

COMMONWEALTH OF KENTUCKY  
BEFORE THE KENTUCKY PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2023 INTEGRATED RESOURCE ) CASE NO.  
PLAN OF BIG RIVERS ELECTRIC CORPORATION ) 2023-00310

**BIG RIVERS ELECTRIC CORPORATION'S  
RESPONSE TO INTERVENOR COMMENTS**

Big Rivers Electric Corporation (“*Big Rivers*” or the “*Company*”), by counsel, respectfully submits this response to the comments regarding Big Rivers’ 2023 Integrated Resource Plan (“*IRP*” or “*2023 IRP*”) filed herein by (i) the Attorney General of the Commonwealth of Kentucky, by his Office of Rate Intervention (the “*Attorney General*”), (ii) Sierra Club, (iii) Kentucky Industrial Utility Customers, Inc. (“*KIUC*”), and (iv) Kentuckians for the Commonwealth and the Kentucky Resource Council (the “*Joint Intervenors*”).

**I. The Attorney General’s Comments**

Big Rivers appreciates the Attorney General’s summation of, and comments to, the Company’s 2023 IRP. As the Attorney General is imbued with the power and duty to appear before regulatory bodies of the Commonwealth in order to be heard on behalf of consumers’ interests, his overarching concurrence with the Company’s analysis and direction is an important confirmation for Big Rivers and its Member-Owners. Further, the Attorney General’s common-sense reflections regarding the significant challenges faced by an evolving electric grid necessitate careful consideration. As the Attorney General recognizes, there is an inherent conflict between emerging state and federal energy regulations and grid reliability, requiring generation and transmission utilities like Big Rivers to find a balance between its members’ need for reliable

power and the increasingly unrealistic demands these regulations impose. Big Rivers will continue to embrace compliance, reliability, and cost-effectiveness as it navigates these evolving frameworks.

As observed by the Attorney General in his comments,

*Since the date BREC's service territory was first created, dispatchable thermal generation plants (which historically have been primarily coal-fired) provided safe, reliable largely base-load power during all weather conditions, 24-hours per day, 365 days per year, year-in and year-out. ... Thermal generation—coal, natural gas and nuclear—are necessary today, tomorrow and will continue to be well into the future.<sup>1</sup>*

Big Rivers is heartened to know that the Attorney General shares the Company's concerns with respect to future grid reliability and that he recognizes the continued importance of reliable, dispatchable energy.<sup>2</sup> Specifically, Big Rivers appreciates the Attorney General's astute observation that as the electrification of Kentuckians' homes and cars continues apace and as the Commonwealth continues to attract new manufacturing firms and data centers, "the Commonwealth and the entire nation will require *more* electricity, not less."<sup>3</sup> Relying primarily or solely on renewables and storage to fill these growing capacity needs places the grid in a precarious position. Further, Big Rivers is concerned that, as identified in Potomac Economics' "2022 State of the Market Report for MISO Electricity Markets," the over-accreditation of intermittent resources in resource planning models may lead to these models recommending the construction of intermittent resources to satisfy reliability requirements, despite the long term consequences to grid reliability.<sup>4</sup> For this reason, Big Rivers placed reliability at the center of its 2023 IRP planning

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<sup>1</sup> Attorney General's Comments at 15-16 (internal footnote omitted).

<sup>2</sup> *Id.* at 9. *See also id.* at 16 ("The OAG agrees with BREC's decisions in this IRP to keep the Wilson plant operating as a coal-fired unit for the foreseeable future....").

<sup>3</sup> *Id.* at 15 (emphasis in original).

<sup>4</sup> *2022 State of the Market Report for the MISO Electricity Markets*, POTOMAC ECONOMICS, 16 (June 15, 2023), [https://www.potomaceconomics.com/wp-content/uploads/2023/06/2022-MISO-SOM\\_Report\\_Body-Final.pdf](https://www.potomaceconomics.com/wp-content/uploads/2023/06/2022-MISO-SOM_Report_Body-Final.pdf).

process, and it has sought to accurately and realistically assess the role of both intermittent and dispatchable resources in its future. Big Rivers appreciates the Attorney General’s recognition and support of these planning decisions.

