COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR APPROVAL TO MODIFY ITS MRSM TARIFF, CEASE DEFERRING DEPRECIATION EXPENSES, ESTABLISH REGULATORY ASSETS, AMORTIZE REGULATORY ASSETS, AND OTHER APPROPRIATE RELIEF	)	Case No. 2020-00064

MOTION OF BIG RIVERS ELECTRIC CORPORATION FOR CONFIDENTIAL PROTECTION

1. Big Rivers Electric Corporation ("Big Rivers") hereby moves the Kentucky Public Service Commission ("Commission"), pursuant to 807 KAR 5:001 Section 13 and KRS 61.878, to grant confidential treatment to certain information contained in Big Rivers' Testimony submitted contemporaneously herewith in the above-styled matter. The information for which Big Rivers seeks confidential treatment is hereinafter referred to as the "Confidential Information."

2. The Confidential Information contained in and attached to the Supplemental Direct Testimony of Paul G. Smith consists of confidential financial projections, which are similar in nature to the financial information for which the Commission already granted confidential treatment, as well as information related to individual customer usage, which is similar to the information subject to a pending Motion for Confidential Treatment.

3. Pursuant to the Commission's March 24, 2020 Order in *In the Matter of: Electronic Emergency Docket Related to the Novel Coronavirus COVID-19*, Case No.

2020-00085 (“Case No. 2020-00085”), one (1) copy of the confidential information highlighted with transparent ink, printed on yellow paper, or otherwise marked “CONFIDENTIAL,” is being field with this motion by electronic mail. A copy of those pages, with the Confidential Information redacted, is being electronically filed with the Responses to the Information Requests filed with this Motion.

4. A copy of this motion with the Confidential Information redacted has been served on all parties to this proceeding through the use of electronic filing. *See* 807 KAR 5:001, Section 13(b). A copy of the Confidential Information has been served on all parties that have signed a confidentiality agreement.

5. The Confidential Information is not publicly available, is not disseminated within Big Rivers except to those employees and professionals with a legitimate business need to know and act upon the information, and is not disseminated to others without a legitimate need to know and act upon the information.

6. If disclosed, the Confidential Information included herein would allow Big Rivers’ competitors to discover, and make use of, confidential information concerning Big Rivers’ financial condition and business strategies, to the unfair competitive disadvantage of Big Rivers, as well as resulting in an invasion of privacy of third-party customers that are not parties to this proceeding.

7. If and to the extent the Confidential Information becomes generally available to the public, whether through filings required by other agencies or

otherwise, Big Rivers will notify the Commission in writing. *See* 807 KAR 5:001, Section 13(10)(b).

8. As discussed below, the Confidential Information is entitled to confidential treatment based upon KRS 61.878(1)(a) and (1)(c)(1). *See* 807 KAR 5:001, Section 13(2)(a)(1).

9. Further, the Confidential Information containing financial information and projections is similar to or pertains to the Confidential Information contained in Big Rivers' Application, for which the Commission already granted confidential treatment. *See* Commission's March 17, 2020 Order, Case No. 2020-00064 (granting confidentiality to financial information for five years) (the "March 17, 2020 Order").

10. Finally, the Confidential Information related to individual customer usage is similar to the Confidential Information contained in Big Rivers' responses to the initial data requests from the Commission and the intervenors for which confidentiality has been sought pursuant to the Motions for Confidential Treatment filed contemporaneously with Big Rivers' responses to the data requests in this proceeding. Thus, the Confidential Information should be granted confidential treatment pending review of Big Rivers' previously filed Motion for Confidential Treatment in this proceeding, which was filed on April 3, 2020. *See* 807 KAR 5:001 Section 13(4) ("Pending action by the commission on a motion for confidential treatment or by its executive director on a request for confidential treatment, the material specifically identified shall be accorded confidential treatment.").

I. Information Protected by KRS 61.878(1)(c)(1)

A. Big Rivers Faces Actual Competition

11. KRS 61.878(1)(c)(1) protects "records confidentially disclosed to an agency or required by an agency to be disclosed to it, generally recognized as confidential or proprietary, which if openly disclosed would permit an unfair commercial advantage to competitors of the entity that disclosed the records."

12. As a generation and transmission cooperative, Big Rivers competes in the wholesale power market to sell energy that it produces in excess of its members' needs. This includes not only the over-the-counter day-ahead and over-the-counter hourly markets to which Big Rivers has access by virtue of its membership in Midcontinent Independent System Operator, Inc. ("MISO"), but also direct, bilateral long-term agreements. Big Rivers' ability to successfully compete in these markets is dependent upon a combination of its ability to: 1) obtain the maximum price for the power it sells, and 2) keep its cost of production as low as possible. Fundamentally, if Big Rivers' cost of producing a unit of power increases, its ability to sell that unit in competition with other utilities is adversely affected.

13. Big Rivers also competes for reasonably priced credit in the credit markets, and its ability to compete is directly impacted by its financial results. Lower revenues and any events that adversely affect Big Rivers' margins will adversely affect its financial results and potentially impact the price it pays for credit. A competitor armed with Big Rivers' proprietary and confidential information will be able to increase Big Rivers' costs or decrease Big Rivers' revenues, which could in

turn affect Big Rivers' creditworthiness. A utility the size of Big Rivers that operates generation and transmission facilities will always have periodic cash and borrowing requirements for both anticipated and unanticipated needs. Big Rivers expects to be in the credit markets in the future, and it is imperative that Big Rivers improve and maintain its credit profile.

14. Accordingly, Big Rivers has competitors in both the power and capital markets, and its Confidential Information should be protected to prevent the imposition of an unfair competitive advantage.

B. The Confidential Information is Generally Recognized as Confidential or Proprietary.

15. The Confidential Information for which Big Rivers seeks confidential treatment under KRS 61.878(1)(c)(1) is generally recognized as confidential or proprietary under Kentucky law.

16. The Confidential Information contained in the Supplemental Direct Testimony of Paul G. Smith consists of financial information derived from Big Rivers' financial forecasts, and is similar to the financial information contained in the Direct Testimony of Paul G. Smith, for which the Commission has already granted confidential treatment. *See* March 17, 2020 Order.

17. Public disclosure of the Confidential Information would reveal detailed information relating to Big Rivers' long-term financial forecast, including projected financial data. Information such as this which bears upon a company's detailed inner workings is generally recognized as confidential or proprietary. *See, e.g.*, *Hoy v. Ky. Indus. Revitalization Auth.*, 907 S.W.2d 766, 768 (Ky. 1995) ("It does not take a degree

in finance to recognize that such information concerning the inner workings of a corporation is 'generally recognized as confidential or proprietary.'"). Additionally, the Commission has previously granted confidential treatment to this type of information. *See, e.g.*, April 25 Confidentiality Order, P.S.C. Case No. 2012-00535 (granting confidential treatment to minutes of the Big Rivers Board of Directors, Big Rivers' Financial Model, and Big Rivers' load forecast); November 25, 2013 Confidentiality Order, P.S.C. Case No. 2013-00199; *In the Matter of*: *An Examination of the Application of the Fuel Adjustment Clause of East Ky. Power Coop., Inc. From Nov. 1, 2011 through Apr. 30, 2012*, Order, P.S.C. Case No. 2012-003919 (February 21, 2013).

18. Finally, the Commission has previously granted confidentiality to much of the specific information for which confidentiality is sought, including through the March 17, 2020 Order, in which the Commission recognized that sensitive financial information is subject to confidential treatment, or the Confidential Information is subject to a pending Motion for Confidential Treatment. *See* 807 KAR 5:001 Section 13(4).

C. Disclosure of the Confidential Information Would Result in an Unfair Commercial Advantage to Big Rivers' Competitors.

19. Disclosure of the Confidential Information would grant Big Rivers' competitors an unfair commercial advantage. As discussed above in Section I.A, Big Rivers faces actual competition in both the short-and long-term wholesale power markets and in the credit markets. It is likely that Big Rivers' ability to compete in

these markets would be adversely affected if the Confidential Information were publicly disclosed, and Big Rivers seeks protection from such competitive injury.

20. The Confidential Information includes material that is derived from Big Rivers' projected financial forecasts. The Commission has consistently recognized that internal strategic planning information, projected financial information, and related materials are entitled to confidential treatment, as these documents typically relate to the company's economic status and business strategies. *See, e.g.*, *Marina Mgmt. Servs. v. Cabinet for Tourism, Dep't of Parks*, 906 S.W.2d 318, 319 (Ky. 1995) (unfair commercial advantage arises simply from "the ability to ascertain the economic status of the entities without the hurdles systematically associated with the acquisition of such information about privately owned organizations"); *In the Matter of: The Joint Application of Duke Energy Corp., Cinergy Corp., Duke Energy Ohio, Inc., Duke Energy Kentucky, Inc., Diamond Acquisition Corp., and Progress Energy Inc., for Approval of the Indirect Transfer of Control of Duke Energy Kentucky, Inc.*, P.S.C. Case No. 2011-00124 (Dec. 5, 2011); *In the Matter of: The Joint Petition of Kentucky-American Water Co., Thames Water Aqua Holdings GmbH, RWE Aktiengesellschaft, Thames Water Aqua U.S. Holdings, Inc., and Am. Water Works Co., Inc. for Approval of a Change in Control of Kentucky-American Water Co.*, P.S.C. Case No. 2006-00197 (Aug. 29, 2006) (holding that reports from the joint applicants' financial advisors and all board of director minutes and information is confidential because competitors could use it to gain unfair competitive advantage).

21. Accordingly, the public disclosure of information derived from Big Rivers' financial forecasts would provide Big Rivers' competitors with an unfair commercial advantage.

II. Information Protected by KRS 61.878(1)(a)

22. KRS 61.878(1)(a) protects "[p]ublic records containing information of a personal nature where the public disclosure thereof would constitute a clearly unwarranted invasion of personal privacy."

23. The Confidential Information attached to the Supplemental Direct Testimony of Paul G. Smith contains individual customer usage data, and is similar to the individual customer usage data subject to Big Rivers' April 3, 2020 Motion for Confidential Treatment.

24. Because these customers are not parties to this proceeding, publicly revealing such information would constitute a clearly unwarranted invasion of personal privacy. Moreover, the Commission has previously granted confidential treatment to similar retail customer usage information. *See, e.g., In the Matter of: Sanctuary Church v. Louisville Gas and Electric Company*, Order, P.S.C. Case No. 2018-00181 (Jan. 8, 2019) (granting confidential treatment pursuant to KRS 61.878(1)(a) for an indefinite period to a retail customer's account and usage information); *In the Matter of: Application of Kentucky Utilities Company for an Adjustment of its Electric Rates*, Order, P.S.C. Case No. 2012-00221 (July 25, 2013) (holding customer names, account numbers, and usage information exempt from disclosure under KRS 61.878(1)(a)).

25. As such, Big Rivers requests confidential treatment for these customers in order to protect their private usage information.

III. Time Period

26. Big Rivers requests that the Confidential Information related to the financial projections remain confidential for a period of five (5) years from the date of this motion, at which time the Confidential Information should be sufficiently outdated so that it could not be used to competitively disadvantage Big Rivers. 807 KAR 5:001, Section 13(2)(a)(2).

27. Big Rivers requests that Confidential Information related to the individual customer usage remain confidential indefinitely to prevent causing an economic disadvantage or invasion of personal privacy of the third-party individual customers. *See, e.g.*, *In the Matter of: Riverside Generating Company, LLC v. Kentucky Power Company*, Order, P.S.C. Case No. 2017-00472 (May 16, 2019) (granting confidential treatment to customer specific information relating to purchases and transmission of electricity for an indefinite period); *In the Matter of: Sanctuary Church v. Louisville Gas and Electric Company*, Order, P.S.C. Case No. 2018-00181 (January 8, 2019) (granting confidential treatment for an indefinite period to detailed account and usage information of a non-party).

IV. Conclusion

28. Based on the foregoing, the Confidential Information is entitled to confidential protection. If the Commission disagrees, then the Commission should hold an evidentiary hearing to protect Big Rivers' due process rights and to supply

the Commission with a complete record to enable it to reach a decision with regard to this matter. *See Util. Reg. Comm'n v. Ky. Water Serv. Co., Inc.*, 642 S.W.2d 591 (Ky. App. 1982).

WHEREFORE, Big Rivers respectfully requests that the Commission classify and protect as confidential the Confidential Information.

This 29th day of May, 2020.

Respectfully submitted,

BIG RIVERS ELECTRIC CORPORATION

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Certification

I hereby certify that the electronic version of this filing made with the Commission on May 29, 2020, is a true and accurate copy of the paper document that will be submitted to the Commission within 30 days of the Governor lifting the state of the emergency pursuant to the Commission's Orders in Case No. 2020-00085, and the electronic version of the filing has been transmitted to the Commission. A copy of this filing has been served electronically on all parties of record for whom an email address is given in the online Service List for this proceeding, and there are currently no parties that the Commission has excused from participation by electronic means.

/s/ Edward T. Depp
Counsel to Big Rivers Electric Corporation

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COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

ELECTRONIC APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR APPROVAL TO MODIFY ITS MRSM TARIFF, CEASE DEFERRING DEPRECIATION EXPENSES, ESTABLISH REGULATORY ASSETS, AMORTIZE REGULATORY ASSETS, AND OTHER APPROPRIATE RELIEF	)	Case No. 2020-00064

MOTION OF BIG RIVERS ELECTRIC CORPORATION FOR LEAVE TO FILE SETTLEMENT AGREEMENT, STIPULATION, AND RECOMMENDATION AND SUPPORTING TESTIMONY

Big Rivers Electric Corporation ("Big Rivers"), by and through undersigned counsel, hereby respectfully moves the Kentucky Public Service Commission (the "Commission") for leave to file (i) a Settlement Agreement, Stipulation, and Recommendation among the parties (the "Settlement Agreement"), and (ii) supporting testimony. In support of this Motion, Big Rivers states as follows.

Big Rivers and the two intervenors to this proceeding, the Attorney General of the Commonwealth of Kentucky (the "Attorney General") and Kentucky Industrial Utility Customers, Inc. ("KIUC"), have had a number of discussions in an effort to resolve the remaining issues in this case. The product of these negotiations is the unanimous Settlement Agreement attached hereto as Exhibit A. The Supplemental Direct Testimony of Robert W. Berry, the Supplemental Direct Testimony of Paul G. Smith, and the Direct Testimony of Daniel M. Walker, respectively attached hereto as Exhibits B, C, and D, describes and supports the reasonableness of the Settlement Agreement. Big Rivers desires to submit the Settlement Agreement and supporting testimony into the record of this proceeding for the Commission's consideration and approval.

WHEREFORE, Big Rivers respectfully requests that the Commission enter an order granting Big Rivers leave to file the Settlement Agreement and supporting testimony filed with this Motion.

This 29th day of May, 2020.

Respectfully submitted,

BIG RIVERS ELECTRIC CORPORATION

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<u>Certification</u>

I hereby certify that the electronic version of this filing made with the Commission on May 29, 2020, is a true and accurate copy of the paper document that will be submitted to the Commission within 30 days of the Governor lifting the state of the emergency pursuant to the Commission's Orders in Case No. 2020-00085, and the electronic version of the filing has been transmitted to the Commission. A copy of this filing has been served electronically on all parties of record for whom an email address is given in the online Service List for this proceeding, and there are currently no parties that the Commission has excused from participation by electronic means.

/s/ Edward T. Depp
Counsel to Big Rivers Electric Corporation

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EXHIBIT A

<u>SETTLEMENT AGREEMENT, STIPULATION, AND RECOMMENDATION</u>

This Settlement Agreement, Stipulation, and Recommendation ("Agreement" or "Settlement Agreement") is entered into this 28th day of May, 2020, by and among the Attorney General of the Commonwealth of Kentucky ("Attorney General"), Big Rivers Electric Corporation ("Big Rivers"), and Kentucky Industrial Utility Customers, Inc. ("KIUC") with respect to *In the Matter of: Application of Big Rivers Electric Corporation for Approval to Modify its MRSM Tariff, Cease Deferring Depreciation Expenses, Establish Regulatory Assets, Amortize Regulatory Assets, and Other Appropriate Relief*, P.S.C. Case No. 2020-00064 (the "Proceeding"). The Attorney General, Big Rivers, and KIUC may be referred to herein individually as a "Party" and collectively as the "Parties."

WITNESSETH

WHEREAS, on February 28, 2020, Big Rivers filed an Application (the "Application") with the Kentucky Public Service Commission (the "Commission") in the Proceeding;

WHEREAS, in its Application, Big Rivers sought an order from the Commission:

(i) finding that the Wilson Station is "used and useful" for the benefit of Big Rivers' Members, authorizing Big Rivers to cease deferring the depreciation expenses for the Wilson Station into a regulatory asset as of December 31, 2020, and authorizing Big Rivers to collect depreciation expenses for the Wilson Station as of January 1, 2021;

(ii) authorizing Big Rivers to establish regulatory assets for the costs related to the retirement of the Coleman Station (the "Coleman Station Regulatory Asset") and Reid Station Unit 1 (the "Reid Station Unit 1 Regulatory Asset"), including the unrecovered net book value of the generating stations and all actual costs related to retirement, such as decommissioning costs, subject to the approval of the Rural Utilities Service ("RUS") to establish the same;

(iii) authorizing Big Rivers to recover through amortization the previously established Station Two Retirement Costs Regulatory Asset, the previously established Wilson Station Depreciation Deferral Regulatory Asset, the previously established Coleman Station Depreciation Deferral Regulatory Asset, the Coleman Station Regulatory Asset (subject to RUS's approval of its establishment), the Reid Station Unit 1 Regulatory Asset (subject to RUS's approval of its establishment), and the Focused Management Audit expenses incurred by Big Rivers, pursuant to KRS 278.255(3) (collectively, the "Smelter Loss Mitigation Regulatory Assets"), over a period no longer than through December 31, 2043, which is the date of expiration of the all-requirements contracts between Big Rivers and its Members; and

(iv) authorizing Big Rivers to modify its Member Rate Stability Mechanism ("MRSM") Tariff, including ceasing the accrual of the Demand Side Management ("DSM") regulatory liability in 2020, to provide a monthly bill credit to Big Rivers' Members and increased amortization of the Smelter Loss Mitigation Regulatory Assets following any calendar year in which Big Rivers' times interest earned ratio ("TIER") exceeds 1.30;

WHEREAS, on April 13, 2020, the RUS granted approval of the establishment of the Coleman Station Regulatory Asset and Reid Station Unit 1 Regulatory Asset;

WHEREAS, the Commission granted the Attorney General and KIUC full intervention in the Proceeding. The members of KIUC who are participating in this proceeding are Domtar Paper Co., LLC and Kimberly Clark Corporation. The individual rights of other KIUC member companies are not affected or limited by this Settlement Agreement;

WHEREAS, KIUC filed testimony in this Proceeding in which KIUC recommended that: Big Rivers' Application be approved; Big Rivers' Large Industrial Class ("LIC") rate design be adjusted to reflect full cost of service by increasing the demand charge to $18.731 per kW and lowering the energy charge to $24.75/MWh;

this new rate design shall not apply to coal mine customers or economic development load; this new rate design is revenue neutral to Big Rivers and the Rural Class; Kenergy Corp. ("Kenergy"), Meade County Rural Electric Cooperative ("MCRECC") and Jackson Purchase Energy Corporation ("JPEC")[1] shall be authorized to include their existing retail adders on the new LIC rate to keep them whole; the fuel adjustment clause allocation method between native load and off-system sales be maintained; Big Rivers should continue seeking mechanisms to lower the rates of the retail customers of its three Members; Big Rivers should make quarterly reporting filings to the Commission and the Parties; there should be established a prioritization of the write-down of the regulatory assets; and that Big Rivers should maintain a 20% Member Equity cushion throughout the term of this plan;

WHEREAS, the Attorney General did not file testimony in this matter, thus reserving his right to comment and provide the Commission any proposal for its consideration;

WHEREAS, the Parties have conducted discovery, reviewed documents provided in discovery, and reviewed the issues raised in this Proceeding and have reached a settlement of the case, including the issues raised therein, as embodied in this Agreement;

WHEREAS, the adoption of this Agreement will support the Commission's administrative efficiency and eliminate the need for the Parties to potentially expend significant resources litigating these proceedings;

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[1] JPEC, Kenergy, and MCRECC are collectively referred to herein as the "Members."

WHEREAS, the adoption of this Agreement not only mitigates the economic impacts of the COVID-19 pandemic by reducing cross-subsidies in the Large Industrial class, by reducing the TIER threshold for which Big Rivers will provide a TIER Credit benefit to its Members in calendar year 2020 from 1.45 to 1.30, by avoiding current increases to base rates, and by increasing the financial stability of Big Rivers, but it also provides longer-term benefits to the Members and their retail member-customers as described in Big Rivers' Application;

WHEREAS, the Parties recognize that if Big Rivers receives an investment grade credit rating from at least two of the three credit rating agencies then its borrowing costs will decline, and that concerns surrounding the economic effects of COVID-19 have made achieving an investment grade credit rating more difficult;

WHEREAS, the Parties recognize that the probability of achieving an investment grade credit rating is increased if Big Rivers' ratemaking TIER of 1.30 for purposes of this Agreement is as close as possible to an actual TIER of 1.30;

WHEREAS, in addition to Big Rivers' normal efforts to minimize the rates charged to its Members, Big Rivers will continue to explore ways to ease the economic burden on its Members and their retail member-customers arising from the COVID-19 pandemic, including the possibility of participating in government-sponsored programs to alleviate the economic effects of COVID-19, which could provide increased MRSM credits to the Members and their retail member-customers; and

WHEREAS, it is the position of the Parties that this Agreement is a fair, just, and reasonable resolution of all of the issues in the Proceeding, is supported by sufficient and adequate data and information, and should be approved by the Commission;

NOW, THEREFORE, for and in consideration of the premises and terms and conditions set forth herein, the Parties agree and stipulate as follows:

1. Capitalized terms used but not defined herein shall have the meanings set forth in Big Rivers' Application or in Big Rivers' tariff on file with the Commission.

2. The Parties recommend that the Commission grant, without change or condition except as provided herein, Big Rivers' request made in its Application that the Commission enter an order authorizing Big Rivers to:

(i) cease deferring the depreciation expenses for the Wilson Station as of December 31, 2020, and begin recovering the depreciation expenses through existing rates for Wilson Station as of January 1, 2021 because the Wilson Station is "used and useful" for the benefit of its Members;

(ii) cease deferring depreciation expenses of the Coleman Station as of the date of retirement;

(iii) establish a regulatory asset for the costs related to the retirement of the Coleman Station, including the unrecovered net book value and the actual costs related to retirement, such as decommissioning costs;

(iv) establish a regulatory asset for the costs related to the retirement of Reid Station Unit 1, including the unrecovered net book value and the actual costs related to retirement, such as decommissioning costs;

(v) recover, through an annual charge to depreciation and amortization expense, the amortization of the Smelter Loss Mitigation Regulatory Assets over a period no longer than through the end of the Member "all-requirements" contracts, December 31, 2043; and

(vi) modify its MRSM Tariff as proposed in its Application, except as provided herein, to establish the New TIER Credit, which provides that 50% of net margins above the margins needed to produce a 1.30 TIER will be utilized to reduce the unamortized balance of the Smelter Loss Mitigation Regulatory Assets through a charge to depreciation and amortization expense and the remaining 50% of net margins above the margins needed to produce a 1.30 TIER will be provided to Members as a Monthly Bill Credit.

