COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC 2020 INTEGRATED RESOURCE	)	Case No.
PLAN OF BIG RIVERS ELECTRIC CORPORATION	)	2020-00299

ATTORNEY GENERAL'S COMMENTS

The Attorney General of the Commonwealth of Kentucky, through his Office of Rate Intervention ("Attorney General"), tenders the following comments regarding the 2020 Integrated Resource Plan ("IRP" or "Plan") of Big Rivers Electric Corporation ("BREC" or "the Company").

A. Conversion of Green Station Coal-Fired Units to Gas-Firing Operations

In Case No. 2019-00435,[1] the Commission authorized BREC to close the ash pond at its Green Station generating plant by October 31, 2029, due to the inability to comply with the requirements of the U.S. Environmental Protection Agency's ("EPA") Coal Combustion Residuals (CCR) Rule.[2] However, the EPA on August 28, 2020, published in the Federal Register[3] certain changes to the CCR Rule requirements,[4] which accelerated the compliance deadline for closure of the Green Station ash pond to October 31, 2023.[5] As a result of the CCR Rule change, BREC would either have to cease coal-firing operations at Green Station,

[1] *In Re: Electronic Application of Big Rivers Electric Corporation for Approval of Its 2020 Environmental Compliance Plan,* etc., Order dated Aug. 7, 2020.
[2] 40 C.F.R. §§ 257, 261 *et seq*.
[3] 85 FR 53561, Aug. 28, 2020, as amended at 85 FR 72542, Nov. 12, 2020.
[4] "Alternative Closure Requirements," 40 CFR § 257.103(f)(2).
[5] *In Re: Application Of Big Rivers Electric Corporation For a Certificate Of Public Convenience And Necessity Authorizing The Conversion Of The Green Station Units To Natural Gas-Fired Units*, etc., Case No. 2021-00079, Order dated June 11, 2021 at 4.

or upgrade an existing landfill to accept CCR byproducts produced from coal-firing operations.[6]

The relatively-sudden change in the CCR Rule had dual consequences for BREC: not only would it have to quickly pivot to develop a compliance strategy, but it had just finished the planning and analysis necessary for its 2020 IRP, which had concluded that converting Green Station to gas-firing would not be economical.[7] However, the Commission in BREC's CPCN case noted that the IRP involved a different type of analysis, finding that:

> . . . differences in the analysis in the 2020 IRP and this matter reasonably result from different key assumptions between the two cases. For example, in the 2020 IRP, BREC analyzed a converted Green Station as a long-term resource designed to meet member load and the capacity reserve margin between 2024 and 2043, but was rejected as uneconomic because it would have provided capacity significantly above member load and capacity reserve margin, In this proceeding, the Green Station conversion was analyzed as a short-term resource designed to operate between 2022 and 2029 as a capacity hedge to meet native load and the OMU and KYMEA contracts while complying with environmental regulations.[8]

BREC's IRP was filed with the Commission on September 21, 2020, scarcely four (4) weeks following EPA's publication of its revised CCR Rule. Due to the IRP's complexity and thorough analysis, it is readily apparent that the Company and its contractor responsible for preparing the Plan, Clearspring Energy Advisors, began the planning and analysis utilized in preparation of the Plan began at least several *months* prior to the date of its filing. The Attorney General believes that BREC should be commended for continuing to identify and pursue least-cost resources for its members and end-use customers in the face of such rapidly changing federal regulatory mandates.

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[6] *Id.* at 3.
[7] Both Green Station units were modeled with three options: remaining coal-fired; converting to natural gas firing; or idling. IRP § 8.1.2 p. 140.
[8] Case No. 2021-00079, Order dated June 11, 2021 at 11.

B. Renewable Generation Resources, and Reliability Issues

In Case No. 2020-00183,[9] the Commission approved BREC's petition to enter into three separate solar purchase power agreements ("PPAs") for a total of 260 MW, over a twenty-year period. These facilities will begin operating in 2023. Under the terms of each such PPA, BREC will receive the entire capacity value (MW), energy (MWh), ancillary services, and environmental attributes (i.e., renewable energy or carbon credits) of the respective solar facility in consideration for the contract price per MWh of energy.[10]

BREC's decision to adopt significant quantities of renewably-sourced power into its supply-side resources is paying, or will pay dividends in many ways: (a) approximately twenty-five percent of the Company's economic development candidates have made some request or inquiry about renewable energy; (b) BREC states that the diversification of its supply-side portfolio will reduce risks; (c) BREC has received an investment-grade credit rating from at least one credit rating agency;[11] and (d) BREC's long-term environmental costs may be reduced through the combination of the adoption of the solar PPAs, and the conversion of the Green units to gas-firing.