## **II. Sierra Club’s Comments**

The comments submitted by the Sierra Club in this matter, like its lines of inquiry throughout this process, focus squarely on a predictable target: Wilson Station. Sierra Club claims that Big Rivers’ 2023 IRP is flawed because Wilson is anticipated to remain an available resource throughout the planning horizon. Although conceding that Wilson has historically served as the workhorse of the Company’s fleet,<sup>5</sup> Sierra Club takes aim at the so-called “aging coal plant” in two primary ways: attacking its reliability (through the selective, sometimes inaccurate, citation of provided data), and attacking Big Rivers’ alleged failure to “analyze or account for obvious environmental regulation” (much of which is merely contemplated, proposed, or in its infancy).<sup>6</sup> Sierra Club’s comments should carry little weight.

First, and unsurprisingly, Big Rivers disagrees with Sierra Club’s assertions regarding the present and future reliability of Wilson. While the unit is undoubtedly not new, Wilson’s proven value as a predictable baseline resource—promoted with rigorous maintenance and timely upgrades—undercuts the assertion that the unit faces “significant reliability concerns.”<sup>7</sup> A decade’s worth of Generation Availability Data System (GADS) information, requested and received by Sierra Club in this case,<sup>8</sup> overwhelmingly reflects a reliable Wilson, and it supports the reasonable anticipation that Wilson will remain a cornerstone of Big Rivers’ fleet for decades to come. Indeed, even during Winter Storm Elliot, when widespread, extended outages plagued

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<sup>5</sup> Sierra Club’s Comments at 6, 10, 11.

<sup>6</sup> *Id.* at 11.

<sup>7</sup> *Id.* at 1.

<sup>8</sup> See Big Rivers’ Response to Sierra Club Request No. 2-10.

utilities throughout large portions of the country, Wilson fared relatively well, enduring only a single major forced outage that lasted roughly 2.5 hours—which is decidedly *not* the exaggerated “almost six hours” stated repeatedly by Sierra Club in its comments.<sup>9</sup> Sierra Club’s attempt to characterize Wilson as “an old car” with “parts...beginning to break down”<sup>10</sup> is simply unfounded and reflects an alternative reality that prioritizes Sierra Club’s organizational policy goals over a reliable and resilient energy future for Kentuckians.

Next, Big Rivers disagrees with Sierra Club’s comments concerning the 2023 IRP’s consideration of various existing and anticipated environmental regulation. As discussed in Chapter 6 (“Environmental”) of Big Rivers’ IRP, the rules that govern power production and its by-products in America are constantly changing, resulting both in uncertainty and a need to remain at-the-ready to effectively address legal, political, and technological challenges. For this reason, Big Rivers included an aggressive carbon-reduction scenario in its IRP modeling as a proxy for increased environmental regulation cost, while rejecting the speculative modeling of specific, albeit unknown or challenged, “new...proposed rules” under the Clean Air Act<sup>11</sup> or “other pending or recently final regulations” respecting coal combustion residuals, effluent limitations guidelines, and other matters.<sup>12</sup> Big Rivers believes this is a sensible approach in light of continued uncertainty, both nationally and in Kentucky, as to the regulation and efficacy of various resource types.

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<sup>9</sup> Sierra Club’s Comments, at 1 (inaccurately describing Wilson’s “complete failure for almost six hours during the height of Winter Storm Elliott”), 6 (inaccurately stating that “all 417 MW went offline for almost six hours at the storm’s peak noting”), 7 (inaccurately repeating that “all 417 MW of Wilson’s coal-fired capacity was unavailable for almost six hours at the height of the storm.”). *See* Big Rivers’ Response to Sierra Club’s Request No. 2-10 for pertinent data.

<sup>10</sup> *Id.* at 7.

<sup>11</sup> *Id.* at 12.

<sup>12</sup> *Id.* at 13.

Of course, that is not to say that Big Rivers does not prioritize environmental compliance and responsibly consider how changing regulation could impacts its operations. For instance, though the timing and impact of the federal Clean Air Act’s “Good Neighbor Plan” is far from certain, Big Rivers presently anticipates Wilson’s existing Selective Catalytic Reduction (SCR) pollution control configuration will prevent significant impact from the reduction of Group 3 ozone season allowances required under the current Good Neighbor Federal Implementation Plan (FIP) dated March 15, 2023.<sup>13</sup> This example underscores why Big Rivers rejects the implication that it is not cognizant of current or anticipated regulation, or that it otherwise refuses to consider potential impacts thereof; rather, Big Rivers continually evaluates these matters and carefully considers them, then plans for actual impacts once appropriately concrete.