3. The Parties recommend that Big Rivers not be required to make any changes to its depreciation rates or its fuel cost stacking methodology at this time.

4. In calculating its TIER for purposes of the New TIER Credit, Big Rivers shall be authorized to include economic development expenses, promotional advertising expenses, and Touchstone Energy dues in a cumulative annual amount not to exceed four hundred thousand dollars ($400,000).

5. The Parties recommend that in addition to the relief sought in Big Rivers' Application filed in the Proceeding, the Commission adopt the Large Industrial Class ("LIC") rate design described in this paragraph. Except for the LIC rate design applicable to service to the Members for their coal mine and oil industry customers ("Fossil Fuel Customers") and their load served under an economic development rate ("EDR"), the LIC rate design applicable to service to the Members for all other Large Industrial customers shall adjust to cost of service, as determined in KIUC's Direct and Settlement Testimony filed in this Proceeding. For service beginning the calendar year 2021, the LIC energy rate will be $33.267/MWh and the demand charge will be $13.406 per kW per month. The existing LIC rate design shall be maintained for service to the Members for their Fossil Fuel Customers and load served under an EDR until changed by Commission order.

6. This Agreement does not affect the current retail adders charged by the Members on LIC customers, nor does it prevent the Members from seeking to change

such adders. This Agreement also does not prevent any Party hereto from making appropriate filings with the Commission seeking a change in Big Rivers' rates to its Members.

7. The Attorney General agrees to the recommendations contained in Paragraph 5 of this Agreement since the changes affecting the LIC rate design are revenue neutral to the Rural Class.

8. The Parties further recommend that, for any year in which a Monthly Bill Credit is to be paid under the new MRSM Tariff, the margins to be credited through the Monthly Bill Credit shall be allocated between the Rural Class and the LIC in proportion to the revenues received from each class for the calendar year in which Big Rivers earned the margins, excluding revenue applicable to sales under an EDR as well as sales to which Big Rivers' Fuel Adjustment Clause is inapplicable. The portion of the Monthly Bill Credit allocated to the LIC shall be applied to Member bills based on kWh sales within the Large Industrial class, excluding sales under an EDR and sales to which Big Rivers' Fuel Adjustment Clause is inapplicable. The portion of the Monthly Bill Credit allocated to the Rural Class shall be applied to Member bills based on the number of retail customers served by each Member. An illustrative example of the application of Big Rivers' proposed MRSM Tariff incorporating the terms of this Agreement, including operation of the New Tier Credit, is attached hereto as Exhibit 1.

9. The Parties recommend that the Commission approve tariff changes for the Members to accomplish the purposes of this Agreement, including allocating any

MRSM credits received for the Rural Class to retail customers on a per customer basis and the new LIC rate design.

10. In 2021, and with no charge to net margins before 2021, Big Rivers agrees to record a one-time reduction in the balance of the Smelter Loss Mitigation Regulatory Assets as a charge to depreciation and amortization expense in the amount of eighty percent of its equity in excess of the minimum equity required by its loan covenants (the "Equity Headroom") as of December 31, 2020. Big Rivers estimates this amount as approximately $91 million in its Application at Paragraph 65, and the actual utilization of eighty percent of Equity Headroom will be determined as illustrated by Exhibit 6 to the Direct Testimony of Robert W. Berry, provided that Big Rivers' minimum equity level will be determined by Big Rivers' loan covenants in effect from time to time.

11. Big Rivers agrees to utilize the DSM regulatory liability accrued through December 31, 2019 to record a one-time amortization of the Smelter Loss Mitigation Regulatory Assets, and will cease recording the DSM regulatory liability in 2020.

12. The reduction in Smelter Loss Mitigation Regulatory Assets shall be prioritized in the following order so as to reduce the specific regulatory assets, until fully recovered:

a. Focused Management Audit Expenses
b. Wilson Station Deferred Depreciation
c. Coleman Station Deferred Depreciation

d. Reid Station Unit 1 Regulatory Asset

e. Station Two Regulatory Asset

f. Coleman Station Regulatory Asset

13. Starting in 2021 and each calendar year thereafter (through 2043), no later than February 28 of each calendar year, Big Rivers agrees to provide the Commission, the Attorney General, and KIUC with a report containing the following information:

a. its calculation of its year-end TIER for the prior calendar year;

b. the amount of adjusted net margins that will flow through the MRSM Rider as a credit to Big Rivers' Members during the following twelve months;

c. the amount Big Rivers will charge to depreciation and amortization expense for recovery of the Smelter Loss Mitigation Regulatory Assets in the prior calendar year, which will result in the reduction of the balance of Smelter Loss Mitigation Regulatory Assets;

d. the overall status of the amortization of the Smelter Loss Mitigation Regulatory Assets;

e. once investment grade ratings are received from at least two of the three rating agencies, all interest savings gained (annualized) as a result thereof;

f. the status of and anticipated decommissioning costs expected to be incurred by Big Rivers for each of the Coleman Station, Reid Station

Unit 1, and Station Two (including the total anticipated decommissioning costs of Station Two and Big Rivers' estimated share of such costs); and

g. a copy of any awarded proposal(s) for the decommissioning of the Coleman Station, Reid Station Unit 1, and Station Two in the prior year.

14. Big Rivers shall periodically explore and evaluate opportunities to mitigate the amount of future regulatory asset amortization expense in the retail rates of the Members, including the potential use of Equity Headroom.

15. In any future proceeding before the Commission, the Parties reserve their rights to advocate for the appropriate allocation and manner of recovery of the annual amortization of the Smelter Loss Mitigation Regulatory Assets, which allocation and manner of recovery may vary depending on factors including whether Big Rivers has in fact achieved the investment grade credit ratings that are a material object of this Application. In any appropriate future proceeding before the Commission, the Parties agree and acknowledge that they will stand by their representations in the settlement agreement approved in Case No. 2018-00146 and in this Proceeding. All Parties agree that full recovery of the Smelter Loss Mitigation Regulatory Assets should occur by the later of December 31, 2043, or the expiration of the Member all-requirements contracts.

16. The Agreement is not intended to, and does not, have any effect on the Commission's decision that Big Rivers' rates established in Case No. 2013-00199 were fair, just, and reasonable.

17. The Parties agree that this Agreement is subject to the acceptance of and approval by the Commission and the RUS, and they agree to act in good faith and to use their best efforts to secure these approvals. Following the execution of this Agreement, Big Rivers will file this Agreement with the Commission and the RUS together with a request that the Commission and the RUS consider and approve this Agreement without modification. If the Commission and RUS approve this Agreement without modification, the Parties each waive any right to appeal or file an action seeking review of or to seek reconsideration of any order of the Commission issued in accordance with this Agreement.

18. The Agreement shall in no way be deemed to divest the Commission of jurisdiction under Chapter 278 of the Kentucky Revised Statutes.

19. If the Commission does not accept and approve this Agreement in its entirety and without change, or if the Commission imposes conditions on its acceptance and approval that are unacceptable to any Party, then any adversely affected Party may withdraw from this Agreement within the statutory periods provided for rehearing and appeal of the Commission's order by: (i) giving notice of withdrawal to all other Parties; and/or (ii) timely filing for rehearing or appeal. If any Party timely seeks rehearing of or appeals the Commission's order, all Parties will continue to have the right to withdraw until the conclusion of all rehearings and appeals.

20. If the Agreement is voided or vacated for any reason after the Commission has approved the Agreement, none of the Parties will be bound by the Agreement.

21. If the RUS does not accept and approve this Agreement in its entirety and without change, or if the RUS imposes conditions on its acceptance and approval that are unacceptable to any Party, then any adversely affected Party may withdraw from the Agreement within seven (7) days of that Party's receipt of notification of RUS' non-approval or imposition of change or conditions, by the withdrawing Party giving written notice of its withdrawal to all other Parties. If any Party timely withdraws from the Agreement under this paragraph, then any other Party or Parties will continue to have the right to withdraw for seven (7) days after receiving the notice of withdrawal.

22. Upon the later of: (i) the expiration of the statutory periods provided for rehearing and appeal of the Commission's order; (ii) the conclusion of all rehearings and appeals; and (iii) the expiration of the withdrawal period following RUS' non-approval or imposition of changes or conditions, and except as otherwise provided herein, all Parties that have not withdrawn will continue to be bound by the terms of the Agreement as modified by the Commission or RUS.

23. Subsequent to obtaining all required Commission and RUS reviews and approvals, Big Rivers shall file with the Commission tariff amendments reflecting the tariff changes attached hereto as Exhibit 2. The Parties recommend that the Commission (i) approve the tariff revisions filed by Big Rivers pursuant to this

paragraph, as well as any tariff revisions filed by the Members to accomplish the purposes of this Agreement, including allocating any MRSM credits received for the Rural Class to retail customers on a per customer basis and the new LIC rate design, and (ii) allow the wholesale and retail tariff amendments to become effective upon filing with Commission.

24. For purposes of any hearing in the Proceeding, the Parties waive all cross-examination of the other Parties' witnesses except for purposes of supporting this Agreement unless the Commission or RUS disapproves or modifies this Agreement.

25. The undersigned for Big Rivers warrants that he or she is authorized to execute this Agreement on behalf of Big Rivers. Counsel for the Attorney General warrants that he or she is authorized to execute this Agreement on behalf of the Attorney General. Counsel for KIUC warrants that he or she has informed, advised, and consulted with the KIUC members participating in this proceeding (Domtar Paper Co., LLC and Kimberly Clark Corporation) in regard to the contents and the significance of this Agreement, and is authorized to execute this Agreement on behalf of those members.

26. In the Proceeding, each Party agrees to and will support the reasonableness of this Agreement before the Commission, and to cause its counsel to do the same, and in any appeal from the Commission's adoption and/or enforcement of the Agreement.

27. This Agreement shall not be deemed to constitute an admission by any Party that any computation, formula, allegation, assertion, or contention made by any other Party in the Proceeding is true or valid.

28. This Agreement shall inure to the benefit of and be binding upon the Parties hereto, their successors, and assigns.

29. This Agreement constitutes the complete agreement and understanding among the Parties hereto, and any and all oral statements, representations, or agreements made prior hereto or contemporaneously herewith shall be null and void and shall be deemed to have been merged into this Agreement.

30. The terms of this Agreement are based upon the independent analyses of the Parties, and reflect a fair, just, and reasonable resolution of the issues addressed herein; and the Parties request that the Commission approve the Agreement without change or condition.

31. This Agreement being a product of negotiation among all Parties, no provision of this Agreement shall be strictly construed in favor of or against any Party.

32. This Agreement shall not have any precedential value in this or any other jurisdiction.

33. This Agreement may be executed in multiple counterparts.

The Attorney General of Kentucky, by and through his Office of Rate Intervention

By: John G. Horne II

Name: John G. Horne, II
Executive Director

Big Rivers Electric Corporation

By: ____________________

Name: ____________________

Kentucky Industrial Utility Customers, Inc.

By: ____________________

Name: ____________________

16476869.1

The Attorney General of Kentucky, by and through his Office of Rate Intervention

By: ______________________________

Name: ______________________________

Big Rivers Electric Corporation

By: Robert W Berry

Name: Robert W. Berry

Kentucky Industrial Utility Customers, Inc.

By: ______________________________

Name: ______________________________

16476869.1

The Attorney General of Kentucky, by and through his Office of Rate Intervention

By: ______________________________

Name: ____________________________

Big Rivers Electric Corporation

By: ______________________________

Name: ____________________________

Kentucky Industrial Utility Customers, Inc.

By: ______________________________

Name: Michael L. Kurtz

16476869.1

EXHIBIT 1

Big Rivers Electric Corporation

Pro Forma 2019 Assuming New TIER Credit
($ 000's)

2019 New TIER Credit Calculation

Line	Description		Net Margins (a)	TIER (Note) (b)
1	Unadjusted Pre-New TIER Credit Net Margins		$ 44,457	
2	Add Back: Regulatory Exclusions			
3	Total Regulatory Exclusions Per Books	492		
4	Less: Allowed Regulatory Exclusions	-400		
5	Net Regulatory Exclusions Add Back		92	
6	Pre-New TIER Credit Net Margins		44,549	2.20
7	Less: Net Margins to Achieve 1.30 TIER		11,143	1.30
8	New TIER Credit		$ 33,406	0.90
9				
10	Allocation of New TIER Credit:			
11	Additional Smelter Reg Asset Amortization	50%	$ 16,703	
12	2020 Member Bill Credits	50%	$ 16,703	

Note: TIER based on 2019 long-term debt interest expense = $ 37,144

Rural vs. Large Industrial Allocation of Member Bill Credits

Line	Description	Total (c)	Rural (d)	Large Industrial (e)
1	2019 Total Member Revenue ($)	$ 256,280	$ 195,140	$ 61,140
2	Less: Economic Development and Non-FAC	(2,500)	-	(2,500)
3	2019 Revenue for MRSM Purposes ($)	$ 253,780	$ 195,140	$ 58,640
4	2019 Revenue for MRSM Purposes (%)		76.9%	23.1%
5				
6	2019 TIER Credit to be Billed in 2020 MRSM	$ 16,703	$ 12,843	$ 3,859
7				
8	2020 Rural Bill Credits ($)		$ 12,843	
9	Number of Rural Members		118,000	
10	Annual MRSM Credit ($/Member)		$ 108.84	
11	Monthly MRSM Credit ($/Member)		$ 9.07	
12				
13	2020 Large Industrial Bill Credits ($)			$ 3,859
14	2020 Sales Excluding EDR & Non-FAC (MWh)			950,000
15	MRSM Credit ($/MWh)			$ 4.06

Big Rivers Electric Corporation

Pro Forma 2019 Assuming New TIER Credit and TIER Below 1.30
($ 000's)

2019 New TIER Credit Calculation

Line	Description		Net Margins	TIER (Note)
			(a)	(b)
1	Unadjusted Pre-New TIER Credit Net Margins		$ 10,000	
2	Add Back: Regulatory Exclusions			
3	Total Regulatory Exclusions Per Books	492		
4	Less: Allowed Regulatory Exclusions	-400		
5	Net Regulatory Exclusions Add Back		92	
6	Pre-New TIER Credit Net Margins		10,092	1.27
7	Less: Net Margins to Achieve 1.30 TIER		11,143	1.30
8	New TIER Credit		$ (1,051)	(0.03)
9				
10	Allocation of New TIER Credit:			
11	Add'l Smelter Reg Asset Amortization/(Add Back)	n/a	$ (1,051)	
12	2020 Member Bill Credits	n/a	-	

Note: TIER based on 2019 long-term debt interest expense = $ 37,144

Rural vs. Large Industrial Allocation of Member Bill Credits

Line	Description	Total	Rural	Large Industrial
		(c)	(d)	(e)
1	2019 Total Member Revenue ($)	$ 256,280	$ 195,140	$ 61,140
2	Less: Economic Development and Non-FAC	(2,500)	-	(2,500)
3	2019 Revenue for MRSM Purposes ($)	$ 253,780	$ 195,140	$ 58,640
4	2019 Revenue for MRSM Purposes (%)		76.9%	23.1%
5				
6	2019 TIER Credit to be Billed in 2020 MRSM	$ -	$ -	$ -
7				
8	2020 Rural Bill Credits ($)		$ -	
9	Number of Rural Members		118,000	
10	Annual MRSM Credit ($/Member)		$ -	
11	Monthly MRSM Credit ($/Member)		$ -	
12				
13	2020 Large Industrial Bill Credits ($)			$ -
14	2020 Sales Excluding EDR & Non-FAC (MWh)			950,000
15	MRSM Credit ($/MWh)			$ -

EXHIBIT 2

Big Rivers Electric Corporation
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Standard Electric Rate Schedules – Terms and Conditions

DATE OF ISSUE ____________________
DATE EFFECTIVE ____________________

/s/ Robert W. Berry

ISSUED BY: Robert W. Berry,
President and Chief Executive Officer
Big Rivers Electric Corporation, 201 Third Street, Henderson, KY 42420

Big Rivers Electric Corporation
Table of Contents

Standard Electric Rate Schedules – Terms and Conditions

DATE OF ISSUE ____________
DATE EFFECTIVE ____________

/s/ Robert W. Berry

ISSUED BY: Robert W. Berry,
President and Chief Executive Officer
Big Rivers Electric Corporation, 201 Third Street, Henderson, KY 42420

STANDARD RATE - RDS – Rural Delivery Service – (*continued*)

Bill Format (*continued*)

Please see Section 4 – Definitions for certain terms used on this Bill Format.

MRSM ADJUSTMENT					00.00
CURTAILABLE SERVICE RIDER					00.00
RENEWABLE RESOURCE ENERGY	________	KWh times	$0.00	EQUALS	00.00
ADJUSTMENT	________	KWh times	$0.00	EQUALS	00.00
			TOTAL AMOUNT DUE		$ 00.00

[D]

- - - - - - - - LOAD FACTOR - - - - - - -		- - - - - - - - - - POWER FACTOR - - - - - - - - - -			
COIN.	BILLED	BASE	AVERAGE	@ PEAK	MILLS PER KWH
00.00%	00.00%	00.00%	00.00%	00.00%	00.00

DUE IN IMMEDIATELY AVAILABLE FUNDS ON OR BEFORE THE FIRST WORKING DAY AFTER THE 24TH OF THE MONTH

STANDARD RATE – LIC – Large Industrial Customer – (*continued*)

Pursuant to the Commission's Order dated __________ ____, 2020, in Case No. 2020-00064, the Monthly Delivery Point Rate at Big Rivers' Large Industrial Customer delivery points, shall be as outlined below. **[N]** **[N]** **[N]**

For service in calendar year 2020, the Monthly Delivery Point Rate for all Large Industrial Customer delivery points shall consist of: **[T]** **[T]**

A Demand Charge of:
All kW of billing demand at $10.7150 per kW **[T]**

plus, **[T]**

An Energy Charge of:
All kWh per month at $0.038050 per kWh.

For service beginning in the January 2021 service month, the Monthly Delivery Point Rate for all coal mine and oil industry customers and for load served under an Economic Development Rate shall consist of: **[N]**

A Demand Charge of:
All kW of billing demand at $10.7150 per kW

plus,

An Energy Charge of:
All kWh per month at $0.038050 per kWh.

STANDARD RATE – LIC – Large Industrial Customer – (*continued*)

For service beginning in the January 2021 service month, the Monthly Delivery Point Rate for all Large Industrial Customer delivery points, *excluding* coal mine and oil industry customers and load served under an Economic Development Rate, shall consist of: **[N]**

A Demand Charge of:
All kW of billing demand at $13.4060 per kW

plus,

An Energy Charge of:
All kWh per month at $0.033267 per kWh.

No separate transmission or ancillary services charges shall apply to these rates.

STANDARD RATE – LIC – Large Industrial Customer – (*continued*) **[N]**

Charges:

Each month, each Member Cooperative shall pay on behalf of each of its large industrial customers taking service under this rate schedule a demand charge calculated by multiplying the demand charge by the higher of the maximum integrated metered thirty-minute non-coincident peak demand or the established contact demand, if any, plus an energy charge calculated by multiplying the energy charge by the metered consumption of kWh in that month.

The Following adjustment clauses and riders shall apply to service under this tariff.

Voluntary Price Curtailable Service Rider
Renewable Resource Energy Service
Rebate Adjustment
Environmental Surcharge
Fuel Adjustment Clause
Member Rate Stability Mechanism
Unwind Surcredit
Non-Smelter Non-FAC PPA
Rural Economic Reserve Rider

Billing:

Big Rivers shall bill Member no later than the first working day after the 13th of the month for the previous month's service hereunder for Large Industrial Customers. Member shall pay Big Rivers in immediately available funds on the first working day after the 24th of the month. If Member shall fail to pay any such bill within such prescribed period, Big Rivers may discontinue delivery of electric power and energy hereunder upon five (5) days written notice to Member of its intention to do so. Such discontinuance for non-payment shall not in any way affect the obligation of Member to pay the take-or-pay obligation of a particular Large Industrial Customer.

STANDARD RATE – LIC – Large Industrial Customer – (*continued*)

Bill Format (*continued*)

Please see Section 4 – Definitions for certain terms used on this Bill Format.

MRSM ADJUSTMENT						00,000.00
CURTAILABLE SERVICE RIDER						00,000.00
RENEWABLE RESOURCE ENERGY	0,000,000	KWh times	$0.000000	EQUALS		00,000.00
REBATE ADJUSTMENT						00,000.00
ADJUSTMENT	0,000,000	KWh times	$0.000000	EQUALS		00,000.00
				SUBTOTAL	$	00,000.00
				TOTAL AMOUNT DUE	$	00,000.00

[D]

- - - - - - - - LOAD FACTOR - - - - - - -		- - - - - - - - - - POWER FACTOR - - - - - - - - - -			
ACTUAL.	BILLED	BASE	AVERAGE	@ PEAK	MILLS PER KWH
00.00%	00.00%	00.00%	00.00%	00.00%	00.00

DUE IN IMMEDIATELY AVAILABLE FUNDS ON OR BEFORE THE FIRST WORKING DAY AFTER THE 24TH OF THE MONTH

DATE OF ISSUE ______________________
DATE EFFECTIVE ______________________

/s/ Robert W. Berry

ISSUED BY: Robert W. Berry,
President and Chief Executive Officer
Big Rivers Electric Corporation, 201 Third Street, Henderson, KY 42420

MRSM – Member Rate Stability Mechanism

Applicability:

Applicable in all territory served by Big Rivers' Member Cooperatives.

Availability:

Available pursuant to Section 3 – Special Rules, Terms, and Conditions: Discount Adjustment of this tariff for all service under Standard Rate Schedule RDS and Standard Rate Schedule LIC. **[T]**

Definitions:

Please see Section 4 for definitions common to all tariffs.

For the period through the December 2020 service month: **[T]**

Member Rate Stability Mechanism:

Big Rivers originally established an Economic Reserve of $157 million pursuant to the Commission's Order dated March 6, 2009, in Case No. 2007-00455. Big Rivers shall deposit the transmission revenues it receives from Century-Hawesville into the Economic Reserve through November 30, 2020. The transmission revenues are allocated 79.2% to the Rural class and 20.8% to the Large Industrial class. The MRSM credit will draw from the applicable accounts containing transmission revenues to provide a credit to each Member during a month. The credit owed to the Large Industrial class shall be allocated to each Member based on kWh sales within the Large Industrial class, and the credit owed to the Rural class shall be based on the number of retail customers served by each Member; in each case, however, such change shall be effective only in coordination with the effective date of each Member's corresponding tariff revision.

MRSM – Member Rate Stability Mechanism – (*continued*)

For the period beginning with the January 2021 service month: **[N]**

Member Rate Stability Mechanism:

Pursuant to the Commission's Order dated __________ ____, 2020, in Case No. 2020-00064, beginning with calendar year 2020, once Big Rivers completes its year-end financial statements after the end of a calendar year, Big Rivers shall record a member rate credit liability equal to 50% of Adjusted Net Margins in excess of a 1.30 Times Interest Earned Ratio ("TIER") for that calendar year ("TIER Credit").

