the-meter generator.

The primary drivers that support accurate capacity planning are reliability and cost. If a load-serving utility fails to reserve capacity that is ultimately needed to serve its load, available resources must be identified in short order and likely from short supply. This strain on the electric grid and accompanying price volatility is precisely what regional transmission organizations like MISO strive to avoid through their constructs.

Additionally, as discussed in the Joint Response of Big Rivers and Kenergy to Commission Staff's First Request for Information, Request No. 1-14, and Second Request for Information, Request No. 2-8, it is *MISO*—not Big Rivers—that is the central authority examining the regional power grid for likelihood of failure, performing resource accreditation, providing market outlooks, and administering the Planning Resource Auction. While it is ultimately Big Rivers' responsibility to take action, the action it takes is informed by reliability signals provided by MISO. If Big Rivers (and other load-serving utilities) undertake the burden of evaluating the anticipated capacity value of specific customer behind-the-meter generation in order to minimize MISO planning year capacity

purchases (all within some undefined risk tolerance and in spite of true system peak demand), the risk of shortfall is all but assured. This instability is compounded by more load-serving utilities attempting to act as their own balancing authorities, instead of allowing MISO to have a clear and accurate picture of actual system load obligations.

It is also worth underscoring that it is the *possibility* of forced outage, not *probability*, that is relevant when examining demand costs related to Backup Power Service. Both Domtar (*see, e.g.*, Baron Testimony, page 7, lines 7 through 9) and Kimberly-Clark (*see, e.g.*, Blank Testimony, page 9, lines 4-9) embrace the illogical belief that Big Rivers' demand costs are impacted by the frequency or duration of instances when Backup Energy is actually delivered; again, however, Big Rivers' fixed demand costs do not change whether it provides Backup Energy one hour per month or 100 hours per month.

Q. DOES MISO CONTEMPLATE THAT CERTAIN CUSTOMERS WILL HAVE BEHIND-THE-METER GENERATION, AND HAS IT ESTABLISHED A FRAMEWORK TO RECOGNIZE THOSE RESOURCES WITHIN THE MISO CONSTRUCT?

A. Yes. MISO permits a generator to register as a Load Modifying Resource (LMR) – Behind the Meter Generation (BTMG). In the 2023 Planning Resource Auction, there were 4,175.2 MWs of behind-the-meter generation registered for Summer 23-24. All of these resources are accredited by MISO; specifically, each behind-the-meter generator has been ascribed a SAC value by MISO—just like each of Big Rivers' generators—allowing the capacity they offer to be recognized and monetized via the MISO Planning Resource Auction.

Q. DOES BIG RIVERS' PROPOSED TARIFF ALLOW THE RECOGNITION AND MONETIZATION OF A CUSTOMER'S BEHIND-THE-METER GENERATOR?

A. Yes. Under the proposed tariff, customers receive a credit for the value of the capacity made available by their generators. Again, this value is not determined by Big Rivers, but rather by MISO—MISO ascribes the SAC, and MISO market pricing is passed through dollar-for-dollar. This approach makes sense in the MISO construct and is consistent with Big Rivers' desire to avoid the reliability and price risks attendant to evaluating the anticipated capacity value of specific customer behind-the-meter generation.

Q. MUCH OF THE INTERVENOR TESTIMONY FOCUSED ON A PERCEIVED DIFFERENCE IN THE NATURE AND/OR COST TO BIG RIVERS OF PROVIDING (UNSCHEDULED) BACKUP POWER VERSUS (SCHEDULED) MAINTENANCE POWER. IF BIG RIVERS CAN BE TOLD, GENERALLY WELL IN ADVANCE, WHEN A BEHIND-THE-METER GENERATOR WILL BE UNAVAILABLE AND THE CUSTOMER'S POWER NEEDS WILL INCREASE, CAN BIG RIVERS REDUCE ANY OF ITS CAPACITY/GENERATION DEMAND RELATED COSTS?

A. No, because of the possibility of forced outage. So long as a forced outage is possible and the customer expects Big Rivers to deliver all required power during the forced outage, the costs to Big Rivers for capacity is established whether there are scheduled, unscheduled, or no outages during a month. On top of this fact, if Big Rivers is required to artificially give Domtar and Kimberly-Clark an "accreditation" on their units by artificially reducing system peak demand, then Big Rivers' actual load will be much higher than the load

submitted as part of its MISO Non-Coincident and Coincident Peak submission in the event a forced outage occurs during MISO peak system conditions.

Further, I would like to address specific assertions made by Mr. Baron and Mr. Blank in their respective testimonies on this topic. In his testimony, Mr. Baron stated that maintenance power "does not impact the utility's capacity need" "as long as it is scheduled and occurs in an off-peak season[.]" Baron Testimony, page 6. He also opined that, "[i]n the case of Big Rivers, maintenance would occur during periods that would also recognize [MISO] peak loads and the determination of Big Rivers' capacity obligations to MISO." Baron Testimony, page 8. These conclusions are misguided under MISO's new Seasonal PRA construct, pursuant to which Big Rivers must acquire and pay for required capacity by season. That means that even though Big Rivers' load is lower in the Spring and Fall than it is in the Winter or Summer, it is still acquiring capacity—including capacity for services sought by the customer-generator—each and every season. MISO reliability events are shifting so that they are no longer just occurring during the Winter and Summer periods, but also during the shoulder seasons, due to periods of colder or warmer than normal weather in combination with high outages. The highest capacity clearing price in the 2023-2024 auction was in Fall for precisely this reason. If you look at MISO's Maximum Generation Emergency Declarations you will notice that from 2009 to 2013, these events only occurred during the Summer and Winter periods, but starting in 2014, we started seeing declarations in the Spring period and in 2016 for the Fall period.