Notably, Sierra Club’s criticism that Big Rivers should have specifically modeled unknown or non-final environmental regulations is undercut by its own historical views as recently as during Big Rivers’ most recent IRP proceeding. Specifically, Sierra Club formerly appreciated the challenges to long-term resource planning presented by oft-changing environmental regulation and related external factors, observing (at this same stage of Big Rivers’ 2020 IRP proceeding) numerous “interceding developments” between the IRP’s filing and its submission of comments less than a year later—among them, the election of a new President “with markedly distinct policies on energy, environmental protection, and climate change,” as well as EPA’s completion of “various stages of revoking, replacing, or promulgating (or preparing to do the same) various new regulations and policies that bear intimately on resource planning[.]”<sup>14</sup> There, Sierra Club

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<sup>13</sup> See Big Rivers’ Response to Sierra Club’s Request No. 1-7 (filed Jan. 5, 2024). Wilson Station emitted approximately 497 tons of NOx emissions during the 2023 ozone season, yet the station received 609 NOx ozone season allowances from the EPA to cover actual emissions for the same period. Additionally, the subject rule requires that facilities equipped with SCRs meet a daily NOx emission rate of 0.14 lb/mmBtu beginning in 2024. The average NOx emission rate at Wilson Station during the 2023 ozone season was approximately 0.08 lb/mmBtu.

<sup>14</sup> *In the Matter of: Electronic 2020 Integrated Resource Plan of Big Rivers Electric Corporation*, Case no. 2020-00299, Sierra Club’s Comments (Ky. PSC Sep. 3, 2021).

conceded, “Big Rivers of course cannot be blamed for not anticipating with certainty, and preemptively factoring in, these developments in the 2020 IRP.”<sup>15</sup>

As stated throughout this proceeding, Big Rivers strives to strike an appropriate balance for its Member-Owners with respect to resource planning. However, the regulatory IRP process neither expects nor requires a utility to consider every conceivable scenario with respect to its future generation fleet. The 2023 IRP highlights a path based on an “all of the above” approach to sustainability and reliability, working to incorporate coal, natural gas, hydropower, and solar energy to increase sustainability while maintaining efficient and reliable baseload electricity for all Member-Owners.

### **III. KIUC’s Comments**

Though KIUC declined to file any requests for information in this proceeding, Big Rivers appreciates and has considered the comments received from KIUC as part of the IRP process. KIUC’s membership, which includes many of the largest electric public utility customers in the Commonwealth, recognizes the importance of reliable, affordable power supply solutions. Big Rivers supports the needs of industry and is committed to ensuring the service it provides remains an impetus for growth.

Big Rivers’ long-term planning, as reflected in its 2023 IRP, includes load forecasts and resource plans designed to meet future demand with an adequate and reliable supply of electricity at the lowest possible cost. Consequently, the IRP modeling consistently concluded that a new 635 MW NGCC plant is an appropriate addition to Big Rivers’ fleet. As observed by KIUC, “NGCCs have low heat rates and low forced outage rates, resulting in reliable, low-cost generation.”<sup>16</sup> Moreover, the identified NGCC supports Big Rivers’ mission to maintain an “all

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<sup>15</sup> *Id.*

<sup>16</sup> KIUC’s Comments at 1.

of the above” approach to sustainability and reliability that includes baseload, steel-in-the-ground resources. Big Rivers values KIUC’s concurrence with the “[r]easonable and [p]ractical [s]olution” provided by the contemplated NGCC.<sup>17</sup>

KIUC’s comments with respect to load forecasting for two specific customers with behind-the-meter generation (namely, Domtar Paper Co., LLC (“Domtar”) and Kimberly-Clark Corporation (“Kimberly-Clark”)), mirror the inaccurate positions of those intervenors in Case No. 2023-00312.<sup>18</sup> It is clear KIUC disagrees with a fundamental premise supporting the design of the proposed tariff in that case, which is that standby service provided by a load serving entity in the MISO construct is better planned and accounted for when behind-the-meter generation is accredited with MISO. Big Rivers takes seriously its obligation to provide reliable, affordable power when called upon, and believes the best way to ensure future grid reliability is by providing MISO with a clear and accurate picture of actual system load obligations.