Adjusted Net Margins shall equal Big Rivers' calendar year Net Margins, before the TIER Credit, and after excluding expenses related to "promotional advertising, political advertising, or institutional advertising" as defined in 807 KAR 5:016, lobbying costs, and donations, or to one-time charges related to the amortization of equity headroom. Big Rivers shall, however, include in the calculation of Adjusted Net Margins economic development expenses, promotional advertising expenses, and Touchstone Energy dues in a cumulative annual amount not to exceed four hundred thousand ($400,000).

The TIER Credit will be allocated to the Rural class and the Large Industrial class based on Member revenues during the calendar year, excluding revenue associated with sales under an economic development rate and sales to which Big Rivers' Fuel Adjustment Clause is inapplicable.

The TIER Credit will be credited to Members through the MRSM in equal amounts over the following twelve (12) consecutive months. The credit each month within the Large Industrial class shall be applied to each Member based on kWh sales excluding sales under an economic development rate and sales to which Big Rivers' Fuel Adjustment Clause is inapplicable. The credit each month within the Rural class shall be applied to each Member based on the number of retail customers serviced by each Member.

If Big Rivers is able to fully amortize the balance of the regulatory assets that the Commission authorized Big Rivers to amortize in Case No. 2020-00064, then the TIER Credit shall equal 100% of Adjusted Net Margins in excess of a 1.30 TIER.

MRSM – Member Rate Stability Mechanism – (*continued*)

For the period beginning with the January 2021 service month (*continued*): **[N]**

Smelter Loss Mitigation Regulatory Assets:

Pursuant to the Commission's Order dated __________ ____, 2020, in Case No. 2020-00064, beginning with calendar year 2020, once Big Rivers completes its year-end financial statements after the end of a calendar year, Big Rivers shall record an amortization expense equal to 50% of Adjusted Net Margins in excess of a 1.30 TIER for that calendar year, to be applied against its Smelter Loss Mitigation Regulatory Assets. Big Rivers shall prioritize its amortization of its Smelter Loss Mitigation Regulatory Assets – as defined in, and as authorized by, the Commission's Order in Case No. 2020-00064 – in the following order so as to reduce the specific regulatory assets until fully recovered:

1. Focused Management Audit Expenses,
2. Wilson Station Deferred Depreciation,
3. Coleman Station Deferred Depreciation,
4. Reid Station Unit 1 Regulatory Asset,
5. Station Two Regulatory Asset, *and*
6. Coleman Station Regulatory Asset.

MRSM – Member Rate Stability Mechanism – (*continued*)

[T]

Tariff Sheet CANCELLED

Reserved for Future Use

EXHIBIT B

ORIGINAL

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF BIG RIVERS ELECTRIC	)	
CORPORATION FOR APPROVAL TO	)	
MODIFY ITS MRSM TARIFF, CEASE	)	
DEFERRING DEPRECIATION EXPENSES,	)	Case No.
ESTABLISH REGULATORY ASSETS,	)	2020-00064
AMORTIZE REGULATORY ASSETS, AND	)	
OTHER APPROPRIATE RELIEF	)	

SUPPLEMENTAL DIRECT TESTIMONY

OF

ROBERT W. BERRY
PRESIDENT AND CHIEF EXECUTIVE OFFICER

ON BEHALF OF

BIG RIVERS ELECTRIC CORPORATION

FILED: May 29, 2020

SUPPLEMENTAL DIRECT TESTIMONY

OF

ROBERT W. BERRY

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SUPPLEMENTAL DIRECT TESTIMONY
OF
ROBERT W. BERRY

I. INTRODUCTION

Q. Please state your name, business address, and position.

A. My name is Robert W. Berry. I am employed by Big Rivers Electric Corporation ("Big Rivers"), 201 Third Street, Henderson, Kentucky 42420, as its President and Chief Executive Officer.

Q. Did you provide direct testimony in this proceeding?

A. Yes.

Q. What is the purpose of your supplemental direct testimony?

A. The purpose of my testimony is to sponsor and support the Settlement Agreement, Stipulation, and Recommendation (the "Settlement Agreement") among the parties to this proceeding. The Settlement Agreement is being filed with this testimony.

Q. Is Big Rivers providing any additional testimony in support of the Settlement Agreement?

A. Yes. In addition to my testimony, Paul G. Smith, Big Rivers' Chief Financial Officer, and Daniel M. Walker, who has vast experience with cooperative finance and the credit rating agencies and who participated in Big Rivers' last base rate proceeding (Case No. 2013-00199), will provide testimony regarding the merits of the New TIER Credit as unanimously agreed upon in the Settlement Agreement. Specifically, Mr. Smith and Mr. Walker will provide testimony explaining how the New TIER Credit is designed to ensure it is viewed positively by the credit rating agencies, especially when compared to possible alternatives, while also allowing Big Rivers to maintain strong financial metrics.

II. THE SETTLEMENT AGREEMENT

Q. Is the Settlement Agreement unanimous?

A. Yes, the Settlement Agreement is unanimous among the parties to this proceeding. Big Rivers is the applicant, and only two parties sought intervention in this proceeding: the Attorney General of the Commonwealth of Kentucky (the "Attorney General") and Kentucky Industrial Utility Customers, Inc. ("KIUC"). Big Rivers, the Attorney General, and KIUC are all parties to the Settlement Agreement.

Q. Does the Settlement Agreement address all issues in this proceeding?

A. Yes. Big Rivers filed its Application in this proceeding on February 28, 2020 (the "Application") primarily seeking to create regulatory assets related to generation facilities to be retired, recover certain regulatory assets, and to revise its Member Rate Stability Mechanism ("MRSM") tariff. The overall purpose of the relief requested in Big Rivers' application was two-fold: (i) to regain Big Rivers' investment grade ratings from the credit rating agencies; and (ii) to return the benefits of an investment grade rating and the success of Big Rivers' Load Mitigation Plan to our Members and their customers, not only through reduced interest expense but also through both a Monthly Bill Credit and an increased amortization of the Smelter Loss Mitigation Regulatory Assets. Big Rivers' proposal allows all of these short- and long-term benefits to be provided to our Members without a corresponding increase in base rates.

Specifically, the Application sought the following relief:

(1) a finding that the Wilson Station is "used and useful" for the benefit of Big Rivers' Members, authorizing Big Rivers to cease deferring the depreciation expenses for the Wilson Station into a regulatory asset as of December 31, 2020, and authorizing Big Rivers to collect depreciation expenses for the Wilson Station as of January 1, 2021;

(2) authorizing Big Rivers to establish regulatory assets for the costs related to the retirement of the Coleman Station (the "Coleman Station Regulatory Asset") and Reid Station Unit 1 (the "Reid Station Unit 1 Regulatory Asset"), including the unrecovered net book value of the generating stations and all actual costs related to retirement, such as decommissioning costs;

(3) authorizing Big Rivers to recover through amortization the previously established Station Two Regulatory Asset, the previously

established Coleman Station Depreciation Deferral Regulatory Asset, the Coleman Station Regulatory Asset, the Reid Station Unit 1 Regulatory Asset, and the Focused Management Audit expenses incurred by Big Rivers pursuant to KRS 278.255(3) (collectively, the "Smelter Loss Mitigation Regulatory Assets"), over a period no longer than through December 31, 2043, which is the date of expiration of the all-requirements contracts between Big Rives and its Members;

(4) authorizing Big Rivers to modify its MRSM tariff, including ceasing the accrual of the Demand Side Management ("DSM") regulatory liability in 2020, to provide a monthly bill credit to Big Rivers' Members and increased amortization of the Smelter Loss Mitigation Regulatory Assets following any calendar year in which Big Rivers' times interest earned ratio ("TIER") exceeds 1.30; and

(5) to authorize each of the requested relief items (1) through (4) above without increasing Member rates.

In addition to the affirmative relief sought in the Application, Big Rivers filed an updated depreciation study, the implementation of which would not materially affect Big Rivers' or its Members, and also explained why no change to Big Rivers fuel cost allocation methodology was needed.

Q. Did KIUC file testimony in this proceeding in its capacity as an intervenor?

A. Yes. KIUC filed testimony in this proceeding recommending that:

(i) Big Rivers' Application be approved;

(ii) Big Rivers' Large Industrial Class ("LIC") rate design be adjusted as follows:

(a) that the LIC rate design be adjusted to reflect full cost of service by increasing the demand charge to $18.731 per kW and lowering the energy charge to $24.75/MWh;

(b) that the new rate design shall not apply to coal mine customers or economic development load;

(c) that the new LIC rate design is revenue neutral to Big Rivers and the Rural Class; and

(d) that Big Rivers' Members be authorized to include their existing retail adders on the new LIC rate;

(iii) Big Rivers should continue seeking mechanisms to lower the rates of the retail customers of Big Rivers' Members;

(iv) Big Rivers should make quarterly reporting filings to the Commission and the Parties;

(v) there should be established a prioritization of the write-down of the Smelter Loss Mitigation Regulatory Assets; and

(vi) that Big Rivers should maintain a 20% Member Equity cushion throughout the term of this plan.

Q. Did the Attorney General file testimony or comments in this proceeding?

A. No.

Q. Has any party objected to the relief sought in Big Rivers' application?

A. No. To the contrary, the intervenors have supported the fundamental proposals and objectives of Big Rivers' application, and Big Rivers has worked with them to implement certain modifications that they believe would be beneficial to the Rural and Large Industrial ("LIC") classes. Consequently, the only issues outstanding in this proceeding are: (i) KIUC's request for a change in Big Rivers' LIC rate design; (ii) KIUC's request that Big Rivers continue to seek mechanisms to lower the rates of the retail customers of Big Rivers' Members; (iii) KIUC's request that Big Rivers make quarterly informational filings to the Commission and the Parties; (iv) KIUC's request that Big Rivers should establish a prioritization of the write-down of the Smelter Loss Mitigation Regulatory Assets; and (v) KIUC's request that Big Rivers should maintain a 20% Member Equity cushion through the term of this plan.

The Settlement Agreement resolves all of these issues by:

- the parties recommending that Big Rivers' LIC rate design be updated to reflect cost of service based upon the rates specified in KIUC's Post Informal Conference Data Request Response and in KIUC's testimony filed in support of the Settlement Agreement;
- Big Rivers committing to continue exploring mechanisms to lower the retail rates of its Members, including but not limited to the possible use of Member equity;
- Big Rivers agreeing to make annual informational filings with the Commission and the Parties; and
- prioritizing the write-down of the Smelter Loss Mitigation Regulatory Assets.

In addition to resolving the outstanding issues in this proceeding, the Settlement Agreement also addresses and resolves various issues that arose during settlement discussions including:

- a recommendation that the Monthly Bill Credit be allocated to the Rural Class based upon a per customer credit, rather than based upon energy usage as proposed in Big Rivers' Application;
- the parties' agreement to support full recovery of the Smelter Loss Mitigation Regulatory Assets by December 31, 2043, but reserving the right to propose different methodologies for allocation and recovery of those assets in a future proceeding; and

- the parties' agreement to allow Big Rivers to include $400,000 of regulatory expenditures in its TIER calculation for the purposes of determining the New TIER Credit to promote economic development and further improve Big Rivers' credit profile.

The specific terms of the Settlement Agreement, including an explanation as to why the terms result in fair, just, and reasonable rates to Big Rivers' Members, is discussed later in this testimony.

A. THE COMMISSION SHOULD APPROVE THE SETTLEMENT AGREEMENT AS IT PERTAINS TO THE RELIEF SOUGHT IN BIG RIVERS APPLICATION.

Q. Why should the Commission grant the relief requested in Big Rivers' Application?

A. As is fully explained in Big Rivers' Application and the Direct Testimony filed in support of the Application, the Commission should grant Big Rivers the relief requested in its Application because the proposed relief will result in significant benefits to Big Rivers' Members.

First, allowing Big Rivers to recover the depreciation expenses associated with the Wilson Station will benefit the members because Big Rivers will be able to stop accruing those expenses into a regulatory asset account, which would ultimately need to be recovered at a later date if they continued to accrue. Big Rivers will begin to immediately recognize those depreciation expenses without a corresponding increase in base rates.

Second, allowing Big Rivers to establish regulatory assets related to the retirement of Coleman Station and Reid Station Unit 1 would be beneficial to Members because it would avoid Big Rivers having to write-off the remaining, undepreciated book value of the historical capital investment in those stations. Having to write-off the remaining net book value of these assets could have significant adverse consequences to Big Rivers and its Members, including:

- very likely causing Big Rivers to default on its credit agreements;
- correspondingly reducing Bondable Additions under Big Rivers' Indenture, which reduces the amount of new debt Big Rivers can issue under the Indenture; and
- signaling to the credit rating agencies a loss of constructive regulatory support.

Third, as is more fully explained in the Supplemental Direct Testimony of Mr. Smith, Commission approval for Big Rivers to recover the Smelter Loss Mitigation Regulatory Assets is critical to Big Rivers' efforts to regain and maintain its investment grade credit ratings. The credit rating agencies have consistently indicated that Commission approval for Big Rivers to recover its significant regulatory asset balances is one of the factors that could allow Big Rivers to achieve an improved credit rating.

Fourth, the Commission should approve the revisions to Big Rivers' MRSM Tariff as proposed in the Settlement Agreement because the revisions will provide Big Rivers' Members with both short-term and long-term benefits by expanding and improving upon the TIER Credit previously approved by the Commission in Case No. 2018-00146 (the "Station Two Case"). Under the New TIER Credit, instead of providing a credit equal to net margins in excess of a 1.45 TIER as was approved in the Station Two Case, Big Rivers' Members will be owed a credit equal to Adjusted Net Margins that exceed a 1.30 TIER. Fifty percent of this credit will flow through the MRSM tariff as a Monthly Bill Credit, representing a short-term benefit; the remaining 50% of Adjusted Net Margins will be utilized to further reduce the balance of the Smelter Loss Mitigation Regulatory Assets, representing the long-term benefit of a reduced regulatory asset balance. Thus, the New TIER Credit mitigates both the possibility of a future base rate increase, as well as the extent of any such potential increase. It is also expected to help Big Rivers regain investment grade credit ratings from all three major credit rating agencies, and that development, in turn, will help Big Rivers reduce its interest rate expenses.

Finally, the Commission should allow Big Rivers' depreciation rates and fuel stacking methodology to remain as they currently exist, as any revisions to Big Rivers' depreciation rates or fuel stacking methodology would have only a marginal effect on Big Rivers' rates. Thus, revisions would offer little to no benefit to Big Rivers' Members.

Q. Does the Settlement Agreement further the goals of Big Rivers' Load Mitigation Plan?

A. Yes. When taking a "big picture" view of the relief requested in this proceeding, it provides Big Rivers' Members multiple benefits and highlights the successes of Big Rivers' implementation of its Load Mitigation Plan, which Big Rivers seeks to share with its Members through this proceeding. Indeed, if the Commission grants the relief requested in this proceeding, Big Rivers will implement a New TIER Credit that will allow Big Rivers' Members to be provided a bill credit based upon a lower TIER threshold in 2020 than what was approved in the Station Two Case, and improve Big Rivers' likelihood of regaining its investment grade credit ratings – all without Big Rivers having to increase base rates – and while annually incurring an additional $67 million in expenses. During uncertain economic times like the COVID-19 pandemic has caused, these benefits are especially important to the Members, their customers, and Big Rivers.

Q. Can you elaborate on the additional expenses Big Rivers is proposing to incur without a base rate case?

A. Yes. If the Settlement Agreement is approved, Big Rivers will absorb the following annual expenses, all without a base rate increase:

- Wilson Station O&M Expenses: $34 million
- Wilson Station Depreciation: $21 million

- Smelter Loss Mitigation Regulatory Asset Amortization: $12 million

Avoiding a rate case also, of course, helps conserve limited Commission and intervenor resources while also resulting in significant savings of time and money for Big Rivers, as well as the recovery of rate case expenses from Members.

Accordingly, Big Rivers appreciates the Commission's expedited review of its Application to revise the MRSM tariff in this proceeding, which allows Big Rivers to provide significant benefits to its Members on a cost-effective and timely basis.

B. THE COMMISSION SHOULD SUPPORT THE ADDITIONAL RELIEF AGREED UPON IN THE SETTLEMENT AGREEMENT AS NEGOTIATED BY THE PARTIES.

Q. Why should the Commission approve a change in Big Rivers' LIC rate design as proposed by KIUC?

A. As is more fully addressed in the testimony submitted by KIUC in support of the Settlement Agreement, KIUC has proposed a rate design change to Big Rivers' LIC tariff that KIUC asserts will move the rates charged to Big Rivers' LIC class to more closely reflect the cost of service. This rate design change is revenue neutral to Big Rivers based on 2013 billing determinants, and will not affect the rates charged to the Rural Class at this time. Accordingly, Big Rivers has no objection to KIUC's proposed rate design change, and it supports the

Commission's approval of the proposed rate design change as set forth in the parties' unanimous settlement agreement.

Q. Why is providing a "per customer" Monthly Bill Credit to the Rural Class beneficial to the Rural Class?

A. In the process of negotiating the unanimous settlement agreement among the parties, the Attorney General explained that residential customers attempt to minimize energy consumption, meaning they are the most poorly situated of all Rural Class customers to obtain a lasting benefit from the proposed changes to Big Rivers' MRSM tariff, which would have otherwise provided the Monthly Bill Credit based upon a "per kWh" energy usage basis.

By increasing the amount of energy savings available to residential customers, it also frees those energy savings for goods and services offered by other non-residential customers within Big Rivers' Rural Class. In other words, residential customer energy cost savings are likely to flow directly back to higher energy consuming customers within the Rural Class, largely through increased purchases at local businesses. That is a fair, just, and reasonable approach to endorse, especially during these unprecedented times. Based upon the Attorney General's views, the parties consequently agreed to stipulate to a "per customer" Monthly Bill Credit for the Rural Class.

C. THE REMAINING PROVISIONS OF THE SETTLEMENT AGREEMENT ARE REASONABLE.

Q. Are there any other provisions of the Settlement Agreement you wish to discuss?

A. Yes. The Settlement Agreement contains standard provisions found in settlement agreements in other Commission proceedings, including provisions describing the parties' rights and obligations in the event the Settlement Agreement is not approved or is changed by the Commission or the RUS.

Additionally, the Settlement Agreement contains commitments the parties are making to each other with respect to the Smelter Loss Mitigation Regulatory Assets. For example, the parties agree that the Smelter Loss Mitigation Regulatory Assets should be fully recovered by Big Rivers no later than December 31, 2043 (when the Members' contracts expire), but the parties reserve the right to propose alternative methods for how such recovery is allocated and the specific mechanism of recovery in a future proceeding. Furthermore, Big Rivers agrees that it will continue to periodically review ways to further reduce Member rates, which could include the possibility of utilizing Member equity.

Q. Is the Settlement Agreement subject to the approval of the Commission and the Rural Utilities Service?

A. Yes.

Q. Has Big Rivers discussed the Settlement Agreement with its Members?

A. Yes. Big Rivers informed the Members of the principal terms of the Settlement Agreement, and the Members were supportive of the Settlement Agreement. Also, Big Rivers' Board of Directors, which consists of two directors from each Member's Board, approved the Settlement Agreement.

III. CONCLUSION

Q. What are your conclusions and recommendations to the Commission in this proceeding?

A. The Settlement Agreement is a fair, just, and reasonable resolution of the issues in this proceeding. It provides short-term benefits to the Members through the Monthly Bill Credit, as well as long-term benefits through the accelerated amortization of Big Rivers' regulatory assets, which will further Big Rivers' efforts to regain and maintain three investment grade credit ratings.

Indeed, Big Rivers is on the precipice of regaining its investment grade credit ratings, due in part to the Commission's regulatory support over these nearly eight years since the first of the smelters gave notice that they were terminating their retail contracts. The Settlement Agreement addresses the two most prevalent concerns of the rating agencies, namely the balancing of Big Rivers' generation capacity and peak load, which will be accomplished with the retirement of the Coleman Station and Reid Station Unit 1, and the elimination of uncertainty regarding recovery of the regulatory assets established during Big Rivers' successful execution of its Load Mitigation Plan.

As is explained further in the Supplemental Direct Testimony of Mr. Smith and the Direct Testimony of Mr. Walker, approval of the Settlement Agreement will continue to demonstrate the Commission's credit supportive regulatory decisions, which is critical to Big Rivers' efforts to regain its investment grade credit ratings.

If Big Rivers is able to regain its investment grade credit ratings, Big Rivers' Members will further benefit under this proposal because the decreased interest expenses will reduce the required net margins to achieve a 1.30 TIER, meaning it is more likely the Members will be owed a Monthly Bill Credit, or a larger Monthly Bill Credit, under the proposed MRSM Tariff.

For these reasons, I request that the Commission approve the Settlement Agreement without change or conditions.

Q. Do you have any recommendations if the Commission does not approve the Settlement Agreement?

A. Yes. I recommend that if the Commission does not approve the Settlement Agreement, that the Commission grant Big Rivers' the relief as requested in its Application.

Q. Does this conclude your testimony?

A. Yes.

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC APPLICATION OF
BIG RIVERS ELECTRIC CORPORATION
FOR APPROVAL TO MODIFY ITS MRSM TARIFF,
CEASE DEFERRING DEPRECIATION EXPENSES,
ESTABLISH REGULATORY ASSETS,
AMORTIZE REGULATORY ASSETS, AND
OTHER APPROPRIATE RELIEF
CASE NO. 2020-00064**

VERIFICATION

I, Robert W. ("Bob") Berry, verify, state, and affirm that I prepared or supervised the preparation of the Supplemental Direct Testimony filed with this Verification, and that Supplemental Direct Testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry

Robert W Berry
____
Robert W. ("Bob") Berry

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Robert W. ("Bob") Berry on this the 29th day of May, 2020.

Joy P. Parsley
____
Notary Public, Kentucky State at Large

My Commission Expires _______________

Notary Public, Kentucky State-At-Large
My Commission Expires: July 10, 2022
ID: 604480

EXHIBIT C

ORIGINAL

Big Rivers ELECTRIC CORPORATION

Your Touchstone Energy® Cooperative

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF BIG RIVERS ELECTRIC	)	
CORPORATION FOR APPROVAL TO	)	
MODIFY ITS MRSM TARIFF, CEASE	)	
DEFERRING DEPRECIATION EXPENSES,	)	Case No.
ESTABLISH REGULATORY ASSETS,	)	2020-00064
AMORTIZE REGULATORY ASSETS, AND	)	
OTHER APPROPRIATE RELIEF	)	

SUPPLEMENTAL DIRECT TESTIMONY

OF

PAUL G. SMITH
CHIEF FINANCIAL OFFICER

ON BEHALF OF

BIG RIVERS ELECTRIC CORPORATION

FILED: May 29, 2020

SUPPLEMENTAL DIRECT TESTIMONY

OF

PAUL G. SMITH

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SUPPLEMENTAL DIRECT TESTIMONY
OF
PAUL G. SMITH

I. INTRODUCTION

Q. Please state your name, business address, and position.

A. My name is Paul G. Smith. I am employed by Big Rivers Electric Corporation ("Big Rivers"), 201 Third Street, Henderson, Kentucky 42420, as its Chief Financial Officer.

Q. Did you provide direct testimony in this proceeding?

A. Yes.

Q. What is the purpose of your supplemental direct testimony?

A. The purpose of my testimony is to support the Settlement Agreement, Stipulation, and Recommendation (the "Settlement Agreement") among the parties to this proceeding. Specifically, my testimony is intended to explain the financial benefits of Big Rivers' proposed relief based upon my experience as a financial executive in the utility industry and my experience working with the credit rating agencies and the credit opinions they have issued. The Settlement Agreement is being filed with this testimony.