Despite the benefits that a diversified supply-side portfolio can bring, BREC is cognizant of the inherent reliability risks that a large-scale, rapid switching to renewable sources (which by nature are intermittent) can bring: "Big Rivers believes that . . . there

[9] *In Re: Electronic Application Of Big Rivers Electric Corporation For Approval Of Solar Power Contracts.*
[10] *Id.*, Order dated Sept. 28, 2020, at 3. The solar PPAs will enable BREC to supply competitively-priced solar power to Nucor Corporation's new steel production facility to be constructed in Meade County. *Id.* at 5.
[11] Case No. 2020-00299, BREC's responses to PSC Staff DR 1-7, and AG DR 1-27.

remains value in retaining our most efficient baseload resource and in identifying resources that will complement intermittent renewable resources in the future."[12]

The Attorney General has three primary concerns regarding any large-scale, rapid adoption of renewable resources in the Commonwealth. First, Kentucky's climate does not provide adequate wind and solar capacity to make large-scale, rapid adoptions of renewable resources cost-effective for utility ratepayers. Second, the intermittent nature of renewable supply-side resources by their very definition carry reliability risks; indeed, the nation is already experiencing major reliability problems in those regions where such a major switch to renewable sources has occurred, and which lack adequate dispatchable resources such as baseload generation to complement renewable resources. [13] Third, even though some states contiguous to the Commonwealth do have areas with greater renewable energy capacity factors, the Commission's IRP regulations do not require Kentucky's electric generating utilities to factor-in costs of additional transmission capacity that are frequently necessary to wheel out-of-state power into the utilities' respective service territories. The Commission and other state agencies require all such relevant data in order to develop sound planning.

C. Potential Future Demand Response / DSM Programs

As indicated in BREC's application, the value of demand response programs in MISO is currently low.[14] However, given the fact that MISO will almost certainly experience

[12] IRP §5.4, p. 98. *See also* IRP § 9.2 at 177: "Considering fuel diversity and reliability, it is unlikely that nationwide long–term energy and environmental objectives will be met without retaining high–capacity–factor electric generation sources."
[13] *See, e.g.*, "Ensuring Electricity Reliability Must Be Job Number One For FERC," accessible at: https://www.utilitydive.com/news/ensuring-electricity-reliability-must-be-job-number-one-for-ferc/604034/ ; and "Renewable Energy Boom Risks More Blackouts Without Adequate Investment In Grid Reliability," accessible at: https://www.forbes.com/sites/michaelshellenberger/2021/04/20/why-renewables-cause-blackouts-and-increase-vulnerability-to-extreme-weather/?sh=347adada4e75
[14] IRP § 4.8, p. 88.

significant penetration of intermittent renewable resources in the years ahead,[15] it appears likely the value of at least some demand response and demand side management resources will increase. In this regard, the Attorney General is encouraged to see that BREC's demand response study shows ***great*** potential for both Peak-Time Rebate, and Critical Peak Pricing programs.[16] The Attorney General agrees with the Company that, ". . . when and if capacity tightens in the region, the value of capacity should increase, approaching the avoided cost of a peaking unit. At that time, demand response programs could become cost effective."[17] The potential effectiveness of one or both such programs will doubtlessly be enhanced by the fact that all three of BREC's distribution coops have deployed AMI meters.[18] Accordingly, the Attorney General encourages the Company to continue to monitor the cost-effectiveness of demand response, and seek Commission permission to implement demand response programs for Peak Time Rebate and/or Critical Peak Pricing, if and when MISO capacity pricing should reach levels conducive to the success of such programs.

[15] *See* Response to AG DR 1-23.
[16] IRP, Table 4.7, p. 88.
[17] IRP § 4.9, p. 89.
[18] *See* Response to AG DR 1-29; *see also* the final order entered in Case No. 2020-00336, granting Meade County RECC's CPCN Application for an AMI metering system.

Respectfully submitted,

DANIEL CAMERON
ATTORNEY GENERAL

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LAWRENCE W. COOK
J. MICHAEL WEST
ANGELA M. GOAD
JOHN G. HORNE II
ASSISTANT ATTORNEYS GENERAL
1024 CAPITAL CENTER DR., STE. 200
FRANKFORT, KY 40601
(502) 696-5453
FAX: (502) 564-2698
Larry.Cook@ky.gov
Michael.West@ky.gov
Angela.Goad@ky.gov
John.Horne@ky.gov

Certificate of Service

Pursuant to the Commission's Order dated July 22, 2021 in Case No. 2020-00085, and in accord with all other applicable law, Counsel certifies that an electronic copy of the forgoing was served and filed by e-mail to the parties of record.

This 3rd day of September, 2021

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Assistant Attorney General