Indeed, grid reliability is one of the most pressing near and long term challenges faced by the Company. These reliability issues are not just related to the growth of intermittently-available resources; unaccounted-for demand from loads otherwise served by behind-the-meter generation is another such threat to grid reliability. Behind-the-meter generation creates the risk of sudden and unexpected increases in power demand, thus forming a necessary part of the complex planning and readiness challenges with which Big Rivers and MISO must contend. In order to adequately plan and prepare for foreseeable eventualities, including the inevitability of behind-the-meter generating unit failures, Big Rivers and MISO must accurately account for and incorporate behind-the-meter generation into their capacity and transmission planning before these shifting loads

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<sup>17</sup> *Id.*

<sup>18</sup> See *In the Matter of: Electronic Filing of Big Rivers Electric Corporation and Kenergy Corp. to Revise the Large Industrial Standby Service Tariff*, Case No. 2023-00312 (Ky. PSC Sep. 15, 2023).

become an operation issue in the real-time markets. Importantly, it also best aligns the costs imposed by those risks with the same customers creating the risks, rather than socializing them across other members.

The manner in which Big Rivers provides service to customers with behind-the-meter generation, as well as the associated recovery of costs related to such service, are issues presently under examination by the Commission in another proceeding. Consequently, like many aspects of intensive, long-term planning, Big Rivers' efforts to predict the manner in which it will satisfy future requirements for specific customers will remain a work-in-progress. That said, Big Rivers' 2023 IRP reflects a sound and reasonable approach to ensuring future demand is met with adequate, reliable, reasonably-priced electricity—both for “typical” customers and for unique customers with complex needs, such as those impacted by Case No. 2023-00312.

#### **IV. The Joint Intervenors' Comments**

Joint Intervenors' 370+ requests for information (including subparts, but not sub-subparts) propounded as part of this proceeding prepared Big Rivers for the Joint Intervenors' lengthy commentary on numerous aspects of the Company's 2023 IRP. Joint Intervenors are comprised of KFTC, a nonprofit “organized for a fair economy, a healthy environment, new safe energy, and an honest democracy[,]”<sup>19</sup> and KRC, a nonprofit “dedicated to prudent use and conservation of the natural resources of the Commonwealth[.]”<sup>20</sup> Their comments include a report from Energy Futures Group (“EFG”), a consultant engaged to examine the work of Big Rivers and its consultants as well as propose alternatives. Big Rivers appreciates and appropriately considers the viewpoints of all stakeholders.

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<sup>19</sup> Joint Intervenors' Motion for Intervene at 3 (filed Nov. 17, 2023).

<sup>20</sup> *Id.* at 5.



Big Rivers accepts EFG’s acknowledgement that, considering the variety and potential impact of the variables at play, there is no perfect approach to resource planning.<sup>21</sup> Still, Joint Intervenors’ proposed approach unreasonably favors renewables, demand side management, distributed energy resources, and anticipated advances in storage capabilities over reliability and resiliency of reasonably-priced electric supply for Kentuckians. While certain of these initiatives comprise a part of Big Rivers’ planning strategy, Big Rivers stands by its decision to emphasize stability, reliability, and cost-effectiveness in its planning process, as reflected in the 2023 IRP.

**A. Big Rivers and its members have obtained fiscal stability through prudent planning.**

Joint Intervenors contend Big Rivers’ IRP advances a “status quo” approach to resource planning, which they argue is inappropriate in light of historical rate increases experienced by Big Rivers’ Member-Owners and their customers. However, Joint Intervenors’ account of the past fifteen (15) years omits the very real challenges that Big Rivers and its member RECCs have worked to overcome. Indeed, Big Rivers’ realistic approach to resource planning is, in many ways, the product of responding to these challenges, and the Company believes it prudent to maintain a balanced approach.

As noted in the Attorney General’s comments and in previous IRP proceedings, the loss of the Century Aluminum Company and Alcan Primary Products Corporation aluminum smelters in Big Rivers’ service area presented a nearly calamitous financial challenge to the Company and its member cooperatives.<sup>22</sup> The loss of these two operations caused Big Rivers to lose its investment-

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<sup>21</sup> Joint Intervenors’ Comments, Exhibit 1 at page 5 (“IRPs are not a set of discrete tasks that one can repeat and perfect, but rather are a process that must evolve with changes in circumstances, technology improvements, consumer preferences, policy requirements, etc.”).

<sup>22</sup> Attorney General Comments, at 18; *In the Matter of: Electronic 2020 Integrated Resource Plan of Big Rivers Electric Corporation* Case No. 2020-00299, Application, (Ky. PSC Sep. 21, 2020); *In the Matter of: See Also In the Matter of: Application of Big Rivers Electric Corporation for a General Adjustment in Rates*, Case No. 2013-00199, Response Letter, 1-2 (Ky. PSC June 5, 2014).

grade credit ratings, forced Big Rivers to develop plans to idle its Wilson and Coleman generating stations, and required the Company to seek rate relief in back-to-back cases in 2012 and 2013.<sup>23</sup> Since then, Big Rivers has managed to maintain stability and recover its position as an investment-grade utility without any additional rate increases.