Q. Are you sponsoring any exhibits?

A. Yes. The following exhibits were prepared by me or under my supervision:

- Exhibit Smith Supplemental-1: Moody's November 13, 2019 Credit Opinion
- Exhibit Smith Supplemental-2: 2016, 2017 & 2018 G&T Accounting & Finance Annual Directory TIER Survey
- Exhibit Smith Supplemental-3: S&P January 16, 2019 Credit Opinion
- Exhibit Smith Supplemental-4: Moody's July 27, 2018 Credit Opinion
- Exhibit Smith Supplemental-5: Fitch's December 4, 2019 Press Release
- Exhibit Smith Supplemental-6: Large Industrial Rate Design Impact

II. <u>THE SETTLEMENT AGREEMENT</u>

Q. Does the Settlement Agreement make any modifications to the New TIER Credit as proposed in Big Rivers' Application?

A. Yes, there were two modifications to the New TIER Credit as proposed in Big Rivers' application. As is explained in the Supplemental Direct Testimony of Robert W. Berry, during the course of settlement discussions the Attorney General requested that the Monthly Bill Credit be provided to the Rural Class on a "per customer" basis, rather than a "per kWh basis" as proposed in Big Rivers' Application. Additionally, as is fully explained below, the parties also agreed that Big Rivers' should be allowed to include up to $400,000 in certain regulatory expenses when calculating its TIER for the purpose of the New TIER Credit. Otherwise, the Settlement Agreement unanimously approves the

New TIER Credit as described in my Direct Testimony submitted with the Application in this proceeding.

Put simply, the New TIER Credit operates in the following manner. For each year in which Big Rivers' TIER exceeds 1.30, Big Rivers will provide its Members a Monthly Bill Credit over the twelve months following the close of the books for that year in an amount equal to 50% of the amount of the margins above a 1.30 TIER. The remaining 50% of the margins above a 1.30 TIER will be used to further reduce the outstanding balance of the Smelter Loss Mitigation Regulatory Assets.

For any year in which Big Rivers' TIER is below 1.30, Big Rivers will reduce the amortization of the Smelter Loss Mitigation Regulatory Asset in an amount that allows Big Rivers to achieve a 1.30 TIER. In any such year (which Big Rivers is not forecasting to occur in the near future), Big Rivers will not provide the Monthly Bill Credit.

Q. Why does the Settlement Agreement propose determining the New TIER Credit based upon a 1.30 TIER?

A. As was explained in my Direct Testimony, a 1.30 TIER was the TIER approved by the Commission in Big Rivers' last rate case.[1] Based upon Big Rivers' current financial position, its credit agreements, and communications with

[1] *See In the Matter of: Application of Big Rivers Electric Corporation for a General Adjustment in Rates Supported by Fully Forecasted Test Period*, Order, Ky. P.S.C. Case No. 2013-00199 (Apr. 25, 2014), at 32 ("We find that a TIER of 1.30X is reasonable and appropriate at this time. . . .").

ratings agencies Big Rivers believes that applying the New TIER Credit to net margins above a 1.30 is a reasonable threshold. In its most recent credit opinion, Moody's cited Big Rivers' steady margins for the past three years and their expectation that the improved financial performance is likely to be sustained.[2] The 1.30 threshold will allow Big Rivers to fully recover the Smelter Loss Mitigation Regulatory Assets prior to the expiration of the Members' all-requirements contracts on December 31, 2043 and to continue improving its financial performance, all without causing the need for a base rate increase.

Maintaining net margins and retaining earnings equal to a 1.30 TIER will ensure Big Rivers has an adequate amount of capital. Maintaining a minimum level of cash flow and capital above the required 1.10 margins for interest ratio ("MFIR") included in Big Rivers' Indenture allows Big Rivers to appropriately maintain its physical plants, to meet its service obligations, to remain in compliance with its debt covenants, and to ensure it has adequate cash on hand for any unexpected expenses.

Thus, applying the New TIER Credit based upon the 1.30 TIER will provide Big Rivers with a small buffer against unexpected circumstances, help ensure that Big Rivers maintains the necessary capital and equity required by its syndicated credit facility, and will help ensure that it has the financial

[2] Exhibit Smith Supplemental-1, Moody's November 13, 2019 Credit Opinion.

performance and capital needed to engender investment confidence from the credit markets, if necessary.

Q. Would determining the New TIER Credit based on a TIER lower than a 1.30 have any negative consequences?

A. Yes. If the New TIER Credit were determined based on a lower metric, whether using TIER or MFIR, which the rating agencies generally view synonymously, Big Rivers would not be afforded the opportunity to maintain a sufficient level of cash flow and capital to responsibly conduct its business. Indeed, the current pandemic has made abundantly clear the importance of maintaining a sufficient level of cash flow and capital to weather negative business cycles and unforeseen circumstances, as those businesses that are not sufficiently capitalized are struggling to survive. Furthermore, reducing financial metrics exacerbates financial struggles because this increases a company's risk as a borrower, making it more difficult to access liquidity in the credit market, especially during these uncertain economic conditions.

Maintaining sufficient financial performance also allows Big Rivers to undertake capital projects without incurring additional debt or by borrowing at more favorable terms and conditions, which benefits Big Rivers' Members through interest cost savings. Indeed, if the Commission approves the relief requested in this proceeding, Big Rivers believes it will be able to reduce its interest expenses, which will in turn lower the amount of Adjusted Net

Margins needed to reach a 1.30 TIER. This means it will be more likely that there will be a Monthly Bill Credit (or a larger Monthly Bill Credit) flowing back to the Members under Big Rivers' proposed New TIER Credit.

Maintaining an adequate level of financial performance could also mitigate the need for Big Rivers to seek a future base rate increase as a result of unforeseen future circumstances. For example, in the event of a destructive weather event, a New TIER Credit based upon a 1.30 TIER (as opposed to 1.1 MFIR or some other metric below 1.30 TIER) would diminish the chance that such circumstances could necessitate a base rate adjustment or additional borrowing (and associated interest expense) in order to cover the costs associated with restoring service to Big Rivers' Members.

Furthermore, the opportunity to earn margins equaling a 1.30 TIER is actually quite low for a generation and transmission ("G&T") cooperative, and is well below the 2016-2018 three-year median G&T TIER of 1.59, as summarized in the following table.[3]

	2018	2017	2016	3-Year Average
Big Rivers	1.39	1.32	1.31	1.34
National G&T Median	1.59	1.65	1.54	1.59
National G&T Average[4]	1.99	1.84	2.02	1.95

Finally, Big Rivers is required to earn a 1.10 MFIR or it will be in default under its Indenture. Currently, the difference between a 1.30 TIER and a 1.10

[3] 2016, 2017, & 2018 G&T Accounting & Finance Association Annual Directory, Exhibit Smith Supplemental-2.
[4] The average excludes the high and low results, which tend to be outliers.

MFIR (TIER and MFIR are almost always equal for Big Rivers), is only approximately $7 million. For a company with approximately $400 million in annual expenses, that is an extraordinarily slim margin of error. Thus, implementing the New TIER Credit based on a 1.30 TIER will be fair, just, and reasonable for Big Rivers' Members.

Q. Does Big Rivers' historical and prospective efforts to reduce its annual interest expense exacerbate the negative consequences if a TIER lower than 1.30 is approved for the New TIER Credit?

A. Yes. As summarized in the following table, successful execution of the Load Concentration Analysis and Mitigation Plan ("Load Mitigation Plan") afforded Big Rivers the opportunity to historically and prospectively reduce its annual interest expense, which correspondingly reduces the allowed net margins and the New TIER Credit threshold.

	2013 Rate Case	2019	2021 Post-Bond Re-issuance
Interest on Long-term Debt	$43,766	$37,144	[redacted]
Approved TIER	1.30	1.30	1.30
Approved Net Margins	$13,130	$11,143	[redacted]

Big Rivers' current rates approved in Case No. 2013-00199 ("2013 Rate Case") include an allowed annual interest expense of $43.8 million, which, at the approved 1.30 TIER, equates to an allowed net margins of $13.1 million. In 2019, Big Rivers was able to reduce its interest costs to $37 million, which corresponds to an allowed net margin of $11 million (or $2 million less than the level approved in its current rates). Additional interest rate savings from the forthcoming call and re-issuance of pollution control bonds will result in Big Rivers' approved net margins to be further reduced to $10 million, or approximately 25% below the level approved in the 2013 Rate Case.

In addition to the declining net margins attributable to the reduced interest expense, beginning in 2021 there will be additional downward pressure on Big Rivers' credit profile related to incremental annual expenses that were not included in the 2013 Rate Case. As is further explained in the Supplemental Direct Testimony of Mr. Berry, Big Rivers will absorb $67 million of annual costs related to Wilson Station and the amortization of the Smelter Loss Mitigation Regulatory Assets. Most importantly, Big Rivers will absorb such costs without seeking an increase in base rates.

Based on Big Rivers' historical and prospective reduction in interest expense, combined with absorbing an additional $67 million in costs that were not included in the 2013 Rate Case, I do not believe that approval of a TIER below 1.30 would be financially reasonable or prudent.

Q. Do you have an expectation as to how the credit rating agencies will view a Commission Order should it approve the New TIER Credit below a 1.30 TIER?

A. Yes. A Commission order that diminishes the amount of Big Rivers' allowed net margins below a 1.30 TIER is very likely to be viewed by the ratings agencies as a credit negative event and would almost certainly hinder Big Rivers' ability to achieve investment grade credit ratings. In fact, considering that the 2016-2018 median TIER among G&T cooperatives was 1.59 and the Commission has approved a 1.50 TIER for East Kentucky Power Cooperative, a Commission order that reduces Big Rivers' net margins would almost certainly be viewed negatively by the credit rating agencies as Big Rivers' net margins would be extremely low when compared across the industry and with the only other G&T cooperative within the Commonwealth. This is especially true when coupled with the fact that the Settlement Agreement recently approved by the Commission in Case No. 2018-00146 allowed Big Rivers to retain net margins below a 1.45 TIER. The credit rating agencies would likely view the shift from a 1.45 TIER to below 1.30 as a shift in the Commission's historical support of Big Rivers' efforts to mitigate the financial effects caused by the loss of the smelter load.

This concern is not merely hypothetical. S&P has already considered Big Rivers' current margins to be relatively weak, so further reduction of Big Rivers' margins is unlikely to be viewed positively. Specifically, S&P stated that "[a]lthough the regulator has provided rate adjustments that support adequate financial performance, we consider the financial margins to be weak relative to the magnitude of the utility's exposure to industrial loads and the vicissitudes of competitive wholesale markets."[5]

Furthermore, in Moody's latest credit report the very first factor that Moody's indicated could lead to a credit rating downgrade was as follows:

> A negative rating action is unlikely in the next two years because of the positive outlook; However, a negative rating action could result if there was a shift to a less credit supportive regulatory environment or if liquidity unexpectedly deteriorates.[6]

Thus, a Commission order that reduces Big Rivers' net margins below a 1.30 TIER is likely to be credit negative. This reduction could actually lead to a credit downgrade because it would lead to a deterioration in Big Rivers' liquidity while also, albeit perhaps unintentionally, signaling an erosion of regulatory support. At the very least, it would undermine the opportunity to achieve the credit upgrade that is a primary objective of this proceeding.

This conclusion finds further support not only in the Direct Testimony of Daniel M. Walker that is being filed in support of the settlement in this case but also in his Direct Testimony in the 2013 Rate Case. In the 2013 Rate Case, Mr. Walker noted: "It is fundamental that expected returns are directly related to the perceived risk of an investment. It follows that if the risk of a particular cooperative and other rated cooperatives are similar, their respective cost of

[5] S&P January 16, 2019 Credit Opinion, Exhibit Smith Supplemental-3, at p.3.
[6] Moody's Credit Opinion, dated November 13, 2019, attached as Exhibit Smith Supplemental-1, at p. 2 (emphasis added)

capital should be similar. . . . In other words, to attract capital it is reasonable to assume the lenders would expect cooperatives with similar risk to have similar financial performance."[7] Mr. Walker continued, "An immediate effect of low earnings and earnings of low quality is to increase the financial risks of investors, and thus lead to the downgrading of securities by the ratings agencies. Downgrading, in turn, means that the bonds must carry higher interest rates, a charge which is passed along to customers. . . . These additional capital costs force rate increases which would otherwise not be necessary, without improving the financial condition of the utilities or their ability to raise money on a low cost basis."[8]

Mr. Walker is not alone in emphasizing the importance of protecting Big Rivers' margins from reduction below the previously authorized 1.30 TIER. So, too, do the credit rating agencies. Specifically, Moody's – who has not yet given Big Rivers an investment grade credit rating – specifically noted the Commission's support of a 1.30 TIER as one of the credit positives, stating: "The KPSC rates approved in the April 2014 rate order are designed to enable Big Rivers to achieve a 1.3x [TIER], a level that is 20 basis points higher than the 1.1x margins for interest (MFI) essentially the equivalent of TIER, required as defined under Big Rivers' Indenture. The additional revenue

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[7] *In the Matter of: Application of Big Rivers Electric Corporation for a General Adjustment in Rates Supported by Fully Forecasted Test Period*, Direct Testimony of Dan Walker, P.S.C. Case No. 2013-00199 (June 28, 2013), at p. 7-8, available at: https://psc.ky.gov/PSCSCF/2013%20cases/2013-00199/20130628_Big_Rivers_Application_Volume_5_of_5.pdf.
[8] *Id.* at p. 12.

amounts to support Big Rivers' TIER at 1.3x is credit positive because the amounts help to partially offset certain other cost items not covered by the approved rate increases."[9]

Moreover, in its later credit profile in November 2019, Moody's again noted the importance of the credit supportive decisions from the Commission, which included approving rates based upon a 1.30 TIER. Moody's states, "Big Rivers' credit profile considers the fact that it is a rate regulated electric generation and transmission cooperative as compared to its peers, but this consideration is balanced by a series of credit supportive decisions from the Kentucky Public Service Commission . . . which has underpinned its strengthened financial metrics for 2016-18."[10]

Most recently, Moody's "Scorecard" noted that one of the only areas where Big Rivers has a characteristic that is considered investment grade is in its 1.30 TIER.[11] One other area on the "Scorecard" where Big Rivers' had a characteristic that is considered investment grade is its Debt Service Coverage ("DSC"). If the New TIER Credit were based on a TIER less than 1.30, the reduction would negatively affect Big Rivers' DSC, and this fact alone could also lead to a rating downgrade. Thus, a reduction in net margins (below a 1.30 TIER), could certainly have negative consequences for Big Rivers' credit

[9] Moody's July 27, 2018 Credit Opinion, Exhibit Smith Supplemental-4 at p. 6; *see also* Fitch's December 4, 2019 Press Release, Exhibit Smith Supplemental-5, at p. 1 ("If margins remain strong and leverage declines further, upward rating movement is possible.").
[10] Moody's November 13, 2019 Credit Opinion, at p. 1; *see also* Fitch's December 4, 2019 Press Release, Smith Supplemental Exhibit-5, at p. 1 (noting that one of the reasons for Big Rivers' improved rating was a "supportive regulatory regime").
[11] Moody's November 13, 2019 Credit Opinion, Exhibit Smith Supplemental-1, at p. 8.

ratings, as it would hurt those aspects of Big Rivers' financial position that the credit rating agencies currently view positively.

So, approving the New TIER Credit based upon a 1.30 TIER not only provides a modicum of protection for Big Rivers' ability to maintain sufficient levels of liquidity and capital, it directly signals to the rating agencies that Big Rivers has not lost the Commission's regulatory support.

Q. Did Big Rivers consider accruing 50% of Adjusted Net Margins above a 1.30 TIER into a regulatory liability account, as opposed to immediately recognizing an increased amortization expense of the Smelter Loss Mitigation Regulatory Assets?

A. Yes. Big Rivers considered requesting that the Commission allow it to establish a regulatory liability account instead of recognizing increased amortization as an immediate expense, but Big Rivers does not believe a regulatory liability account would provide the same benefits that are provided by the relief proposed in its Application and the Settlement Agreement. Most notably, Big Rivers believes that approval to immediately increase the amortization expense to further reduce the balance of its regulatory assets in years in which Big Rivers' TIER exceeds 1.30 is likely to result in a more positive outlook from the credit ratings agencies, as the high balance of Big Rivers regulatory assets is consistently noted as a concern.

Indeed, in 2019, Moody's noted that one of the factors that could lead to an upgrade is "if credit supportive regulatory treatment remains intact and there is future regulatory support for cost recovery of the increasing regulatory asset account which would avoid potential future write-offs while maintaining reasonably competitive rates."[12] The importance of the Commission's support for Big Rivers' request to increase its amortization expense in years in which its TIER exceeds 1.30 is evident in Moody's Credit Opinion summary, which noted that Big Rivers' "credit profile considers the fact that it is a rate regulated electric generation and transmission cooperative as compared to its peers, but this consideration is balanced by a series of credit supportive decisions from the Kentucky Public Service Commission (KPSC) which has underpinned its strengthened financial metrics. . . . [T]he cooperative is undertaking strategies . . . to seek assurances for cost recovery relating to its increasing regulatory assets in a rate neutral manner through regulatory filings with the KPSC."[13] Thus, the Commission's continued support of Big Rivers' and its efforts to successfully mitigate the smelter load loss is vital.

In fact, Moody's identified one of Big Rivers' most significant credit challenges as: "Increasing regulatory assets pose potential cost recovery and write-off risks if not adequately addressed as expected through regulatory proceedings."[14] It continued by noting that there would be pressure for a

[12] *Id.* at p. 2.
[13] *Id.* at 1.
[14] *Id.* at 2.

negative rating action if recovery of regulatory assets do not occur as expected.[15]

Thus, an immediate increased reduction in the balance of the Smelter Loss Mitigation Regulatory Assets as proposed in Big Rivers' Application is likely to have more positive benefits for Big Rivers than accruing any portion of the New TIER Credit in a regulatory liability account, which may or may not be utilized in the future to reduce the Smelter Loss Mitigation Regulatory Assets. An immediate recognition of increased amortization will ensure that Big Rivers' increases recovery of the Smelter Loss Mitigation Regulatory Assets – a key concern of the credit rating agencies – and will also signal the continued credit supportive decisions of the Commission, which will be credit positive for Big Rivers.

An increased reduction of the Smelter Loss Mitigation Regulatory Assets could also help ensure that Big Rivers is able to fully amortize the Smelter Loss Mitigation Regulatory Assets prior to 2043. This would allow Big Rivers' Members to receive an increased Monthly Bill Credit because, as proposed by Big Rivers, 100% of the New TIER Credit will be provided in the form of a bill credit when the Smelter Loss Mitigation Regulatory Assets are fully amortized.

[15] *Id.*

Q. Does the adjustable amortization element of the proposed New TIER Credit comport with generally accepted accounting principles?

A. Yes. Big Rivers is requesting to recover the annual amortization of the Smelter Loss Mitigation Regulatory Assets through existing rates. Thus, if the Commission grants Big Rivers the relief requested in this proceeding, the amortization expenses (which were historically incurred for purposes of serving Big Rivers' Members) will be included in allowable costs for ratemaking purposes, but will not require the typical necessity of requesting an additional base rate increase. Thus, Big Rivers' proposal is able to provide its Members with the long-term benefit of further decreasing the balance of the Smelter Loss Mitigation Regulatory Assets, which will ensure that Big Rivers is able to fully amortize the Smelter Loss Mitigation Regulatory Assets prior to the expiration of the Members' all-requirements contracts in December 2043. The Commission's approval of this guaranteed recovery of the Smelter Loss Mitigation Regulatory Assets will address one of the primary concerns of the credit rating agencies. Thus, the approval of this mechanism should lead to the additional benefits of regaining an investment grade credit rating without increasing base rates, and in compliance with all accounting standards.

Q. Why does the Settlement Agreement allow Big Rivers to include a limited amount of regulatory expenses in the TIER calculation for the purpose of determining the New TIER Credit?

A. During the course of negotiating the Settlement Agreement, the parties agreed that Big Rivers should be allowed to include up to $400,000 of actually incurred economic development expenses, promotional advertising expenses, and Touchstone Energy dues when determining Big Rivers' TIER for the purpose of the New TIER Credit because it will benefit Big Rivers' Members in multiple ways. First, the $400,000 amount is based on historical spending and includes Big Rivers' efforts to promote economic development in its service area. In its supplemental response to Commission Staff's Request for Information 2-7, Big Rivers provided a detailed list of these historical expenses, which the parties agree benefit Big Rivers' Members and the local community. For example, Big Rivers expended $1,500 to support Meade County RECC's Energy Efficiency Programs; invested $5,000 to support the Greater Paducah Economic Development Council; and expended $1,000 towards the Owensboro Community and Technical College's Annual Campaign. Big Rivers believes encouraging economic development is vital to the economy of western Kentucky and the financial well-being and stability of its Members, and will also allow Big Rivers to continue furthering the goals of its Load Mitigation Plan by seeking to increase its native load.

Second, the proposed LIC rate design is revenue neutral when calculated using the 2013 test period billing determinants, but results in a net revenue decrease of $266,000 when applied to the affected customers' 2019 billing determinants.[16] Absent inclusion of this limited amount of regulatory expenses in the TIER calculation, the benefit of the New TIER Credit to Big Rivers' Members would be reduced. Specifically, both the amount of excess net margins to be credited to Big River' Members and the additional amortization of the Smelter Loss Mitigation Regulatory Assets would be reduced every year.

Third, the regulatory exclusion threshold will help further Big Rivers' effort to regain an investment grade credit rating because including these expenses for the purposes of the New TIER Credit would make the TIER calculation closer to a true 1.30 TIER. Indeed, the credit rating agencies have previously noted the Commission's prior approval of a 1.30 TIER revenue requirement is a credit positive because it gives Big Rivers an opportunity to recover any additional expenses not included in the revenue requirement without conjuring the specter of default.[17] Thus, allowing Big Rivers to include these limited amount of expenses in its TIER calculation will signal to the credit rating agencies that the Commission is still supportive of Big Rivers, as well as Big Rivers' efforts to regain an investment grade credit rating.

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[16] Exhibit Smith Supplemental-6, Large Industrial Rate Design Impact.

[17] Moody's July 27, 2018 Credit Opinion, Exhibit Smith Supplemental-4, at 6 ("The KPSC rates approved in the April 2014 rate order are designed to enable Big Rivers to achieve a 1.3x times interest earned ratio (TIER), a level that is 20 basis points higher than the 1.1x margins for interest (MFI), essentially the equivalent to TIER, required as defined under Big Rivers' Indenture. The additional revenue amounts to support Big Rivers' TIER at 1.3x is credit positive because the amounts help to partially offset certain other cost items not covered by the approved rate increases. . . .").

Q. Does 807 KAR 5:016 prohibit Big Rivers from including up to $400,000 of regulatory expenses in its calculation of TIER for purposes of the New TIER Credit?