Mr. Blank takes a similarly erroneous approach in his testimony, but also broadly states that scheduling ahead of time means "any system impacts due to the maintenance

outage are greatly mitigated if not eliminated." He does not provide any actual support for that statement or otherwise attempt to quantify the value of the supposed mitigation of system impacts; rather, he summarily concludes, "[t]herefore, it is just to charge less for a scheduled maintenance outage versus an unscheduled outage." Blank Testimony, page 13.[1]

Furthermore, a maintenance outage for these generators is subject to recall as long as a recall notice is given seven (7) days before the start of the outage. If an outage is a one or two-week outage, it would require Big Rivers to accurately predict the weather anywhere from one week out to three (3) weeks out. Professional weather forecasters struggle to get the weather correct a week out, let alone for a longer period. Even if the outage is scheduled during a period of perceived lower load, it would be impossible for Big Rivers to know in advance whether this will be a resource adequacy period for that particular season.

Conceptually and practically, Big Rivers disagrees with Mr. Blank and Mr. Baron vis-à-vis the costs and benefits associated with scheduled maintenance power. In brief, Big Rivers, by request of Domtar and Kimberly-Clark, must have the capability at all times to serve their entire loads in the event of an unscheduled outage. In order for Big Rivers to remain capable of fulfilling this requested service obligation, it necessarily incurs costs associated with capacity and the construction/maintenance of transmission infrastructure. As stated in Mr. Berry's testimony previously filed herein on behalf of Big Rivers, and as

[1] Mr. Blank for Kimberly-Clark, like Mr. Baron for Domtar, suggests that an appropriate demand charge for scheduled maintenance power should be 50% of the standard demand rate otherwise charged to large industrial customers seeking capacity. *See* Blank Testimony, page 11, lines 1-3; Baron Testimony, page 19, lines 5-7. Neither party provided any data or quantitative analysis of any kind in support of their proposed discount.

echoed throughout this and earlier proceedings with respect to this matter, these costs do not change if Domtar or Kimberly-Clark also schedule some of their outages. While in any given hour Domtar or Kimberly-Clark may not need to call on the backup energy that is available to them, Big Rivers must nevertheless stand ready to provide that energy at any time, and the proposed demand rate for Backup Power Service captures the cost of maintaining that capability.

Q. DOES A BEHIND-THE-METER GENERATOR ALLOW BIG RIVERS TO REDUCE ANY OF ITS TRANSMISSION DEMAND RELATED COSTS?

A. No. Again, Big Rivers is obligated to ensure its facilities are constructed and maintained to ensure service of peak system load; although some (or even most) of the time, the load may be less than peak, the service must be available irrespective of actual use. Further, in light of the nature of the relevant facilities, identifiable costs savings (*e.g.*, extended service lives) are not achieved as a result of less use; in other words, the cost to Big Rivers of having the capability to energize facilities (at the flip of a switch, so to speak) are substantially the same whether or not the switch is actually flipped.

Q. MUCH OF THE INTERVENOR TESTIMONY FOCUSED ON ANTICIPATED INCREASES IN COSTS FOR STANDBY SERVICE. DOES BIG RIVERS BELIEVE THE PROPOSED TARIFF REFLECTS FAIR, JUST, AND REASONABLE RATES?

A. Yes. The proposed tariff is designed for the unique service sought by specific large industrial customers, and it recognizes the risks associated with significant, varying capacity and energy needs. For many years, utilities approached standby service needs

differently—in manners like those embraced by Domtar and Kimberly-Clark—by assuming that maintenance and back-up service had different cost-of-service profiles, and then selecting an arbitrary fraction of existing demand rates to account for the presumed-lesser costs associated with less-than-constant energy needs. Indeed, in a different time and under a construct in which the utility is its own Balancing Authority, such a framework may make more sense. Here and now, however, in light of the MISO marketplace and the risks and costs associated with the acquisition of reliable capacity and energy, a new framework is appropriate. The tariff proposed in this matter protects all ratepayers while ensuring responsive and reliable service as requested.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

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BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC TARIFF FILING OF BIG RIVERS ELECTRIC CORPORATION AND KENERGY CORP. TO REVISE THE LARGE INDUSTRIAL CUSTOMER STANDBY SERVICE TARIFF	))))	**Case No. 2023-00312**

VERIFICATION

I, Terry Wright, Jr., verify, state, and affirm that I prepared or supervised the preparation of the Rebuttal Testimony filed with this Verification, and that the Rebuttal Testimony is true and accurate to the best of my knowledge, information, and belief after a reasonable inquiry on this 9th day of January, 2024.

TERRY WRIGHT, JR.
Vice President of Energy Services
BIG RIVERS ELECTRIC CORPORATION

COMMONWEALTH OF KENTUCKY)
)
COUNTY OF DAVIESS)

SUBSCRIBED AND SWORN TO before me on this the 9th day of January, 2024.

Notary Public, Commonwealth of Kentucky

Notary ID # KYNP43026

My Commission Expires 1-14-2026