Big Rivers disagrees with Joint Intervenors' claim that Big Rivers' IRP is inadequate in the face of financial challenges. On the contrary, Big Rivers believes that its "all-of-the-above," "build and hold" approach to ensuring reliable capacity will best position Big Rivers, its Member-Owners, and their customers for both the near and long term. While Joint Intervenors' support for energy innovation is appreciated, proposing a drastic increase in reliance on emerging technologies and a greater share of renewables creates new, avoidable risks to Big Rivers' operational and financial stability.

**B. Joint Intervenors' Preferred Resources Cannot Replace Dispatchable Energy.**

The Joint Intervenors similarly dedicate a significant portion of their comments in the IRP to the proposition that Big Rivers overlooked the renewable options available to it. Specifically, the Joint Intervenors assert that Big Rivers overlooked the value of developing renewable energy generation by selecting a Natural Gas Combined Cycle plant from the available RFP options, deciding not to rely on distributed energy resources ("DERs"), pursuing funds for Carbon Capture and Sequestration technology, and continuing to rely on the Wilson plant. While Big Rivers believes that renewables will certainly be a growing part of its future energy mix, the realities of renewable energy reliability, geographic availability, and transmission integration simply do not comport with Joint Intervenors' assessment.

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<sup>23</sup> *In the Matter of: Application of Big Rivers Electric Corporation for a General Adjustment in Rates*, Case No. 2013-00199, Response Letter, 1-2 (Ky. PSC June 5, 2014). See *In the Matter of: Application of Big Rivers Electric Corporation for an Adjustment of Rates*, Case No. 2012-00535 (Ky. PSC Dec. 4, 2012).

As noted in the Attorney General’s Comments, long-term energy planning must appreciate the delicate balance between building out renewable capacity and maintaining grid reliability.<sup>24</sup> While Big Rivers is hopeful that future technologies enable greater storage capacity, dispatchability, and resilience, Big Rivers believes that, to quote NRECA’s Jim Matheson, when it comes to energy planning, “hope is not a good strategy, and it sure isn’t good policy.”<sup>25</sup> As the nation braces for “unprecedented challenges to the reliability of our nation’s electric system,” Big Rivers believes that the most prudent way forward is to maintain a realistic perspective on the potential benefits that renewables offer while shoring up their deficiencies with a sufficient supply of more reliable energy generation.<sup>26</sup>

Throughout their comments, the Joint Intervenors repeatedly overstate the ability of intermittent resources to supplant more reliable energy sources. For example, the Joint Intervenors write that Big Rivers’ failure to account for DERs “overlooked huge potential for the company to tap into to meet future capacity needs.”<sup>27</sup> In particular, Joint Intervenors asserted that DER solar plus storage systems, “can operate indefinitely during grid outages...”<sup>28</sup> Big Rivers questions the inherent conflict between the Joint Intervenor’s criticism of Big Rivers for allegedly projecting excess capacity and for simultaneously criticizing Big Rivers’ failure to seek additional capacity from an expensive option like DER.<sup>29</sup> Moreover, Big Rivers does not share Joint Intervenors’ belief that solar plus storage DERs can operate indefinitely, as that does not reflect the current

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<sup>24</sup> Attorney General’s Comments at 10.

<sup>25</sup> Cathy Cash, *Matheson: Reliable, Affordable Electricity Hinges on Rational Public Policy*, NRECA (Jan. 25, 2024), <https://www.electric.coop/matheson-reliable-affordable-electricity-hinges-on-rational-public-policy> (last accessed March 23, 2024).

<sup>26</sup> Attorney General’s Comments at 11 (quoting “FERC Commissioners Tell Senators of Major Grid Reliability Challenges, With Some Blaming Markets,” Utility Dive, May 5, 2023, accessible at: <https://www.utilitydive.com/news/ferc-grid-reliability-senate-energyhearing/649523/> (last accessed March 8, 2024).).

<sup>27</sup> Joint Intervenors’ Comments at 14-15.

<sup>28</sup> *Id.* at 15.