A. No. Although I am not an attorney, my understanding is that the Commission's regulations would not prevent Big Rivers from including up to $400,000 in regulatory expenses in its calculation of TIER for purposes of the New TIER Credit. Over the last several years, Big Rivers' MRSM tariff has included various mechanisms to provide bill credits or reductions in regulatory assets based on Big Rivers' TIER. The Commission has approved those mechanisms even though the TIER calculation for purposes of those mechanisms did not exclude the regulatory expenses. Additionally, the purpose of 807 KAR 5:016 "is to insure that no direct or indirect expenditures may be includable in a gas or electric utility's cost of service for rate-making purposes which are for promotional advertising, political advertising, or institutional advertising."[18] The parties are not requesting that the regulatory expenses be included in Big Rivers' cost of service for rate-making purposes. Rather, the parties are requesting the Commission approve a mechanism that will enable Big Rivers to pass through the benefits resulting from its successful implementation of the Load Mitigation Plan by utilizing margins above a certain level, while at the same time Big Rivers is reducing its regulatory asset balances, absorbing $67 million in annual expenses above those included in its base rates, and

[18] 807 KAR 5:016, Section 1.

remaining on a path to regaining its investment grade credit ratings, all without requesting a base rate increase.

III. CONCLUSION

Q. What are your conclusions and recommendations to the Commission in this proceeding?

A. The Settlement Agreement is a fair, just, and reasonable resolution of the issues in this proceeding. The Settlement Agreement addresses the most prominent concerns of the credit rating agencies and is intended to provide the most benefit to Big Rivers' credit profile. Despite being well below the TIER earned by Big Rivers' peers, by allowing Big Rivers to retain net margins equal to a 1.30 TIER, Big Rivers will be able to maintain solid financial metrics as monitored by the rating agencies. Enhancing Big Rivers' credit profile and maintaining solid financial metrics are important criteria to regaining and maintaining an investment grade credit rating – which will provide immediate and long-term interest rate savings to Big Rivers' Members in addition to providing greater access to capital markets at more favorable terms and conditions.

Furthermore, by implementing the New TIER Credit so that Big Rivers accelerates the amortization of the Smelter Loss Mitigation Regulatory Assets in years when its TIER exceeds 1.30, Big Rivers will address one of the credit rating agencies biggest concerns – a high regulatory asset balance combined with uncertainty of full recovery. Therefore, this proposal will provide the most benefits to Big Rivers' Members by allowing Big Rivers to immediately accelerate the reduction in the regulatory asset balance, as opposed to further delaying a decision regarding recovery of those balances through establishment of a regulatory liability account, for example (and thereby generating additional uncertainty in the credit markets about the same). This method will also ensure that the Smelter Loss Mitigation Regulatory Assets are fully amortized prior to the expiration of the Members' current all-requirement contracts, which the credit rating agencies are likely to view as credit positive.

In Case Nos. 2012-00535 and 2013-00199, many participants in this proceeding as well as many industry observers – including all three credit rating agencies – questioned Big Rivers' ability to avoid bankruptcy, let alone regain financially viability and an investment grade credit rating. The Settlement Agreement takes the final step to achieving financial stability by providing full recovery of the significant regulatory assets resulting from the departure of the smelters, which is being accomplished without requesting an increase to Member base rates.

All three credit rating agencies have published positive comments regarding the Commission's history of supportive regulatory decisions. The Commission's approval of the Settlement Agreement would reaffirm that Big Rivers continues to operate in a credit supportive regulatory environment.

For these reasons, I request that the Commission approve the Settlement Agreement without change or condition.

Q. Does this conclude your testimony?

A. Yes.

BIG RIVERS ELECTRIC CORPORATION

**ELECTRONIC APPLICATION OF
BIG RIVERS ELECTRIC CORPORATION
FOR APPROVAL TO MODIFY ITS MRSM TARIFF,
CEASE DEFERRING DEPRECIATION EXPENSES,
ESTABLISH REGULATORY ASSETS,
AMORTIZE REGULATORY ASSETS, AND
OTHER APPROPRIATE RELIEF
CASE NO. 2020-00064**

VERIFICATION

I, Paul G. Smith, verify, state, and affirm that I prepared or supervised the preparation of the Supplemental Direct Testimony filed with this Verification, and that Supplemental Direct Testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry

Paul Smith
____
Paul G. Smith

COMMONWEALTH OF KENTUCKY)
COUNTY OF HENDERSON)

SUBSCRIBED AND SWORN TO before me by Paul G. Smith on this the 29th day of May, 2020.

Joy P. Parsley
____
Notary Public, Kentucky State at Large

My Commission Expires ____________

Notary Public, Kentucky State-At-Large
My Commission Expires: July 10, 2022
ID: 604480

CASE NO. 2020-00064

EXHIBIT SMITH SUPPLEMENTAL-1

Moody's November 13, 2019 Credit Opinion

CREDIT OPINION

13 November 2019

Update

Rate this Research

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Big Rivers Electric Corporation

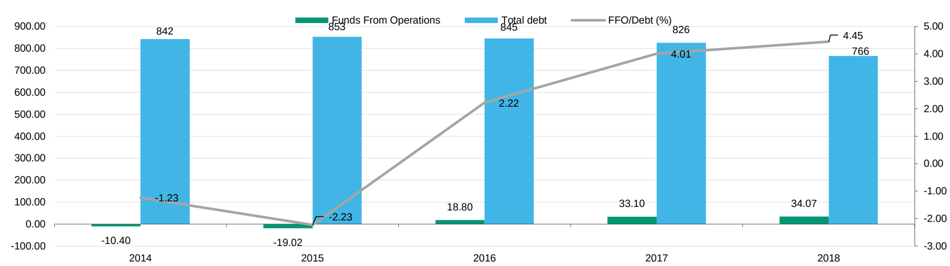
Update following outlook change to positive

Summary

Big Rivers Electric Corporation's (Ba1 positive) credit profile reflects improving prospects for mitigating the challenges posed by its ownership of a significant excess of mostly coal-fired generation capacity, some of which is idled, and its increasing regulatory asset balances. Big Rivers' credit profile considers the fact that it is a rate regulated electric generation and transmission cooperative as compared to its peers, but this consideration is balanced by a series of credit supportive decisions from the Kentucky Public Service Commission (KPSC) which has underpinned its strengthened financial metrics for 2016-18. Big Rivers' credit profile benefits from the ability to secure steadily increasing replacement loads following the termination of contracts with two aluminum smelters, including contracts that will continue to be phased in through 2022. Additionally, the cooperative is undertaking strategies to mitigate future refinancing risk relating to two long-term debt issues with bullet maturities due in 2023 and 2031 and to seek assurances for cost recovery relating to its increasing regulatory assets in a rate neutral manner through regulatory filings with the KPSC.

Exhibit 1

Historical FFO, Total Debt and FFO to Total Debt
($ in millions)



Source: Moody's Financial Metrics

Credit Strengths

» Contracted sales of excess capacity are being phased in over the next several years, including sales to a prospective steel plate manufacturing plant to be built by Nucor Corporation

» Limited new debt financing needs to support a moderate capital program, reliable net margins and no patronage capital returns to members support a strong balance sheet

» Regulatory support for timely and substantial recovery of existing costs of service bodes well for sustaining stronger financial metrics

» Long term wholesale power contracts with three member owners through 2043 produce a steady and predictable revenue stream from electricity sold to rural residential and other non-smelter industrial customers

Credit Challenges

» Maintaining customer satisfaction as bill credits have expired and the full impact of increases to the members' wholesale power rate has increased retail rates for members' customers

» Increasing regulatory assets pose potential cost recovery and write-off risks if not adequately addressed as expected through regulatory proceedings

» Elevated carbon transition risk because of significant dependence on mostly coal-fired, carbon-emitting, owned generation capacity, including idled capacity

» Executing strategies to address refinancing risk relating to two bullet maturities of long-term debt and sizable debt maturities beyond the term of certain existing power sales agreements with replacement loads following termination of contracts with the two aluminum smelters

» Local economic dependence on industrial activity, including two operating aluminum smelters and the prospective steel plate manufacturing plant to be built by Nucor

Rating Outlook

The positive rating outlook reflects a prevailing credit supportive regulatory environment and Big Rivers' improving prospects for sustaining its financial metrics at the stronger levels attained during 2016-18 while continuing to achieve better than expected progress in reducing its significant excess capacity created by the lost smelters load several years ago. The positive outlook also considers the cooperative's good prospects for reducing refinancing risk and limited new debt financing needs during the next three years, and incorporates the likelihood that the smelters will continue to operate and that the Nucor load will materialize, thus providing support for the local economy, including employment levels.

Factors that Could Lead to an Upgrade

» A rating upgrade is possible if credit supportive regulatory treatment remains intact and there is future regulatory support for cost recovery of the increasing regulatory asset account which would avoid potential future write-offs while maintaining reasonably competitive rates

» Achieving further successful financial results through ongoing strategies to mitigate refinancing risk and to better align the cooperative's capacity supply and load profile on a sustainable basis could also contribute to upward rating pressure

» Achieving stronger metrics to balance unique business and financial risks; for example, funds from operations (FFO) coverage of interest and debt improving to 2.4x and in a range of 6%-7%, respectively, with the debt service coverage (DSC) ratio tracking at close to 1.2x or better on a sustained basis

Factors that Could Lead to a Downgrade

» A negative rating action is unlikely in the next two years because of the positive outlook; However, a negative rating action could result if there was a shift to a less credit supportive regulatory environment or if liquidity unexpectedly deteriorates

» The pressure for a negative rating action would also increase if substantial and timely assurance for recovery of environmental compliance costs and increasing regulatory assets over time do not occur as expected under the KPSC approved environmental cost recovery mechanism and future KPSC regulatory proceedings

» A scenario under which either or both of the smelters discontinued operations or if the Nucor Corporation load does not materialize would be credit negative because of the potential residual negative effects on the local economy

» In terms of metrics, FFO to debt and DSC ratios below 4% and 1.2x, respectively, for a sustained period would pressure the rating

Key Indicators

Exhibit 2

Big Rivers Electric Corporation

Key Indicators

	2014	2015	2016	2017	2018
Times Interest Earned Ratio (TIER)	1.6x	1.3x	1.1x	1.3x	1.4x
DSC (Debt Service Coverage)	1.5x	1.2x	1.2x	1.2x	1.2x
FFO / Debt	-1.2%	-2.2%	2.2%	4.0%	4.4%
(FFO + Interest Expense) / Interest Expense	0.7x	0.5x	1.5x	1.8x	1.9x
Equity / Total Capitalization	34.9%	35.3%	36.0%	37.2%	39.6%

Source: Moody's Financial Metrics

Obligor Profile

Big Rivers is an electric generation and transmission cooperative headquartered in Henderson, Kentucky and owned by its three member system distribution cooperatives -- Jackson Purchase Energy Corporation; Kenergy Corp (Kenergy); and Meade County Rural Electric Cooperative Corporation (Meade County). These member system cooperatives provide retail electric power and energy to more than 116,000 residential, commercial, and industrial customers in 22 Western Kentucky counties.

In aggregate, Big Rivers owns 1,444 net MWs of coal-fired generating capacity at four stations, including Robert D. Green (454 MWs), Robert A. Reid ((130 MWs), D.B. Wilson (417 MWs) and Kenneth C. Coleman (443 MWs), which has been idled since May 2014. Including about 178 MWs of contracted hydro capacity from the Southeastern Power Administration (SEPA) and taking into account the decision to cease operations at the Henderson Municipal Power and Light (HMPL) Station Two plant thus eliminating its rights to about 187 MWs of coal-fired capacity from that plant, the cooperative's total power capacity is 1,622 MWs.

Big Rivers' owned transmission system includes 1,298 miles of transmission lines and 24 substations. The cooperative also has about 25 transmission interconnections to link its system with several surrounding utilities. Unlike most of its peers, Big Rivers is subject to rate regulation by the KPSC.

Detailed Credit Considerations

Good progress on mitigating credit challenges resulting from loss of aluminum smelters' load

Big Rivers has been making good progress towards replacing the roughly two-thirds of its annual energy sales from two aluminum smelters. While initial worst case expectations contemplated the prospect that both smelters would cease operations upon the expiration of their respective power contracts, regulatory approvals of the smelters' definitive agreements with Big Rivers and Kenergy enable the continued operations of both smelters with energy demands met by open market purchases of electricity. Big Rivers is addressing the long generation capacity position created by the absence of both smelters' load through both supply-side and demand-side strategies, as well as by reducing staff and controlling other expenses where feasible without compromising reliability.

Supply-side strategies taken to another level during 2018-2019

Big Rivers' supply-side initiatives included idling its 443-MWs Coleman plant in May 2014 and terminating its operating agreement with HMPL during 2018, which led to the closure of the HMPL Station Two plant on January 31, 2019. The latter steps reduced the cooperative's excess capacity by eliminating its rights to about 187 MWs of competitively challenged coal-fired capacity from the HMPL Station Two plant.

The settlement agreement to end the operating agreement with HMPL, which was approved by the KPSC on an expedited basis during 2018, provides Big Rivers the ability to apply regulatory asset treatment for its approximately $90 million of net book value relating to its past investments in the Station Two plant as part of the operating agreement. The settlement also established a times interest earned ratio (TIER) credit, which allows Big Rivers to apply any 2019 and 2020 margins in excess of a 1.45 TIER as an initial amortization of its regulatory asset balance. It is management's intent to seek recovery of the regulatory assets in regulatory proceedings likely to be filed at the KPSC no later than early 2020.

Although the Coleman plant was idled in May 2014, it is being maintained to permit restart should market conditions become economically feasible. By idling the Coleman plant, Big Rivers achieved overall cost savings of about $26 million annually. Big Rivers is reporting internal load growth and longer term opportunities are arising for sales of electricity, resulting from economic development activity in its service territory. For example, Big Rivers has an industrial customer utilizing the cooperative's economic development incentive rate in its business expansion, which will contribute significant growth to the cooperative's load. Also, in March 2019 Nucor Corporation (Baa1 stable) announced it plans to construct a steel plate manufacturing mill in Meade County's service territory. More recently, in September 2019 Meade County, Big Rivers and Nucor all signed a long-term power purchase agreement that will add about 200 MWs of load by 2022 to be served by Big Rivers, effectively establishing Nucor as one of Meade County's members. The Nucor plant will also provide additional economic stimulus within the service territory.

Also, Big Rivers is considering the transfer of some environmental control equipment at the Coleman plant to its Wilson plant. If this strategy is successfully implemented, it is likely to reduce the financial impact of a potential write-off or the need for regulatory asset recovery if management elects to permanently shutter the Coleman plant in the future. The current net book value of the Coleman plant, including deferred depreciation, is estimated at $181 million. The net book value includes approximately $73 million of investments in scrubbers. The remaining amounts of net investment in both the Coleman and Station Two plants represent potential write-off risks to Big Rivers' common equity if the cooperative is not able to recover the remaining costs from its customers as a regulatory asset.

The fact that the HMPL Station Two settlement was unanimously supported by the Attorney General (AG) and the Kentucky Industrial Utility Customers (KIUC) is a credit positive. In doing so, the AG and KIUC agreed to support recovery of Station Two and Wilson Station regulatory assets in Big Rivers' next base rate case, with the AG's support contingent on any proposed rate impact being 0% or less. Also, the KIUC has agreed to support recovery of the Coleman Station regulatory asset, while the AG indicated neither support nor opposition to such recovery.

Demand-side strategies are phasing in according to plans and are enhanced by the signing of the contract with Nucor

Big Rivers' demand-side strategies include securing medium-term contracts for the sale of capacity and energy to load serving municipal-distribution entities in Nebraska and Kentucky, making short-term off system sales and participating in the capacity markets.

In addition, the Nucor contract, which is still subject to various regulatory approvals, would add to the three nine-year contracts that the cooperative already has in place to sell capacity and energy to three Nebraska entities which will grow to about 85 MWs. Power being provided under the contract with the Nebraska entities began flowing in 2018 and is scheduled to reach full output in 2022. Also, Big Rivers has executed a 10-year contract to transmit as much as 100 MWs from its coal-fired Wilson Station to Kentucky Municipal Energy Agency (KyMEA) and sales to KyMEA began in May 2019. Also, in June 2018, the City of Owensboro awarded its full-requirements contract, approximating 180 MWs to Big Rivers, which together with other supply-side efforts, helps to further balance Big Rivers' generation capacity and load requirement. The contract with the City of Owensboro covers a term of June 2020 through December 2026 to provide the municipal utility's full annual energy requirements estimated at 825,000 megawatt hours and annual peak load of about 155 MWs, net of its 25 MWs provided through a contract with the Southeast Power Administration.

These contracts are credit positive for Big Rivers because they lock up some of its substantial excess capacity and energy with load-serving municipal-distribution entities for multiple year periods, helping the cooperative replenish the smelter load lost during 2013-14. The contracts are likely to prove beneficial for Big Rivers' long-term financial performance and provide a reliable source of recovery for Big Rivers' fixed and variable costs and contribute to its overall competitiveness through better rates for its members. Also, the contracts allow Big Rivers to become less dependent on the wholesale power market for incremental revenues and helps diversify the cooperative's revenue stream, which historically was heavily dependent on the aluminum industry, to one that is less volatile and more predictable.

Setting aside the still idled Coleman capacity and considering the effects of terminating the operating agreement with HMPL, BREC has just under 1,200 MWs of capacity and awaits the outcome of its RFP for up to 250 MWs of solar capacity. This level of capacity compares with average member peak load of 650 MWs and when combined with additional aforementioned contracted capacity sales of about 550 MWs phasing in through 2022 and allocating about 150 MWs for an approximate 15% reserve margin, moves Big Rivers very close to achieving supply and demand balance.

Smelters continue to operate and the Hawesville smelter moves closer to operating at full capacity

Since canceling their respective contracts, both of the smelters continue to operate. We understand that the Hawesville smelter has gradually ramped up operations in recent years because of some economic aid and improved commodity pricing for aluminum and currently is operating at about 80% of its capacity with four of its five pot lines operating. Also, the Hawesville smelter is continuing work during 2019 to get the fifth pot line operational. The Sebree smelter has been operating at near full production capacity for several years. When compared to the alternative scenario of having both smelters permanently shut down, this outcome is positive particularly since Big Rivers and Kenergy are being reimbursed for any incremental costs to their members of the smelters' continued operation and there are residual benefits to the local economy.

Rate case decisions and ongoing cost recovery mechanisms remain credit positive factors

Big Rivers has approval from the US Department of Agriculture's Rural Utilities Service (RUS) for loans to be funded no later than December 2023 which would provide reimbursement for certain transmission asset investments already made and to refinance half of its Series B Note which has a $245.5 million balloon payment due in December 2023, while it intends to repay the other half of the Series B Note with cash. Additional refinancing strategies are likely to include a reoffering of its $83.3 million of County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project) in July 2020 to achieve an estimated net present value of $20 million interest expense savings. The pollution control bonds have a July 2020 call date.

Also, Big Rivers' credit profile benefits from credit supportive rate case decisions rendered by the KPSC in October 2013 and April 2014, which resulted in approval of a combined wholesale power rate increase of about $90.4 million. As part of these decisions, residual cash, set aside in restricted accounts, was supportive to Big Rivers' liquidity after the loss of the smelter load. Specifically, cash in the restricted accounts was used to provide bill credits during 2014-16, which minimized the rate shock to ratepayers until September 2015 for large industrial/business (non-smelter) customers and until August 2016 for rural (residential) customers. With the expiration of bill credits in 2016, the full effects of the wholesale power rate increases are now being fully borne by Big Rivers' members and, in turn, the members' retail customers.

Overall credit positive impact from KPSC mandated independent management audit

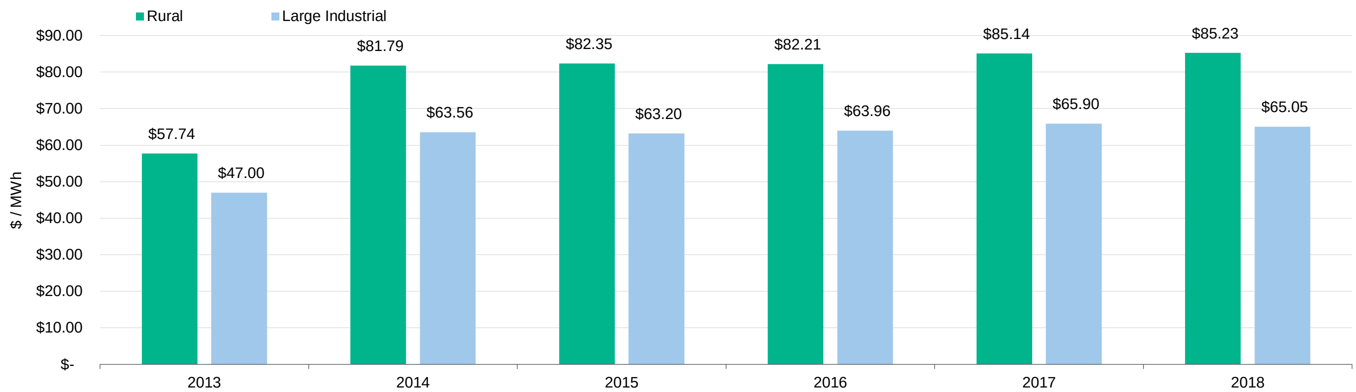
The KPSC ordered independent consultant's comprehensive management audit is credit positive for Big Rivers since it incorporates a combination of many supportive or neutral findings about Big Rivers' past decisions and future plans, as well as five specific, seemingly manageable, recommendations. Of those five recommendations, four were already in process as of the report date, including those relating to increasing expertise regarding the MISO market, pursuing new energy sales and analyzing the best use of the currently idled Coleman plant. Three of the five action items have been closed by the KPSC, including an agreement that the recommendation of adding a new board member with energy expertise is not warranted, that Big Rivers was sufficiently pursuing new energy sales, and that Big Rivers has sufficiently added staff resources focusing on enhancing internal expertise in production cost and financial modeling to further leverage its association as a member of ACES.

The remaining two items yet to be closed by the KPSC relate to: (1) the executed amendments made to Big Rivers' debt documents to address restrictions around the sale or early retirement of the Coleman plant, and (2) completion of the study of the sale, retirement or redevelopment of the Coleman plant.

Reasonably competitive position maintained

As depicted in exhibit three below, although Big Rivers' rates have increased following the loss of the smelter loads, the economics of power produced from Big Rivers' generation sources have enabled it to still maintain a reasonable competitive position in the region.

Exhibit 3
Historical Average Member Rates



Source: Big Rivers Electric Corporation

Base rate increases from 2013 and 2014 and other strategic initiatives are driving improved financial performance and this trend is likely to be sustained

The outcomes in Big Rivers' last two rate cases and other mitigation strategies have supported steady margins for the past three fiscal years in a range of approximately $12.9 - $15.2 million. The net margin for fiscal year ended December 31, 2018 was $15.2 million, representing modest improvement over the prior two years and produced a 1.39x TIER, a contractual margins for interest (MFI) ratio of 1.39x and a DSC ratio of 1.22x, all as defined in the cooperative's debt documents.

Despite mild weather and soft wholesale market pricing, Big Rivers margins for the six months ended June 30, 2019 were $18.9 million compared to $15.6 million in the same period of 2018, primarily reflecting the cost savings from the January 31, 2019 closure of the Station Two plant. Net margin and cash flow benefits from the Station Two plant closure are likely to continue throughout fiscal year 2019 and beyond.

For fiscal years 2016-18 (including Moody's standard adjustments), Big Rivers' FFO coverage of interest, FFO to debt and DSC ratios averaged in the “Baa”, “Baa” and “A” rating categories, respectively, for the ratios covered under the Rating Methodology for U.S. Electric G&T Cooperatives. For example, Big Rivers' three year average FFO coverage of interest, FFO to Debt, and DSC for 2016-18 were 1.7x, 3.5%, and 1.2x, respectively.

Big Rivers' FFO coverage of interest and debt ratios strengthened during fiscal years 2016-18 and prospectively are likely to be sustained to support the cooperative's credit quality as power sales agreements with entities in Nebraska and Kentucky and the recent long-term contract with Nucor help compensate for the substantial overcapacity at Big Rivers.

Liquidity

We expect that Big Rivers will maintain ample liquidity over the next 12-18 months.

Big Rivers supplements its existing cash on hand and internally generated cash flow with a multi-year $100 million syndicated senior secured credit agreement with five financial institutions, led by National Rural Utilities Cooperative Finance Corporation (NRUCFC), which expires September 18, 2020. Big Rivers plans to negotiate prior to the expiration date for either an amend and extend agreement or a new facility for at least the same amount and under similar terms and conditions for at least a three-year term.

As of June 30, 2019, Big Rivers had a cash and temporary investments balance of about $48.8 million and $92.3 million available under the NRUCFC credit agreement. Big Rivers is likely to have very limited need for new debt financing for the next eight quarters because of a modest capital spending program for maintenance of existing infrastructure and manageable debt maturities over the period. The debt maturities are largely comprised of scheduled amortizations of long-term debt to be paid at roughly $8 million - $10 million per quarter for the next eight quarters.

Terms of the NRUCFC credit agreement provide a good quality source of alternate liquidity in the form of a syndicated credit agreement. The facility does not have any onerous financial covenants, which are largely consistent with the financial covenants in existing debt documents. The syndicated agreement does, however, separately require Big Rivers to maintain a minimum equity balance at each fiscal quarter-end and year-end of $375 million plus 50% of the cooperative's cumulative positive net margins for each of the preceding fiscal years, beginning with the fiscal year ended December 31, 2015. Big Rivers is comfortably in compliance with those covenants. Additionally, the credit agreement benefits from no ongoing material adverse change (MAC) clause. The syndicated credit agreement does not have any rating triggers, just a pricing grid based on Big Rivers' rating.

Debt Structure

As part of the unwinding of various transactions completed in 2009, Big Rivers replaced the previously existing RUS mortgage with a senior secured indenture. Under the senior secured indenture RUS and all senior secured debt holders, including the $83.3 million of County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7), are on equal footing in terms of priority of claim and lien on assets. The current senior secured indenture provides Big Rivers with the flexibility to access public debt markets without first obtaining a case specific RUS lien accommodation, while retaining the right to request approval from the RUS for additional direct borrowings under the RUS loan program, if they choose to do so. Given persistent questions about the availability of funds under the federally subsidized RUS loan program, the added flexibility of the current senior secured indenture is credit positive.

Other Considerations

Big Rivers' mapping under Moody's U.S. Electric Generation & Transmission Cooperative Rating Methodology scorecard below is based on historical data through December 31, 2018.

The scorecard-indicated outcome for Big Rivers' senior most obligations under the Methodology is currently Baa2. However, Big Rivers' actual senior secured rating of Ba1 reflects several of the unique risks at Big Rivers and the challenges facing the cooperative in mitigating these risks, including further implementation of its load mitigation strategies following the smelter contract terminations and addressing issues surrounding its increasing regulatory asset accounts and idled Coleman plant. The differential between the scorecard indicated outcome and the actual Ba1 senior secured rating is also reflected in the recent revision to a positive outlook to incorporate progress in addressing these challenges.

Methodology

Exhibit 4

Big Rivers Electric Corporation

Big Rivers Electric Corporation, KY -Private

U.S. Electric Generation & Transmission Cooperatives Industry Scorecard [1][2]	Current FY 12/31/2018		Moody's 12-18 Month Forward View As of Publication Date [3]	
Factor 1: Long-Term Wholesale Power Supply Contracts and Regulatory Status (20.0%)	**Measure**	**Score**	**Measure**	**Score**
a) % Member Load Served under Regulatory Status	Ba	Ba	Ba	Ba
Factor 2: Rate Flexibility (20.0%)				
a) Board Involvement / Variable Cost Adjustment Mechanisms	Baa	Baa	Baa	Baa
b) Purchased Power / Total MWh Sales (%)	17.9%	Aa	20% - 30%	A
c) New Build Exposure (% Net PP&E)	A	A	A	A
d) Potential for Rate Shock Exposure	B	B	B	B
Factor 3: Member / Owner Profile (10.0%)				
a) Residential Sales / Total Sales (%)	36.9%	Ba	25% - 35%	Ba
b) Members' Consolidated Equity / Capitalization (%)	37.8%	Baa	37% - 40%	Baa
Factor 4: 3-Year Average G&T Financial Metrics (40.0%)				
a) TIER (3 Year Avg)	1.3x	A	1.3x - 1.5x	Aa
b) DSC (3 Year Avg)	1.2x	A	1.2x - 1.5x	A
c) FFO / Debt (3 Year Avg)	3.5%	Baa	4% - 7%	Baa
d) (FFO + Interest) / Interest Expense (3 Year Avg)	1.7x	Baa	2x - 2.5x	A
e) Equity / Total Capitalization (3 Year Avg)	37.6%	Aa	37% - 41%	Aa
Factor 5: G&T Size (10.0%)				
a) Megawatt hour sales (Millions of MWhs)	6.4	Baa	7 - 10	Baa
b) Net PP&E (USD Billions)	$1.0	A	$0.9	Baa
Rating:				
a) Indicated Outcome from Scorecard		Baa2		Baa1
b) Actual Rating Assigned (Senior Secured)		Ba1		Ba1

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 12/31/2018; Source: Moody's Financial Metrics™
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Source: Moody's Investor Service

RATINGS

BIG RIVERS ELECTRIC CORPORATION, KY

Rating: County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7)	Ba1
Outlook	Positive

REPORT NUMBER 1198918

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Moody's
INVESTORS SERVICE

CASE NO. 2020-00064

EXHIBIT SMITH SUPPLEMENTAL-2

2016, 2017, & 2018 G&T Accounting & Finance Annual Directory TIER Survey

2016 TIER

1	14.15	PNGC Power
2	5.12	Sam Rayburn
3	4.72	Central Power - ND
4	4.42	Northwest Iowa
5	3.87	East River
6	3.81	Sunflower
7	3.44	Sho-Me Power
8	3.30	Tex-La
9	3.06	Corn Belt
10	3.02	Central Electric - MO
11	2.53	Northeast Missouri
12	2.51	Wolverine
13	2.45	Central Iowa
14	2.37	KAMO
15	2.06	Arkansas
16	1.99	N. W. Electric
17	1.95	KIUC
18	1.75	Golden Spread
19	1.73	Arizona
20	1.70	South Texas
21	1.64	Brazos
22	1.58	Dairyland
23	1.56	Wabash Valley
24	1.53	Associated
25	1.49	Cooperative Energy
26	1.48	East Kentucky
27	1.44	Allegheny
28	1.43	Matanuska
29	1.38	Alaska Electric
30	1.34	Seminole
31	1.33	San Miguel
32	1.32	Buckeye
33	1.31	Big Rivers
34	1.31	Minnkota
35	1.30	Old Dominion
36	1.30	Southern Illinois
37	1.28	Prairie Power
38	1.27	Chugach
39	1.25	PowerSouth
40	1.23	Kansas Electric
41	1.20	East Texas
42	1.14	Square Butte
43	1.05	New Horizon
44	1.00	NTEC
45	0.88	Deseret
46	0.31	Rayburn

Note: Member Information Excluded if No Data Available or Category N/A

2017 TIER

1	17.67	PNGC Power
2	3.86	Sunflower
3	3.30	Sam Rayburn
4	3.10	Northwest Iowa
5	2.98	Central Power - ND
6	2.97	Sho-Me Power
7	2.88	Central Electric - MO
8	2.87	East River
9	2.69	Northeast Missouri
10	2.57	KIUC
11	2.35	Corn Belt
12	2.27	KAMO
13	2.21	Rayburn
14	2.14	Arkansas
15	2.04	Deseret
16	2.04	Central Iowa
17	1.97	N. W. Electric
18	1.84	Arizona
19	1.78	Allegheny
20	1.77	Wolverine
21	1.75	Golden Spread
22	1.72	Buckeye
23	1.68	Dairyland
24	1.62	South Texas
25	1.56	Brazos
26	1.53	Associated
27	1.51	Matanuska
28	1.49	Wabash Valley
29	1.43	Cooperative Energy
30	1.43	Old Dominion
31	1.41	Seminole
32	1.32	Big Rivers
33	1.32	Minnkota
34	1.28	Kansas Electric
35	1.28	Chugach
36	1.28	Prairie Power
37	1.27	Southern Illinois
38	1.19	East Kentucky
39	1.16	PowerSouth
40	1.14	East Texas
41	1.13	Square Butte
42	1.06	San Miguel
43	1.05	New Horizon
44	1.00	NTEC
45	0.76	Alaska Electric
46	0.70	Tex-La

Note: Member Information Excluded If No Data Available or Category N/A

2018 TIER

1	46.53	PNGC Power
2	5.59	Central Power - ND
3	5.34	Northwest Iowa
4	5.34	East River
5	3.71	Corn Belt
6	3.23	Central Electric - MO
7	2.69	Northeast Missouri
8	2.58	KAMO
9	2.51	Golden Spread
10	2.43	KIUC
11	2.23	Arkansas
12	2.20	Sunflower
13	2.14	Sho-Me Power
14	2.13	Rayburn
15	2.03	N. W. Electric
16	1.92	Arizona
17	1.89	Wolverine
18	1.77	Buckeye
19	1.75	South Texas
20	1.66	Associated
21	1.64	Wabash Valley
22	1.59	Brazos
23	1.58	Cooperative Energy
24	1.48	Allegheny
25	1.42	Dairyland
26	1.39	Big Rivers
27	1.38	Matanuska
28	1.37	Seminole
29	1.35	East Kentucky
30	1.33	Kansas Electric
31	1.31	Minnkota
32	1.30	Prairie Power
33	1.26	Chugach
34	1.22	Southern Illinois
35	1.21	PowerSouth
36	1.20	Old Dominion
37	1.18	San Miguel
38	1.13	Square Butte
39	1.11	East Texas
40	1.09	Central Iowa
41	1.07	Alaska Electric
42	1.05	New Horizon
43	1.00	NTEC

Note: Member Information Excluded if No Data Available or Category N/A

CASE NO. 2020-00064

EXHIBIT SMITH SUPPLEMENTAL-3

S&P January 16, 2019 Credit Opinion

S&P Global
Ratings

RatingsDirect®

Summary:

Big Rivers Electric Corp., Kentucky; Rural Electric Coop

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Summary:

Big Rivers Electric Corp., Kentucky; Rural Electric Coop

Credit Profile		
Big Rivers Electric Corp. ICR		
Long Term Rating	BB+/Stable	Upgraded
Ohio Cnty, Kentucky		
Big Rivers Electric Corp., Kentucky		
Ohio Cnty (Big Rivers Electric Corp.) RURELCCOO		
Long Term Rating	BB+/Stable	Upgraded

Rationale

S&P Global Ratings raised its issuer credit rating on Big Rivers Electric Corp. (BREC), Ky. to 'BB+' from 'BB'. At the same time, S&P Global Ratings raised its rating on Ohio County, Ky.'s $83.3 million pollution control refunding revenue bonds, series 2010A (Big Rivers Electric Corp. Project), issued for BREC, to 'BB+' from 'BB'. The outlook is stable.

The upgrade reflects our view of the following factors:

- The cooperative utility has entered into five contracts with nonmember public power utilities for the sale of the output from surplus portions of its generation capacity. Excess generation capacity followed the loss of two aluminum smelters that represented its members' two principal industrial customers.
- We believe the nonmember contracts, together with the idling of the utility's uneconomical Coleman power plant, and the cessation of the utility's obligation to purchase output from a Henderson Municipal Power And Light power plant, should better align BREC's 1,200 megawatts (MW) of generation resources with load through 2026. These developments should also add more predictability to the revenue stream and mitigate the utility's and its lenders' vulnerability to default.
- Although the nonmember contract purchasers will not reach their peak requirements until 2022, Big Rivers projects that adding the portfolio of about 340 MW of nonmember contracts will reduce its exposure to market revenues from 37% in 2017 to 9% in 2022. The utility also projects that its gross margins will increase as it migrates from market sales to contracted sales.
- The utility reports that the association representing its members' industrial electric customers has agreed to support the utility's plans to apply to the Kentucky Public Service Commission in late 2020 for the recovery of investments in retired generation assets.
- The utility projects debt balances will remain relatively stable through 2022 as it pursues about $250 million of capital investments.
- In 2017 and 2018, BREC reduced market access risk by retiring with cash, $80 million of debt maturing in 2019-2021. It plans to use cash to retire about 40% of a $245 million 2023 bullet maturity and refinance the balance

of that bullet. The utility is exploring options for its $83 million 2031 bullet maturity.

The ratings also reflect our opinion of these exposures:

- The tenor of the contracts with nonmembers provides only near-term revenue stream security and predictability, which constrains the ratings. The contracts expire in 2026 and 2029 and if they are not renewed or replaced, their expiration will expose about one-third of the utility's generation capacity to competitive markets. Therefore, we continue to consider long-term financial performance as vulnerable because 240 MW of the contracted capacity will roll off in 2026 and another 100 MW in 2029.
- BREC is a price-taker when it sells its power plants' output in competitive markets. The utility's 2017 energy production was almost exclusively from aging coal units that face emissions remediation issues. Self-production accounted for about two-thirds of BREC's 2017 energy sales.
- Members' residential revenues accounted for only one-third of members' 2017 revenues. Large commercial and industrial revenues accounted for half of their revenues. We consider residential revenues as generally representing the most stable and predictable revenue stream,
- Because 40% of BREC's debt does not amortize before maturity, the deferred principal amortization skews debt service coverage (DSC) metrics upward relative to those of other cooperative utilities with amortizing debt. Accrual DSC levels were essentially stable in 2015 and 2016 at nearly 1.2x. Accrual DSC declined to 1.0x in 2017, but cash from operations coverage was nearly 1.6x. That year's diverging cash and accrual coverage reflects, in part, timing differences relating to the recording of interest expense.
- BREC's average revenue per megawatt-hour from nonmember sales were anemic at $32 in 2016, $34 in 2017, and an estimated $30 in 2018.
- In 2017, the member distribution cooperatives' residential customers' retail rates were 12%-16% higher than the state average. Moreover, each of the members' residential rates in 2017 were at least 69% higher than in 2011, because the utility allocated costs from the lost smelter loads to its remaining customers. The sharp increases, the rate disparity relative to state average, and the low income levels might limit financial flexibility.
- We believe BREC's few vintage, coal-fired generation assets present operational exposures that can affect financial performance.

Henderson, Ky.-based BREC is a generation and transmission cooperative that produces and procures electricity for sale to its three distribution cooperative members--Kenergy Corp., Jackson Purchase Energy, and Meade County Rural Electric Cooperative--and their approximately 117,000 retail customers. The members serve in 22 counties. The state's median household income levels are nearly 20% below that of the nation, which could limit ratemaking flexibility. The utility reported $804 million of debt as of Dec. 31, 2017. In April, BREC reduced its debt balances by retiring a $65 million 2021 bullet maturity. BREC's 63% debt-to-capitalization ratio is favorable for a generation-owning, cooperative utility.

The Kentucky Public Service Commission must approve the utility's rate adjustment requests and those of its member distribution cooperatives, which distinguishes these utilities from many other cooperative utilities that have autonomous ratemaking authority. Although the regulator has provided rate adjustments that support adequate financial performance, we consider the financial margins to be weak relative to the magnitude of the utility's exposure to industrial loads and the vicissitudes of competitive wholesale markets where the utility cannot exert price-setting authority over its customers. The commission allows the utility to use a fuel adjustment clause to capture changes in variable costs, which we view as a positive factor. We believe this tool helps reduce financial volatility. Contracts with new loads should contribute to stable financial performance for a number of years, but the specter of volatility remains because substantial debt will remain after the contracts expire.

The utility's generation portfolio provides little fuel diversity. It includes the idled 443-MW, coal-fired Coleman power plant; the 417-MW, coal-fired Wilson plant; the 454-MW, coal-fired Green station; and 130 MWs from multiple units at the coal- and gas-fired Reid station. The cooperative also has an allocation of 178 MWs of Southeastern Power Administration hydroelectric power. Coal represents the dominant energy source and we believe that BREC's concentration in coal resources exposes the utility to the potential financial and operational effects of regulations governing power plant emissions and coal combustion residuals.

BREC's Coleman station has been idle since the loss of the smelter loads in 2014. The Reid plant's coal capacity can only operate if the utility remediates the plant's emissions.

Ohio County sold $83.3 million of bonds in 2010 for the benefit of BREC, which used bond proceeds to refund auction-rate securities. The bonds do not amortize and have a 2031 bullet maturity. We understand that the financing structure obligates the utility to unconditionally pay the county's bonds' debt service. BREC issued a note to the county that provides it with a security interest in the utility's assets under its mortgage indenture. The security interest on the county's bonds is on par with that on BREC's senior secured debt.

Outlook

The stable outlook reflects improved prospects for stable financial performance through the term of the contracts to sell surplus power to nonmember public power utilities. We view the contracts as reducing the revenue stream's exposure to competitive market forces during the life of the contracts.

Upside scenario

We do not expect to raise the ratings within our two-year outlook horizon without prospects for a more secure long-term revenue stream that aligns predictable revenues with debt maturities. We view several additional exposures as constraining the ratings. These include recent years' sharp rate increases relative to low income levels, an almost exclusively coal-fired generation portfolio and its potential exposure to more stringent emissions regulations, DSC levels that are only adequate relative to these exposures, and the presence of nonamortizing debt, which we believe distorts DSC coverage levels relative to utilities with greater percentages of amortizing debt.

Downside scenario

We could lower the ratings if the utility cannot sustain sound financial performance because of poor prospects for renewing or replacing nonmember contracts, weak market conditions, or poor plant performance. Similarly, if the financial profiles of BREC's members erode, we could lower the ratings.

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria.

Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

CASE NO. 2020-00064

EXHIBIT SMITH SUPPLEMENTAL-4

Moody's July 27, 2018 Credit Opinion

MOODY'S
INVESTORS SERVICE

CREDIT OPINION
27 July 2018

Update

Rate this Research

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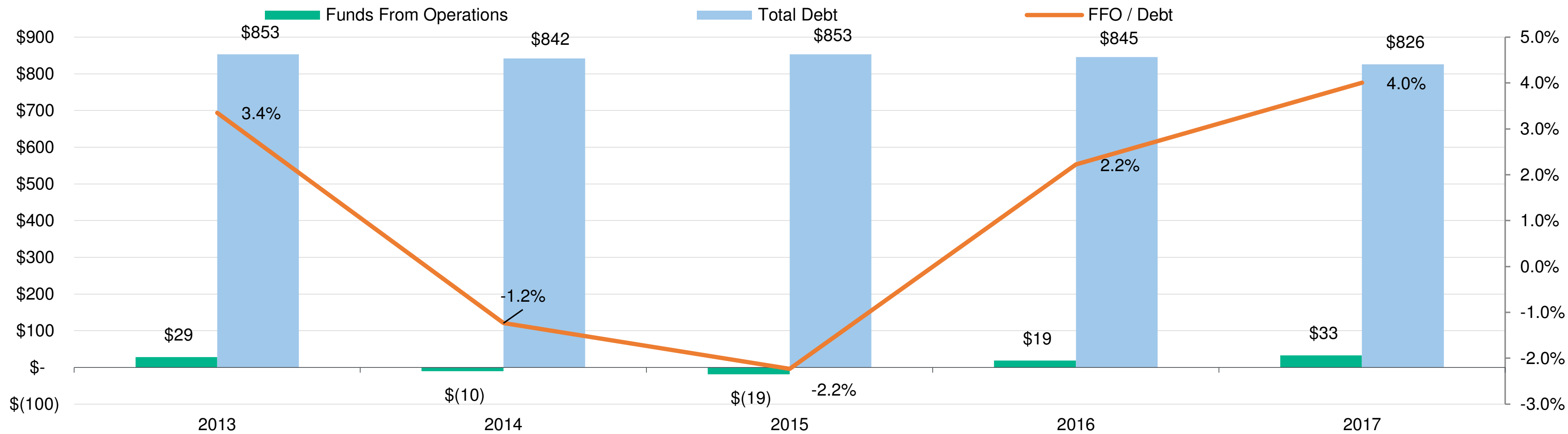
Big Rivers Electric Corporation

Update following rating upgrade

Summary

Big Rivers Electric Corporation's credit profile reflects a supportive regulatory environment and prospects for sustaining stronger financial metrics which are necessary to help balance business and financial risks owing to its substantial excess generation capacity and increasing regulatory assets, both of which could pose potential cost recovery and write-off challenges. Since 2013, progress in addressing excess generation capacity has included idling a 443 megawatt coal plant and signing medium-term contracts for the sale of excess capacity. Sizable rate increases approved by the Kentucky Public Service Commission (KPSC) and cost saving initiatives are helping to maintain viable financial performance. With regulatory support prevailing and sales of excess capacity phasing in, funds from operations (FFO) coverage of interest and debt are likely to strengthen further after improving in FY 2017 to 1.8x and 4%, respectively, from 1.5x and 2.2%, respectively, for FY 2016. Big Rivers is likely to be free cash flow positive for the next three years, while also maintaining ample liquidity.

Exhibit 1
Historical FFO, Total Debt and FFO to Total Debt
($ in millions)



Source: Moody's Financial Metrics

Credit Strengths

- Contracted sales of excess capacity to be phased in over several years began in January 2018
- The likelihood of sustaining sound net margins, no patronage capital returns to members and routine capital spending should drive free cash flow and contribute to debt reduction
- Timely and substantial recovery of costs of service owing to regulatory support for base rate increases, a variable cost adjustment mechanism and an environmental cost surcharge bode well for improving financial metrics
- Long term wholesale power contracts with three member owners through 2043 produce a steady and predictable revenue stream from electricity sold to rural residential and other non-smelter industrial customers
- Ownership of generally competitive coal-fired generation plants

Credit Challenges

- Avoiding customer backlash as bill credits have expired and the full impact of increases to the members' wholesale power rate has increased retail rates for members' customers
- Increasing regulatory assets resulting from deferral of depreciation for certain coal-fired generation assets and other expenses poses potential cost recovery and write-off risks
- Significant excess of mostly coal-fired, carbon-emitting, owned generation capacity, including idled capacity, while awaiting more clarity on future environmental regulations
- Sizable debt maturities beyond the term of certain existing power sales agreements with replacement loads following termination of contracts with the two aluminum smelters
- Finding additional long-term market opportunities to sell significant excess capacity beyond the term of existing contracts that are phasing in over the next few years
- Local economic dependence on industrial activity, including two aluminum smelters

Rating Outlook

The stable rating outlook reflects a prevailing supportive regulatory environment and the likelihood that Big Rivers can sustain its financial metrics at the stronger levels attained in FY 2017 while continuing to achieve better than expected progress in reducing its significant excess capacity through off-system capacity and energy sales in the Midcontinent Independent System Operator (MISO) and other markets at favorable margins. The stable outlook also considers Big Rivers having free cash flow to reduce debt during the next three years, and incorporates our view that the smelters will continue to operate, thereby providing support for the local economy, including employment levels. The stable outlook further expects that Big Rivers will continue to pursue additional long-term contracts for the sale of its excess capacity for terms beyond those already in place.