<sup>29</sup> *Id.* at 15, 34.

realities of storage and solar generation; overnight periods and continuous cloudy days would deplete four and even eight hour storage systems in short order. Finally, Big Rivers believes that clinging to historical growth rates in its DER projections, as suggested in the EFG Report, is unrealistic. Projecting EFG's cited 58.64% and 59.06% growth rates through 2035, for example, would yield roughly 5,000,000 MWh of DER generation and effectively eliminate Big Rivers' role as an energy provider, an unrealistic assumption to say the least.

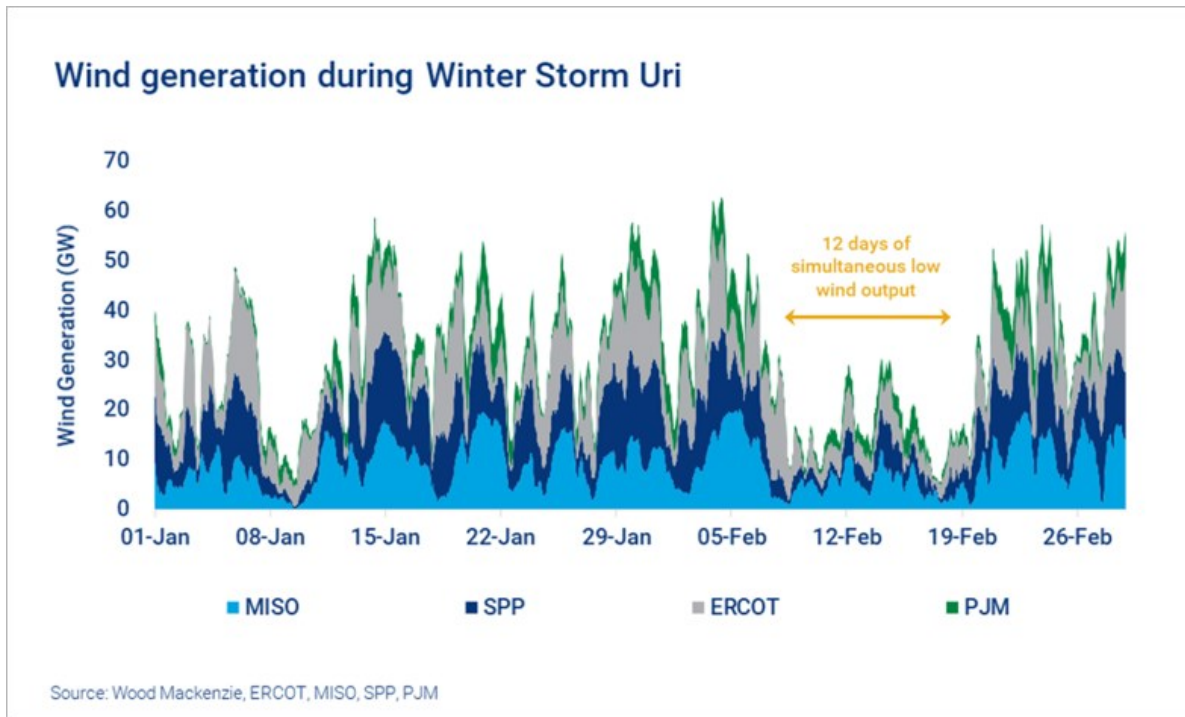
Likewise, Big Rivers' solar projections for its PACE Solar facilities, which Joint Intervenors treated as unduly pessimistic, illustrated Big Rivers' attempts at ascertaining realistic projections of expected solar output given that a location had not yet been selected.<sup>30</sup> Because the PACE Solar location has not yet been selected, Big Rivers felt that a conservative, generic projection that did not offer an overly-rosy outlook of the project's capabilities, was most appropriate for planning purposes.

The Joint Intervenors' assessment of DERs or solar systems is not the sole instance where they overlooked renewable energy's limitations. Wind energy also experiences extended periods of low production. Historically, across the major markets in the Eastern Interconnection, the output of wind has experienced significantly depressed output for extended periods of time. For example, the graphic below<sup>31</sup> shows that, during Winter Storm Uri, wind production stalled for twelve (12) full days. Storage alone cannot make-up for these shortfalls, as it is clear that four or even eight hour storage will not be sufficient to bridge these gaps.

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<sup>30</sup> EFG Report at 13.

<sup>31</sup> Ryan Sweezey, *Winter reliability and the road to net zero*, WOOD MACKENZIE, <https://www.woodmac.com/news/opinion/winter-reliability-and-the-road-to-net-zero> (last accessed Mar. 27, 2024).