Factors that Could Lead to an Upgrade

- A rating upgrade is possible if credit supportive regulatory treatment remains intact and there is future support for cost recovery of the increasing regulatory asset account which would avoid potential write-offs while maintaining reasonably competitive rates
- Achieving further successful financial results through ongoing strategies to mitigate a long capacity position
- Achieving stronger metrics to balance its unique business and financial risks; for example, FFO coverage of interest and debt improving to 2.4x and in a range of 6%-7%, respectively, with the debt service coverage (DSC) ratio tracking at close to 1.2x or better on a sustained basis

Factors that Could Lead to a Downgrade

» We could take a negative rating action if there was a shift to a less credit supportive regulatory environment and if liquidity unexpectedly deteriorates

» The pressure for a negative rating action would increase if substantial and timely recovery of environmental compliance costs and increasing regulatory assets do not occur as anticipated under the KPSC approved environmental cost recovery mechanism and future rate proceedings, especially if such amounts increase beyond currently anticipated levels

» A scenario under which either or both of the smelters discontinued operations would be credit negative owing to the potential residual negative effects on the local economy

» In terms of metrics, FFO to debt and DSC ratios below 4% and 1.2x, respectively, for a sustained period would pressure the rating

Key Indicators

Exhibit 2

Big Rivers Electric Corporation

	2013	2014	2015	2016	2017
Times Interest Earned Ratio (TIER)	1.5x	1.6x	1.3x	1.1x	1.3x
DSC (Debt Service Coverage)	0.8x	1.5x	1.2x	1.2x	1.2x
FFO / Debt	3.4%	-1.2%	-2.2%	2.2%	4.0%
(FFO + Interest Expense) / Interest Expense	1.7x	0.8x	0.5x	1.5x	1.8x
Equity / Total Capitalization	33.1%	34.9%	35.3%	36.2%	37.2%

Source: Moody's Investors Service

Obligor Profile

Big Rivers is an electric generation and transmission cooperative headquartered in Henderson, Kentucky and owned by its three member system distribution cooperatives -- Jackson Purchase Energy Corporation; Kenergy Corp; and Meade County Rural Electric Cooperative Corporation. These member system cooperatives provide retail electric power and energy to more than 116,000 residential, commercial, and industrial customers in 22 Western Kentucky counties. In aggregate, Big Rivers owns 1,444 net MW of coal-fired generating capacity at four stations, including Robert D. Green (454 MW), Robert A. Reid ((130 MW), D.B. Wilson (417 MW) and Kenneth C. Coleman (443 MW), which has been idled since May 2014. Including its rights to about 197 MW of coal-fired capacity from Henderson Municipal Power and Light (HMPL) Station Two and about 178 MW of contracted hydro capacity from the Southeastern Power Administration (SEPA) its total power capacity is 1,819 MW. Big Rivers' owned transmission system includes 1,299 miles of transmission lines and 24 substations. The cooperative also has about 25 transmission interconnections to link its system with several surrounding utilities. Unlike most of its peers, Big Rivers is subject to rate regulation by the KPSC.

Detailed Credit Considerations

Good progress on strategies to mitigate credit challenges resulting from sizable excess capacity following loss of aluminum smelters' load

Big Rivers has been making good progress towards replacing the roughly two-thirds of its annual energy sales, just under 60% of its system demand and in excess of 60% of its annual revenues previously derived from the contracts it had with two aluminum smelters. While initial worst case expectations contemplated the prospect that both smelters would cease operations upon expiration of their respective power contracts, regulatory approvals of the smelters' definitive agreements with Big Rivers and Kenergy enable the continued operations of both smelters with energy demands met by open market purchases of electricity. That said, in the absence of both smelters' load, Big Rivers remains long on generation. The progress in addressing the excess capacity is attributable to both supply-side and demand-side strategies, as well as reducing staff and controlling other expenses where feasible and without compromising reliability.

Supply-side strategies continue to unfold

Big Rivers supply-side initiatives included idling its 443-MW Coleman plant and it is taking steps to terminate its longstanding operating agreement with HMPL. The latter strategy, if successful, will reduce its excess capacity by eliminating its rights to about 197 MW of competitively challenged coal-fired capacity from the HMPL Station Two plant no later than May 2019. The latter strategy is the subject of a KPSC regulatory filing, through which Big Rivers has asked the KPSC to address its request to end the operating agreement with HMPL on an expedited basis during 2018. Big Rivers is also requesting regulatory asset treatment for its approximately $90 million of net book value relating to its past investments in Station Two as part of the operating agreement, with an intent to seek recovery in the next rate case. Meanwhile, Big Rivers continues to honor the operating agreement with a desire to terminate by May 31, 2019 at the latest. If HMPL is successful in finding adequate replacement resources to meet its full requirements, Big Rivers and HMPL would terminate the operating agreement sooner than May 31, 2019.

Although the Coleman plant was idled in May 2014, it is being maintained to permit restart should market conditions become economically feasible. By idling the Coleman plant, Big Rivers achieved overall cost savings of about $26 million annually. Big Rivers is reporting internal load growth and additional longer term opportunities may also arise for sales of electricity, depending on economic development activity in its service territory. For example, Big Rivers has an industrial customer utilizing the cooperative's economic development incentive rate in its business expansion, which will contribute significant growth to the cooperative's load. Meanwhile, Big Rivers is also considering the transfer of some environmental control equipment at the Coleman plant to its Wilson plant. If this strategy is successfully implemented, it is likely to reduce the financial impact of a potential writeoff if management elects to permanently shutter the Coleman plant in the future. The current net book value of the Coleman plant, including deferred depreciation, is estimated at $181 million. The net book value includes approximately $73 million of investments in scrubbers. The remaining amounts of net investment in both the Coleman and Station Two plants loom as potential write-off risks to Big Rivers' common equity if the cooperative is not able to recover the remaining costs from its customers as a regulatory asset.

Demand-side strategies progressing well

Big Rivers' demand-side strategies include securing medium-term contracts for the sale of capacity and energy from its fleet to load serving municipal-distribution entities in Nebraska and Kentucky, making short-term off system sales and participating in the capacity markets.

In that regard, Big Rivers currently has three nine-year contracts to sell capacity and energy to three Nebraska entities which will grow to about 85 MW to the Nebraska entities. Power being provided under this contract began flowing this year and is scheduled to reach full output in 2022. Big Rivers also has executed a 10-year contract to transmit as much as 100 MW from its coal-fired Wilson Station to Kentucky Municipal Energy Agency (KyMEA), beginning in 2019, with the potential to increase the contract for sale of capacity by another 50 MW starting in 2022. Moreover, in June 2018, the City of Owensboro awarded its full-requirements contract, approximating 180 MW to Big Rivers, which together with other supply-side efforts, helps to further balance Big Rivers' generation capacity and load requirement. The contract with the City of Owensboro covers a term of June 2020 through December 2026 to provide the municipal utility's full annual energy requirements estimated at 825,000 megawatt hours and annual peak load of about 155 MW (net of its 25 MW SEPA contract).

These contracts are credit positive for Big Rivers because they lock up some of its substantial excess capacity and energy with load-serving municipal-distribution entities for multiple year periods, helping the cooperative replenish the smelter load lost during 2013-2014. The contracts are likely to prove beneficial for Big Rivers' long-term financial performance and provide a reliable source of recovery for Big Rivers' fixed and variable costs and contribute to its overall competitiveness through better rates for its members. Moreover, the contracts allow Big Rivers to become less dependent on the currently depressed wholesale power market for incremental revenues and helps diversify the cooperative's revenue stream, which historically was heavily dependent on the aluminum industry, to one that is less volatile and more predictable.

Setting aside the still idled Coleman capacity and assuming successful termination of the operating agreement with HMPL which eliminates rights to a portion of capacity at the Station Two plant, Big Rivers would have just under 1,200 MW of capacity available beginning in 2020. This level of capacity compares with average member peak load of 650 MW, plus additional aforementioned contracted capacity sales of about 350 MW phasing in during 2018-20 and allocating about 150 MW for an approximate 15% reserve margin, leaves Big Rivers very close to supply and demand balance. That said, overhang risks associated with the ultimate recovery of the idled Coleman and Station Two investments remain, which together remain a rating constraint within the speculative grade rating category.

Smelters continue to operate, with increased production levels at the Hawesville smelter

Since canceling their respective contracts, both of the smelters continue to operate. We understand that the Hawesville smelter has been operating at about 40% of its capacity during recent years; however, with some economic aid and improved commodity pricing for aluminum, the Hawesville smelter is now operating at about 60% of its capacity with expectations to increase to 100% in 2019. The Sebree smelter has been operating for the most part at full production for several years. When compared with the alternative scenario of having both smelters permanently shut down, this outcome is acceptable particularly since Big Rivers and Kenergy are being reimbursed for any incremental costs to their members of the smelters' continued operation and there are residual benefits to the local economy.

More specifically, following regulatory approvals from the KPSC in 2013 and 2014, Century Aluminum of Kentucky (a subsidiary of Century Aluminum Company) continues to operate its Hawesville and Sebree smelters by purchasing electricity on the open market. Under an agreement that Big Rivers and Kenergy have with Century, Kenergy arranges with a third party for the energy purchases at wholesale market prices and Century pays the market price and additional amounts to cover any incremental costs incurred by Big Rivers and Kenergy to accommodate Century's desire to purchase energy on the market for the two smelters.

Rate case decisions and ongoing cost recovery mechanisms are credit positive factors serving as mitigants to credit challenges

In addition to the challenges facing Big Rivers in securing asset recovery for Coleman and Station Two in a credit benign manner, Big Rivers also remains exposed to incremental execution risk in securing extensions of the aforementioned medium term contractual arrangements with economically similar or better terms as Big Rivers' debt profile has sizable maturities extending beyond the tenor of the existing power sales contracts. Notwithstanding these credit challenges, Big Rivers' profile benefits from credit supportive rate case decisions rendered by the KPSC in October 2013 and April 2014, which resulted in approval of a combined wholesale power rate increase of about $90.4 million. Moreover, as part of these decisions, residual cash, set aside in restricted accounts, provided a mitigant to Big Rivers' liquidity after the loss of the smelter load. Specifically, cash in the restricted accounts was used to provide bill credits during 2014-16, which temporarily minimized the rate shock to ratepayers until September 2015 for large industrial/business (non-smelter) customers and until August 2016 for rural (residential) customers.

With the expiration of bill credits in 2016, the full effects of the wholesale power rate increases are now being fully borne by Big Rivers' members and, in turn, the members' retail customers. The rate increases are credit positive for Big Rivers because the incremental amounts are estimated to result in about 90% of Big Rivers' total gross margins coming from its members that have all requirements contracts in place through 2043. The current wholesale power rates are likely to support steady financial performance at recently improved levels, ensure a degree of cushion for compliance with financial covenants and should allow for Big Rivers to further advance its strategies.

While Big Rivers faces ongoing challenges, our view of the credit profile acknowledges credit supportive actions and comments from the KPSC in the latest rate orders about prudent mitigation steps taken by Big Rivers as well as the commission's clear intention to ensure that electric rates are sufficient to maintain Big Rivers' financial integrity. In that regard, the KPSC rates approved in the April 2014 rate order are designed to enable Big Rivers to achieve a 1.3x times interest earned ratio (TIER), a level that is 20 basis points higher than the 1.1x margins for interest (MFI), essentially the equivalent of TIER, required as defined under Big Rivers' indenture. The additional revenue amounts to support Big Rivers' TIER at 1.3x is credit positive because the amounts help to partially offset certain other cost items not covered by the approved rate increases, the most significant of which relate to deferrals of any recovery of depreciation costs relating to the Coleman and Wilson plants. In addition to the predictable revenue stream provided by the contracts, entering the long term contracts for the sale of excess power also bodes well for Big Rivers' regulatory relationship with the KPSC, since the regulators established an action plan in 2013 that called for the pursuit of such supply contracts.

Maintaining supportive regulatory relationships remains an important credit factor for Big Rivers since its rate-setting is subject to regulation, which is atypical for an electric generation and transmission cooperative. Rate regulation can potentially introduce uncertainty around the timeliness and extent of future cost recovery, making that uncertainty an especially important credit risk factor for Big Rivers as its regulatory asset balance is increasing. With existing contracts in place as described above, we understand that Big

Rivers will likely seek regulatory approval for recovery of the regulatory asset balance tied to the Wilson plant depreciation deferrals beginning in 2021.

In addition to the 2013 and 2014 rate increases approved by the KPSC, the existence of certain fuel and purchased power cost adjustment mechanisms and the existence of an environmental cost surcharge in rates are favorable to Big Rivers' credit profile since they can temper risk of cost recovery shortfalls if there is a mismatch relative to existing rate levels.

Overall credit positive impact from KPSC mandated independent management audit

As required by the KPSC in its April 2014 rate order, an independent consultant conducted a comprehensive management audit, with a particular focus on Big Rivers' load mitigation strategies, and a final action plan was issued in December 2015. The action plan is a credit positive since it incorporates a combination of many supportive or neutral findings about Big Rivers' past decisions and future plans, as well as five specific, seemingly manageable, recommendations. Of those five recommendations, four were already in process as of the report date, including those relating to increasing expertise regarding the MISO market, pursuing new energy sales and analyzing the best use of the currently idled Coleman plant. Two of the five action items have been closed by the KPSC, including an agreement that the recommendation of adding a new board member with energy expertise is not warranted and that Big Rivers was sufficiently pursuing new energy sales.

Big Rivers has added staff resources focused on enhancing internal expertise in production cost and financial modeling to further leverage its association as a member of ACES and has executed amendments to its debt documents to address restrictions around the sale or early retirement of the Coleman plant. The advanced stage of action plans relating to these two items makes it likely that the items can be closed by the KPSC in the near term, perhaps as soon as October 2018.

With respect to the action item focusing on sale, retirement or redevelopment of the Coleman plant, Big Rivers is still studying its options and may opt to relocate a scrubber from the Coleman plant to its Wilson plant. This action item is expected to continue as an ongoing issue at least during the remainder of 2018. As Big Rivers moves forward in addressing the still open audit recommendations, it is currently required to report to the KPSC annually if necessary. Big Rivers has provided four reports to this point and anticipates filing its next report with the KPSC in October.

Reasonably competitive position maintained

Although Big Rivers' rates have increased following the loss of the smelter loads and KPSC approved rate increases, the economics of power produced from Big Rivers' generation sources have enabled it to still maintain a reasonable competitive position in the Southeast and even more so when compared to other regions around the country. The capacity factors and efficient operations of the assets resulted in a 2017 average member rate per MWh for rural members and large industrial members of $85.14 and $63.37, respectively, compared to $82.21 and $63.96, respectively, for 2016, $82.35 and $63.20, respectively, for 2015, $81.79 and $63.56, respectively, for 2014 and $57.74 and $47.00, respectively, for 2013 (in all instances, excluding the benefits of member rate stability mechanism).

Wholesale power contracts support Big Rivers' credit profile

The revenues derived under Big Rivers' long-term wholesale contracts with its members for sales to non-smelter customers are continuing as the contracts are in effect through December 31, 2043. The underlying favorable economics of power produced by Big Rivers' generation assets and bill credits provided during 2014-16 appear to have tempered any expressed or latent member disenchantment now that members are feeling the full impact of significant rate increases. Despite a relatively competitive starting point in 2013 and other price mitigating strategies, it remains possible that member unrest will surface, especially if further substantial rate increases become necessary to recover an increasing regulatory asset balance or if environmental compliance and other operating cost pressures surface unexpectedly. We understand that there was some decline in member satisfaction surveys for 2017, at least partially attributable to expiration of the rate stability mechanism.

Improved financial performance following base rate increases and other strategic initiatives

Big Rivers' financial performance is being supported by the outcomes in its last two rate cases and other mitigation strategies. Big Rivers' financial performance in fiscal year (FY) December 31, 2017 was reasonably consistent with its budget expectations and very much in line with FY 2016, including net margins of $13.0 million, which supported a 1.32x TIER, a contractual MFI ratio of 1.32x and a DSC ratio of 1.22x, all as defined in the cooperative's debt documents. Although the net margins in fiscal years 2015-2017 were far below the net margins of $32.7 million achieved in FY 2014, financial performance during 2014 was aided by the positive weather effects of the polar vortex which added more than $25 million on a non-reoccurring basis to Big Rivers' off-system margins that year.

For fiscal years 2015-2017 (including Moody's standard adjustments), Big Rivers' FFO coverage of interest, FFO to debt and DSC ratios averaged in the "Ba", "B" and "A" rating categories, respectively, for the ratios covered under the Rating Methodology for U.S. Electric G&T Cooperatives. For example, Big Rivers' three year average FFO coverage of interest, FFO to Debt, and DSC for 2015-2017 were 1.27x, 1.3%, and 1.2x, respectively. Although the average scores for two of these three metrics are at weak levels under the rating methodology, the ratio of FFO to interest and FFO to debt metrics during FY 2014 and to a lesser degree in FY 2015 are negatively affected by the accounting effects of noncash member rate mitigation revenue. The 2013 and 2014 rate case decisions firmly established the necessary revenue requirements and rate levels to maintain Big Rivers' financial viability and have restored these metrics to stronger levels in FY 2017 now that the economic reserve, rural economic reserve and transmission revenue economic reserve accounts have been utilized. The A category ranking for the average DSC ratio for the same period primarily reflects the absence of any large principal payments during the period. Big Rivers has some non-amortizing debt issues in its capital structure which can pressure the DSC ratio in years when large principal repayments are required. We expect that the DSC ratio can be sustained near 1.2x for the near term, with the next sizable bullet maturity of about $240 million not until FY 2023.

For the same 2015-2017 period, the TIER averaged 1.2x (in the "A" category range) primarily reflecting supportive regulatory decisions which support net margins, and equity to total capitalization averaged 36.1% (in the "Aa" category range) as the metric is benefitting from debt reduction and full retention of net margins. With about $181 million of net book value relating to the idled Coleman plant, Big Rivers could experience some pressure in complying with a minimum equity level as described in the liquidity section if it decides to shutter the plant permanently and has to take a write-off.

As noted in our summary above, Big Rivers' FFO coverage of interest and debt ratios strengthened in FY 2017 and prospectively are likely to be sustained to support the cooperative's credit quality as power sales agreements with entities in Nebraska and Kentucky help compensate for the substantial overcapacity at Big Rivers. Still, Big Rivers faces regulatory and execution risks as it eventually needs to seek recovery of increasing regulatory asset balances and decide on a final strategy to best address the idled Coleman plant.

Liquidity

We expect that Big Rivers will maintain ample liquidity over the next 12-18 months and will generate positive cash flow each year for the next several years.

Big Rivers supplements its existing cash on hand and internally generated cash flow with a multi-year $100 million syndicated senior secured credit agreement with five financial institutions, led by National Rural Utilities Cooperative Finance Corporation (NRUCFC), which expires September 18, 2020. As of June 30, 2018, Big Rivers had a cash and temporary investments balance of about $60.4 million and $92.3 million available under the NRUCFC credit agreement. Big Rivers has manageable debt maturities over the next eight quarters, which are largely comprised of scheduled amortizations of long-term debt to be paid at roughly $6.5 million per quarter. Terms of the NRUCFC credit agreement provide a good quality source of alternate liquidity in the form of a syndicated credit agreement which benefits from a multi-year tenor and the absence of any onerous financial covenants largely consistent with the financial covenants in existing debt documents. The syndicated agreement does, however, separately require Big Rivers to maintain a minimum equity balance at each fiscal quarter-end and year-end of $375 million plus 50% of the cooperative's cumulative positive net margins for each of the preceding fiscal years, beginning with the fiscal year ended December 31, 2015. Big Rivers is comfortably in compliance with those covenants. Additionally, the credit agreement benefits from no ongoing material adverse change (MAC) clause. The syndicated credit agreement does not have any rating triggers, just a pricing grid based on Big Rivers' rating.

During 2017, Big Rivers also expanded its bank relationships by negotiating a $15 million term loan with Federal Agricultural Mortgage Corporation, proceeds from which it pre-paid a portion of the existing series A loan from the Rural Utilities Service (RUS) to achieve interest cost savings. The note currently has an outstanding balance of $14.3 million and a final maturity of October 23, 2020. More recently, in April 2018 Big Rivers received about $46.1 million of funding from the RUS in the form of amortizing first mortgage bonds, with $25.6 million maturing in 2033 and $20.5 million maturing in 2043. Proceeds from these RUS loans and existing cash were used to repay in full the remaining balance of the RUS series A loan, thereby achieving interest cost savings, minimizing debt maturities for 2020 and 2021 and re-establishing access to low-cost RUS financing.

Debt Structure

As part of the unwinding of various transactions completed in 2009, Big Rivers replaced the previously existing RUS mortgage with a senior secured indenture. Under the senior secured indenture RUS and all senior secured debt holders, including the $83.3 million of County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7), are on equal footing in terms of priority of claim and lien on assets. The current senior secured indenture provides Big Rivers with the flexibility to access public debt markets without first obtaining a case specific RUS lien accommodation, while retaining the right to request approval from the RUS for additional direct borrowings under the RUS loan program, if they choose to do so. Given persistent questions about the availability of funds under the federally subsidized RUS loan program, the added flexibility of the current senior secured indenture is credit positive.

Other Considerations

Big Rivers' mapping under Moody's U.S. Electric Generation & Transmission Cooperative Rating Methodology grid below is based on historical data through December 31, 2017. The grid indicated rating for Big Rivers' senior most obligations under the Methodology is currently Baa3. However, Big Rivers' actual senior secured rating of Ba1 reflects several of the unique risks at Big Rivers and the challenges facing the cooperative in mitigating these risks, including further implementation of its load mitigation strategies following the smelter contract terminations and addressing issues surrounding its increasing regulatory asset accounts and idled Coleman plant.