The MISO seasonal accredited capacity projections reflect some of these shortcomings from wind and solar. MISO anticipates that during the winter season, solar resources provide very little accredited capacity, and this poor solar performance will not be offset by the marginal increases in winter time wind accredited capacity. Moreover, because MISO’s models are built on marginal assumptions rather than average assumptions, intermittent resources such as wind and solar, if adopted *en masse*, are likely to experience reduced MISO marginal accreditation over time.<sup>32</sup> For these reasons, Big Rivers believes that it is simply not prudent planning, under any scenario, to overcommit to inherently unreliable resources.

Despite the Joint Intervenors assertions, stand-alone storage is also an inadequate means of offsetting reliability risks.<sup>33</sup> The Joint Intervenors argue that in order to properly evaluate whether storage or a renewables and storage combination could replace the output of the Green

<sup>32</sup> See David Patton, *Marginal v. Average Capacity Accreditation*, POTOMAC ECONOMICS, (Sep. 21, 2022)

<sup>33</sup> *Id.* at 10.

units, Big Rivers should have allowed the model to select storage in 2027.<sup>34</sup> This is not a realistic alternative. Although storage assets were fully considered in the IRP, Big Rivers is not yet confident that storage can be built and implemented reliably by 2027, nor does it believe that, even if available, four hour storage would be a prudent approach to building future capacity. In fact, even when the IRP model was allowed to select energy storage assets to arbitrage energy against projected market prices, the model still found that energy storage was not the best alternative.

MISO's accreditation of storage facilities also featured prominently in Big Rivers' planning decisions. Big Rivers did not model longer-duration storage in its IRP because MISO does not currently account for these technologies in its accreditations. At this juncture, MISO does not have any accredited projections for storage durations longer than four hours, meaning that four, six, and eight hour storage assets would all receive the same amount of accredited capacity. While Big Rivers is hopeful that longer duration storage will help make up for renewables' shortcomings in the future, the risk of overbuilding long-duration storage without guidance from MISO is significant, and Big Rivers cannot diverge from MISO rules on this issue.

Finally, Joint Intervenors argue that, reliability concerns aside, IRA tax relief for renewables—the specifics of which are still unclear—should have made these technologies more competitive in Big Rivers' RFP process.<sup>35</sup> In fact, Big Rivers did provide shortlisted bidders with the opportunity to update their pricing after the passage of the IRA, but Big Rivers' Natural Gas Combined Cycle plant remained the most prudent option in both the short and long term. This was even clearer once the IRP model was adjusted to better account for low price gas and high price gas scenarios.<sup>36</sup>

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<sup>34</sup> *Id.*

<sup>35</sup> *Id.* at 12.

<sup>36</sup> See Revised Tables 7.2.3(a), 7.4.4(a), 7.4.4(b) (filed Mar. 12, 2024).

Big Rivers is optimistic about the future of renewables and long-duration storage, and hopes to find ways to continue to incorporate renewables into its future. However, for planning purposes, Big Rivers must develop realistic scenarios and avoid merely wishful thinking. For this reason, Big Rivers' IRP modeled the realities of storage and renewable capabilities as permitted by current MISO rules.

**C. Big Rivers believes it is forecasting an appropriate amount of capacity and is in the process of evaluating contract renewals.**

As mentioned above, Joint Intervenors criticize Big Rivers' failure to access additional capacity through DERs and renewables while also worrying that Big Rivers will have too much capacity in the future.<sup>37</sup> However, given the uncertainties about future energy demands and the evolving changes to MISO accreditation standards, Joint Intervenors' concerns about Big Rivers' excess capacity are misguided and unwarranted. Big Rivers believes a "build and hold" plan is the most prudent approach to its long-term capacity strategies and is determined to reasonably avoid future risk of capacity shortfall.

Big Rivers believes that having some excess installed capacity is an effective safeguard against seasonal capacity losses, such as those faced by its solar facilities during the winter, and unanticipated increases in demand, such as any faster than anticipated uptick in the electrification of automobiles. One such example of unanticipated demand spikes is seen in the difficulty in projecting energy demand from the Direct Serve class, which consists of a handful of large industrial firms and cannot be projected with the same level of accuracy as other customer classes. From 2019-2021, for example, the demand from this customer class dropped due to the loss of a handful of customers; it then increased through 2022 despite no new customers moving to the region, and it spiked in 2023 and 2024 due largely to the addition of one particularly large

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<sup>37</sup> Joint Intervenors' Comments at 14-15, 34.

customer. Because it is difficult to accurately project growth for this customer class, long term projections of the Direct Serve customer class are inherently unreliable. Although the IRP attempts to model potential customer additions in the High Growth scenarios, even these scenarios cannot adequately account for the large amount of variance between these customers and the energy demands they might have. For this reason, coupled with increasing Planning Reserve Margin requirements within MISO's new seasonal capacity construct, Big Rivers believes that planning for reasonable excess capacity is its most prudent path forward.

MISO's evolving revisions to its accreditation process further justify the existence of excess installed capacity at this juncture. As the Joint Intervenors' note in the EFG Report, the potential changes to MISO accreditation may mean that Big Rivers' excess installed capacity is given a lower accreditation than is projected in the IRP.<sup>38</sup> MISO's changes to its Direct Loss of Load (DLOL) approach have not been fully revealed, but will likely cause Big Rivers' installed capacity to receive a lower MISO accreditation. Big Rivers believes that these developments and uncertainties justify its current "build and hold" approach to capacity.

Finally, as the Joint Intervenors identify, the 2029 decrease in demand coincides with the expiration of the KyMEA and OMU contracts.<sup>39</sup> While the future of Big Rivers' non-member sales contracts is under review, it remains a very real possibility that these contracts will be renewed in the future.

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<sup>38</sup> EFG Report at 14-15.

<sup>39</sup> Join Intervenors at 36-39. Joint Intervenors also mistakenly assert that Big Rivers' plan not to renew its Nebraska contract will yield excess MISO Capacity. However, the Nebraska contract has no effect on Big Rivers' MISO capacity position.



**D. Big Rivers declined to model the Wilson Plant’s retirement due to its continued reliability and current Kentucky law.**

Big Rivers views its Wilson plant as an extremely valuable resource and, based on its ongoing reliability and Kentucky’s regulatory scheme, the Company does not believe that its retirement is a realistic option during the IRP period. Put simply, Big Rivers did not model the potential retirement of the Wilson plant because it has no intentions to retire the Wilson plant by the end of the IRP period. Given the continuing uptick in energy demand, the need for readily dispatchable, reliable energy, and the legal climate in Kentucky, Big Rivers does not believe that it would be prudent to plan to abandon the workhorse of its fleet.

In addition, The Kentucky Legislature recently codified (in KRS 278.864) significant presumptions against the retirement of fossil fuel plants in Kentucky. And although recent efforts to strengthen that law were clearly outside the planning window for this IRP, it appears evident that the steel-in-the-ground value of workhorses like Wilson Station continue to remain at the forefront of legislators’ minds as they work to protect the energy security of Kentuckians.<sup>40</sup> These present and future legal considerations, taken in combination with the continuing reliability and productivity of the Wilson plant (as discussed in Big Rivers’ response to Sierra Club’s comments, above), led Big Rivers to conclude that retirement of the Wilson plant was simply not a feasible option during the IRP planning period.

Big Rivers recognizes that, eventually, the Wilson plant will require retirement and that planning for this eventuality will be an important component of its future IRPs. However, Big Rivers stands by its decision to model the Wilson plant in full operation throughout this IRP period.

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<sup>40</sup> Kentucky Senate Bill 349, for example, proposes substantial amendments to KRS 278.864 that would likely make the retirement of productive, dispatchable plants like Wilson extremely difficult to justify, has – at the time of this filing – advanced significantly toward becoming Kentucky law. *See also* Alex Acquisto, *Bill to Make it Harder to retire Kentucky’s fossil fuel power plants nears passage*, LEXINGTON HERALD LEADER (Mar. 22, 2024), <https://www.kentucky.com/news/politics-government/article286952895.html> (last accessed Mar. 22, 2023).

**V. Conclusion**

Big Rivers thanks the Attorney General, the Joint Intervenors, Sierra Club, and KIUC for their respective reviews of the 2023 IRP, and Big Rivers looks forward to receiving the Commission Staff's report on its 2023 IRP.

This 29th day of March, 2024.

Respectfully submitted,

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### **Certification**

I hereby certify that a copy of this filing has been served electronically on all parties of record through the use of the Commission's electronic filing system, and there are currently no parties that the Commission has excused from participation by electronic means. Pursuant to the Commission's July 22, 2021 Order in Case No. 2020-00085, a paper copy of this filing has not been transmitted to the Commission.

/s/ Edward T. Depp  
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