Methodology

Exhibit 3
U.S. Electric Generation & Transmission Cooperative Rating Methodology

Rating Factors				
Big Rivers Electric Corporation, KY				
U.S. Electric Generation & Transmission Cooperatives [1][2]	Current FY 12/31/2017		Moody's 12-18 Month Forward View As of Published Date [3]	
Factor 1 : Wholesale Power Contracts and Regulatory Status (20%)	Measure	Score	Measure	Score
a) % Member Load Served and Regulatory Status	Ba	Ba	Ba	Ba
Factor 2 : Rate Flexibility (20%)				
a) Board Involvement / Rate Adjustment Mechanism	Baa	Baa	Baa	Baa
b) Purchased Power / Sales (%)	32.5%	Baa	25%-35%	Baa
c) New Build Capex (% of Net PP&E)	Aa	Aa	Aa	Aa
d) Rate Shock Exposure	B	B	B	B
Factor 3 : Member / Owner Profile (10%)				
a) Residential Sales / Total Sales	29.8%	Ba	25%-35%	Ba
b) Members' Consolidated Equity / Capitalization	38.8%	Baa	38%-40%	Baa
Factor 4 : 3-Year Average G&T Financial Metrics (40%)				
a) Times Interest Earned Ratio (TIER)	1.2x	A	1.2x-1.4x	A
b) Debt Service Coverage Ratio (DSC)	1.2x	A	1.2x	A
c) FFO / Debt	1.3%	B	4%-6%	Baa
d) (FFO + Interest) / Interest Expense (3 Year Avg)	1.3x	Ba	1.8x-2x	Baa
e) Equity/Total Adjusted Capitalization	36.1%	Aa	36% - 39%	Aa
Factor 5 : G&T Size (10%)				
a) MWh Sales	7.4	Baa	7-10	Baa
b) Net PP&E	$1.0	A	$1 - $1.1	A
Rating:				
Indicated Rating from Grid		Baa3		Baa2
Actual Rating Assigned (Senior Secured)		Ba1		Ba1

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 12/31/2016; Source: Moody's Financial Metrics™
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Investors Service

RATINGS

BIG RIVERS ELECTRIC CORPORATION, KY	
Rating: County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7)	Ba1
Outlook	Stable

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

REPORT NUMBER 1130318

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Moody's
INVESTORS SERVICE

CASE NO. 2020-00064

EXHIBIT SMITH SUPPLEMENTAL-5

Fitch's December 4, 2019 Press Release

FitchRatings

Fitch Affirms Big Rivers Electric Corp. at 'BBB-'; Outlook Stable

Fitch Ratings - New York - 04 December 2019:

Fitch Ratings has affirmed the ratings on the following bonds issued by Big Rivers Electric Corporation (BREC) at 'BBB-':

--$83 million County of Ohio pollution control revenue bonds, series 2010A.

--Issuer Default Rating (IDR).

ANALYTICAL CONCLUSION

The 'BBB-' rating and IDR on Big Rivers Electric Corporation reflects the corporation's elevated but improving leverage profile in relation to its midrange revenue defensibility and strong operating risk profile. Fitch assesses Big River's three members to have midrange credit quality, which coupled with the absence of independent rate-setting authority, constrains the corporation's overall revenue defensibility.

The rating also reflects the corporation's consistently low operating cost burden and supportive regulatory regime. Lastly, Fitch views favorably the re-balancing of Big River's previously long resource position through a combination of greater contracted non-member sales and the retiring and/or idling of existing capacity, which should allow financial margins to remain stable and operating costs low. If margins remain strong and leverage declines further, upward rating movement is possible.

CREDIT PROFILE

Big Rivers Electric Corporation, a non-profit generation and transmission (G&T) cooperative formed in 1961, provides all-requirements wholesale electric and transmission service to three electric distribution cooperatives pursuant to all-requirements contracts through Dec. 31, 2043. The three members provide service to a total of approximately 117,000 retail customers located in 22 western Kentucky counties. Financial performance of the three distribution systems is satisfactory and provides sufficient support for the rating.

KEY RATING DRIVERS

Revenue Defensibility:: 'bbb'

Strong Contractual Framework, Midrange Member Credit Quality

Revenue defensibility is midrange despite otherwise very strong revenue source characteristics provided by all-requirements contracts. The midrange assessment principally reflects the credit quality of the three member utilities along with the regulatory framework within which Big Rivers and its customers operate. While the regulatory regime has been constructive historically, neither Big Rivers nor its three customers have autonomy over rate-setting.

Operating Risk:: 'a'

Coal-Dominated Resource Base, Low Cost Burden

The strong operating risk assessment begins with a low operating cost burden that has averaged 4.85 cents/KWh over the past five years. Operating cost flexibility assessment is neutral as Big River's has idled or retired 695 MWs of coal capacity over the past few years. As a result, reliance on coal-fired capacity is lower than historical amounts and sits just below Fitch's threshold for a neutral assessment. Management expects to add some renewable (solar) capacity over the next several years, which will further diversify the resource base.

Financial Profile:: 'bbb'

Improved Margins, Leverage to Decline

Big River's midrange financial profile reflects elevated but improving leverage ratios. The solid financial results achieved in fiscals 2017 and 2018 are expected to continue as Big Rivers provides contracted energy and capacity to Kentucky Municipal Energy Agency and the city of Owensboro, KY in 2019 and 2020, respectively. In addition, Fitch anticipates lower operating expenses from the reduction in capacity over the past few years coupled with higher non-cash expenses (depreciation) will lead to a further improvement in leverage over the next few years.

Asymmetric Additional Risk Considerations

There are no additional asymmetric risks affecting the rating.

RATING SENSITIVITIES

Improved Leverage: Big Rivers Electric Corporation's ratings and IDR could be upgraded if the financial profile is sustained and leverage continues its positive trend downward over time.

Member Credit Quality: The rating is also sensitive to changes in the credit quality of its three member customers. A shift in member credit quality in either direction could result in a change in Fitch's assessment of revenue defensibility and could lead to a change in the rating.

SECURITY

The bonds are secured by a mortgage lien on substantially all of the Big Rivers' owned tangible assets, which include the revenue generated from the wholesale sale or transmission of electricity.

Revenue Defensibility

Strong Contractual Framework

Revenue source characteristics are very strong. All three of Big Rivers' customers are signed to long-term, all-requirements, take-and-pay power contracts. All costs associated with the delivery of power and energy/services, including debt service on the bonds, are billed to the customers on a monthly basis. There are no step-up provisions in the contracts for non-payment. However, given there are only three members, the rating on the bonds is heavily correlated to the credit quality of all three customers.

Rates are Regulated

The Kentucky Public Service Commission (KPSC) is charged with approving the wholesale and retail rates of Big Rivers' and its members. Wholesale rates charged to the members consist of a demand charge and an energy charge per kWh consumed as approved by KPSC. Big Rivers has certain approved riders including a fuel adjustment clause and an environmental surcharge, which helps provide timely pass-through of variable charges. Supportive regulatory policies and successful rate recovery efforts historically point to a constructive regulatory environment.

Big Rivers' last rate order, received in 2014, approved rates at levels that allowed it to cover total fixed costs on a self-sustaining basis. On the member level, rates are set for full cost recovery. However, while the regulatory environment for rate recovery has been supportive, approval of rate cases by an outside entity could result in delayed revenue recovery, potentially higher revenue variability and weaker overall revenue defensibility compared to non-regulated entities, and thus limits rate flexibility in Fitch's view.

Beginning in 2018, member rates have been set to allow Big Rivers to fully recover its costs from the members (i.e., there are no longer any deferred revenues), which is an important rating factor that underpins the investment grade rating. Fitch believes the stronger margins are sustainable over the intermediate term as Big Rivers begins to benefit for newly contracted sales. The average wholesale power cost to members declined in 2018 to $71/MWh from about $76/MWh the previous year. The member rate for 2019 is up to $72.50 and is forecast to rise again in 2020 to just over $73.00 but remain at this level for the next few years.

Midrange Purchaser Credit Quality

Revenue defensibility primarily reflects the member (purchaser) credit quality as evaluated using Fitch's purchaser credit index (PCI), which reflects the weighted average credit quality of the relevant obligors. Fitch's PCI score of 3.05 is based on an evaluation of all three member cooperatives; Meade County Rural Cooperative Corporation (Meade), KY comprising 16% of Big River's revenues; Kenergy Corporation, KY (Kenergy, 63% of revenues); and Jackson Purchase Energy Corporation, KY (Jackson, 21% of revenues). The overall scoring for each cooperative ranged from relatively strong to relatively weak.

The PCI takes into account the strength of the member's service area, retail rate competitiveness and ability to absorb rate increases through an analysis of its service area, as well as 2018 financial performance. Fitch assessed the service area characteristics for the two largest members to be midrange based on the relatively low median household income (MHI) and average to above average unemployment rates.

Contributing to Kenergy's midrange score are its proportionally low amount of revenues derived from residential users (23% of total coop revenues) and MHI that is just 84% of the US average. In addition, 2018 financial performance was weak. On the positive side, Kenergy's customer base is slowly growing and retail rates are very affordable. The weak score for Jackson is rooted in its even lower MHI (74% of the U.S. average), relatively high unemployment rate of 6.1%, high retail rates, and very weak 2018 margin and cash cushion. Meade's score was assessed to be the highest of the three, although as the smallest of Big Rivers' members, its strong overall credit profile factors less into the overall PCI.

The three member cooperatives serve small to mid-sized cities and counties, and are geographically located on Kentucky's western border. Economic activity throughout the state is relatively diverse but weighted more heavily in manufacturing and natural resources. Locally, growth in the population and customer base has been steady and the unemployment levels for the communities, while varied, are mostly moderate ranging from 4.4% to as high as 6.1%. A fairly robust transportation network provides access to larger metropolitan areas including Nashville, TN (to the south) and Louisville, KY as well as to St. Louis, MO (northwest) and Indianapolis, IN (north).

Operating Risk

Big River's strong operating risk assessment reflects a consistently low operating cost burden of about 5 cents/KWh since at least 2014. Operating costs are anticipated to remain low as resource capacity is expected to remain sufficient to meet existing member and newly added customer load and capital needs are manageable. In addition, power is supplied mainly by low-cost vintage generating units and contracted purchases, all of which is further supported by access to the MISO market.

Operating Cost Flexibility

Fitch assesses Big River's operating cost flexibility as neutral as its past reliance on coal-fired generation has declined. The assessment takes into account the corporation's current resource base that includes four owned generating facilities (all coal) as well as contracted hydroelectric capacity. In 2019, approximately 78% of total capacity is coal-fired, followed by hydro capacity at 16% and a small amount of natural gas.

Big Rivers currently owns and operates 1,000 MWs of net generating capacity consisting of the following coal-fired facilities: Green generating station, a two-unit 454 MW facility that has the ability to burn high Sulphur, low cost coal; Wilson generating station, a 417 MW single unit facility; and the smallest of BR's generating assets - Reid Station (130 MW). In addition, Big Rivers also receives power through contract with Southeastern Power

Administration (SEPA) for 178 MWs of hydroelectric capacity, bringing total current capacity to over 1,100 MWs. Big Rivers' 2017 decision to idle the 443 MW three-unit Coleman Station has helped improve its resource mix.

Not included in the assessment cost flexibility assessment is the capacity from the coal-fired plant owned by the city of Henderson, KY. Pursuant to a long-standing agreement with Henderson, Big Rivers received the surplus energy from the plant after Henderson's own retail needs were met, which had been roughly equivalent to 180MW-190MW per year. The Henderson plant was no longer capable of providing economical, continuous and reliable operation, leading both parties to agree to de-commission it in early 2019. The retirement of the Henderson plant, which was approved by regulators in late 2018, resulted in the elimination of a net operating loss on the asset of roughly $13 million annually.

Environmental Considerations

The Commonwealth of Kentucky does not currently have a renewable portfolio standard. However, Big Rivers issued a request for proposal to add up to 150 MWs of solar capacity. The expectation is to enter into a 20 year purchase power agreement at a fixed price. A short list of respondents and potential projects is currently being evaluated. The additional capacity is not expected to be available for at least several years. However, once available, capacity from coal resources will decline to around 70%.

Capital Planning and Management

Capital planning and management are assessed to be midrange. Big Rivers has an exceptionally high, Fitch-calculated average age of plant of 49 years in 2018, which indicates high life-cycle needs. This is somewhat offset by capital spending that has averaged 131% of annual depreciation over the past five years and an anticipated acceleration in annual depreciation expense and approval to treat several of its generating facilities as regulatory assets is received over the near term.

The regulatory asset designation will allow Big Rivers to include a larger proportion of the depreciation of these assets in its rating case with regulators for enhanced future cost recovery. Management anticipates capital spending for 2019-2023 to total a fairly sizeable $355 million, which continues a recent trend of sound capital reinvestment undertaken over the past few years. Roughly $250 million in additional debt is expected to be issued to fund the proposed capital spending.

Reduction in Long Generation Portfolio Position

Big Rivers historically provided capacity and energy to its members through a combination of multiple owned generation stations, including a leased facility (Henderson Station 2) and power purchases. After the loss of load attributable to the two large aluminum smelters, system peak demand declined to around 650 MWs, or roughly half of historical demand, leading to a very long resource position. To address this, Big Rivers implemented a mitigation plan with the goal of achieving financial savings and benefits that would help lower member rates. The plan included aggressively marketing the excess power under intermediate-term contracts and through spot sales in MISO.

More recently, growth in the existing customer base coupled with the signing of bi-lateral contracts with Kentucky Municipal Energy Agency (KyMEA, A/Stable), a consortium of Nebraska-based utilities, and full requirements sales to the city of Owensboro, KY (beginning in 2020) significantly increases contracted (non-member) sales and lowers reliance on short-term markets. In addition, the idling of the capacity at Coleman station and de-commissioning of the Henderson plant reduces total capacity to a manageable reserve of around 10% of total expected peak demand by 2020 (1,179 MW of capacity vs 1,026 MW of peak demand).

Operations at the Coleman plant (443 MW) were initially idled in 2014. Coleman is expected to be retired in the near term.

The wholesale customers in Nebraska began receiving energy in 2018, but full requirements capacity and energy totaling 85 MWs will phase in over time. KYMEA's 100 MW of firm purchases began May 1, 2019 and is followed by the city of Owensboro's agreement to purchase full requirements (165 MW) from Big Rivers beginning in mid-2020. The inclusion of these intermediate term contracts brings some predictability to the revenue base, which coupled with the idling and retiring of certain generating assets right-sizes the total resource needs relative to member and contracted demand. Big Rivers is expected to add up to 150 MW of solar in the coming years, 100 MW of which will be used to meet the expected 200 MWs of new demand from Nucor Steel.

Financial Profile

Improved Financial Results

Big Rivers filed a rate case with the Kentucky Public Service Commission (KPSC) in 2013 requesting an increase in rates to levels that would provide full cost recovery of system obligations. The KPSC granted the new rates in 2014, but the full effect of the increases were not realized until fiscal 2017, as previously set aside reserves were used to keep member rates low over several years leading up to 2017.

Fitch-calculated debt service coverage improved to 1.30x in fiscal 2017 (and to 1.36x in 2018) from very weak levels previously, and coverage of full obligations improved to 1.28x by 2018. Audited fiscal year Sept. 30, 2019 results are not expected to be available for several months, but are anticipated to be sound once again. The improved performance over the past few years is largely attributable to the full implementation of the cooperative's risk mitigation strategy and approved rate plan.

However, the mitigation reserves have been fully utilized and Fitch believes the improved leverage ratios that have resulted from a steady decline in net debt and rise in funds available for debt service (FADS) over the past few years is likely to continue. Cash remains near historical norms and at 57 days cash on hand is considered neutral to the financial profile assessment. A $100 million senior secured credit agreement provides added liquidity.

Fitch Analytical Stress Test (FAST) Base and Rating Case Analysis

Fitch's base case is based on Big River's financial pro forma for fiscal years 2019 - 2023, which conservatively incorporates a slight decline in energy and revenues followed by limited growth through the forecast and annual spending for capital improvements totaling $356 million through 2023. The base case assumes $294 million of outstanding principal will be retired (including cash defeasances) although a portion of the capital plan will be funded with additional debt.

The Fitch base case aligns with Big Rivers' forecasted margins, which includes a decline in operating expenses related to the closure of Station 2 in 2019, and regulatory approval to treat station 2 as a regulatory asset, a rise in annual depreciation beginning in 2019, and an expected increase in sales related to Owensboro, KY and the expected opening of a new facility by Nucor Steel in 2022. The base case shows a decline in leverage in year one (2019) to 6.9x followed by a further modest decline in the leverage ratio throughout the remainder of the forward look.

For the rating case, the FAST incorporates a stress in sales in the first two years aggregating to 16% before a return to sales growth in years three through five. The previously mentioned base case assumptions are also applied. The result of the stress is an increase in the leverage ratio to 9.1x in year two before an expected return of sales growth and presumed rate increases that would allow the utility to maintain at least a minimal amount of cash in subsequent years. Fitch believes the above stress-induced leverage ratio would remain fully supportive of the current rating. However, if actual leverage declines as projected in the base case, a higher rating could be warranted.

Debt Profile

The debt profile is neutral to the rating. Big Rivers had approximately $760 million in total outstanding debt as of fiscal year-end 2018. All of the outstanding debt is fixed rate maturing no later than 2032 and includes a large bullet maturity of $245 million due in 2023. Management expects to cash-fund roughly half of this payment and refinance the rest with long-term, fully amortizing bonds.

In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by information from Lumesis.

ESG Considerations

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of 3 - ESG issues are credit neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity.

For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

RATING ACTIONS

ENTITY/DEBT	RATING		PRIOR
Big Rivers Electric Corporation (KY)	LT IDR BBB- ⭘ Affirmed		BBB- ⭘
Big Rivers Electric Corporation (KY) /Senior Secured Obligation/1 LT	LT BBB- ⭘ Affirmed		BBB- ⭘

Additional information is available on www.fitchratings.com

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Applicable Criteria

U.S. Public Power Rating Criteria (pub. 03 Apr 2019)
Public Sector, Revenue-Supported Entities Rating Criteria (pub. 07 Nov 2019)

Additional Disclosures

Dodd-Frank Rating Information Disclosure Form
Solicitation Status
Endorsement Policy

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CASE NO. 2020-00064

EXHIBIT SMITH SUPPLEMENTAL-6

Large Industrial Rate Design Impact

Big Rivers Electric Corporation
Case No. 2020-00064
2019 Member Billing
Settlement vs. Current Rates

	Existing Rates	Settlement Rates
Demand	**$ 10.715**	**$ 13.406**
Energy	**$ 0.03805**	**$ 0.03327**

	Billing Determinants			Settlement Rates			Current Rates		Bill Impact Increase / (Decrease)	
Customer (Note)	**kW**	**kWh**	**Average Load Factor**	**Demand Revenue**	**Base Energy Revenue**	**Total Demand + Energy**	**Total Demand + Energy**	**Total Current Bill**	**Amount**	**%**
[redacted]	61,237	25,662,424	57.4%	$ 820,943	$ 853,712	$ 1,674,655	$ 1,632,610	$ 1,879,597	$ 42,045	2.2%
	697	405,827	79.8%	9,344	13,501	22,845	22,910	32,760	(65)	-0.2%
	322,389	177,071,899	75.2%	4,321,944	5,890,651	10,212,595	10,191,982	n/a	20,613	n/a
	19,811	5,641,117	39.0%	265,586	187,663	453,249	426,919	479,104	26,330	5.5%
	180,000	130,748,355	99.5%	2,413,080	4,349,606	6,762,686	6,903,675	7,854,326	(140,989)	-1.8%
	438,178	294,419,631	92.0%	5,874,214	9,794,458	15,668,672	15,897,744	18,068,242	(229,072)	-1.3%
	41,657	20,007,182	65.8%	558,454	665,579	1,224,033	1,207,628	1,365,385	16,405	1.2%
	85,850	51,964,339	82.9%	1,150,905	1,728,698	2,879,603	2,897,126	3,287,332	(17,523)	-0.5%
	154,658	84,755,269	75.1%	2,073,345	2,819,554	4,892,899	4,882,099	5,529,426	10,800	0.2%
	23,023	11,724,997	69.8%	308,646	390,055	698,702	692,828	783,695	5,874	0.7%
	1,327,500	802,401,040	82.8%	$ 17,796,462	$ 26,693,475	$ 44,489,938	$ 44,755,520		$ (265,582)	

Note: Proposed Settlement excludes coal mines, Shell Oil and Aleris EDR.

CONFIDENTIAL
Filed with Motion for
Confidential Treatment

EXHIBIT D

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION OF KENTUCKY

In the Matter of:

APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR APPROVAL TO MODIFY ITS MRSM TARIFF, CEASE DEFERRING DEPRECIATION EXPENSES, ESTABLISH REGULATORY ASSETS, AMORTIZE REGULATORY ASSETS, AND OTHER APPROPRIATE RELIEF	)	Case No. 2020-00064

DIRECT TESTIMONY

OF

DANIEL M. WALKER

ON BEHALF OF

BIG RIVERS ELECTRIC CORPORATION

FILED: May 29, 2020

DIRECT TESTIMONY
OF
DANIEL M. WALKER

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DIRECT TESTIMONY
OF
DANIEL M. WALKER

I. <u>INTRODUCTION</u>

Q. Please state your name and address.

A. My name is Daniel M. Walker. I am an advisor on cooperative finance. My business address is 7106 University Drive, Richmond, VA 23229.

Q. Please describe your relevant experience and educational background.

A. I hold a Bachelor's degree from Appalachian State University and a Master of Business Administration degree from the University of Richmond. I have published articles in the College of William & Mary Business Review, EPRI Research Journal, and Public Utilities Fortnightly on regulation. I have served as Director of Public Utility Accounting and Finance for the Virginia State Corporation Commission and as a public utility consultant, testifying in civil and administrative cases in Virginia, Florida, Kentucky, Ohio, Arizona, and Alaska.

In addition, I served as the Chief Financial Officer for Old Dominion Electric Cooperative for 21 years. In that capacity, I was directly responsible for the issuance of approximately $3 billion of capital market financings. Also, in that capacity, I have testified on behalf of Old Dominion or its members before the Virginia State Corporation Commission, the Maryland Public

Service Commission, the Delaware Public Service Commission, and the Federal Energy Regulatory Commission. As an advisor to generation and transmission cooperatives ("G&Ts"), I have assisted G&Ts across the country in placing over $4 billion of financing in the capital markets. Also, as a financial advisor, I have testified on behalf of G&Ts and distribution cooperatives before public service commissions in Kentucky, Alaska, and Virginia. Indeed, I provided testimony on behalf of Big Rivers Electric Corporation ("Big Rivers") before this Commission in its last base rate proceeding, Case No. 2013-00199 (the "2013 Rate Case").

Q. What is the purpose of your testimony?

A. I have been asked by Big Rivers to review the relief requested in its Application in this proceeding, as well as the Settlement Agreement, Stipulation, and Recommendation (the "Settlement Agreement") that the parties to this proceeding unanimously support. In that light, I provide an analysis of how the credit rating agencies are likely to view the proposals, as well as possible alternatives to the proposals. I will give a recommendation as to what I believe is most likely to lead to Big Rivers regaining its investment grade credit ratings from all three credit rating agencies.

Q. Are you sponsoring any exhibits?

A. Yes. The following exhibits were prepared by me or under my supervision:

- Exhibit Walker-1: G&T Financial Analysis
- Exhibit Walker-2: Fitch's July 5, 2018 Press Release
- Exhibit Walker-3: Moody's July 17, 2018 Credit Opinion
- Exhibit Walker-4: S&P January 16, 2019 Credit Opinion
- Exhibit Walker-5: Moody's November 13, 2019 Credit Opinion
- Exhibit Walker-6: Fitch's December 4, 2019 Press Release
- Exhibit Walker-7: S&P April 1, 2020 Credit Opinion

Q. Please summarize your testimony and recommendation.

A. Based on my review of Big Rivers' Application and the Settlement Agreement, as well as Big Rivers' latest credit opinions issued by the credit rating agencies, I recommend that the Commission approve the Settlement Agreement among all the parties to this proceeding. Based on my experience as a financial advisor to G&Ts and working with the credit rating agencies, I believe the relief granted in the Settlement Agreement will be viewed very positively by the credit rating agencies and potential bondholders because of the following factors:

- the Settlement Agreement will allow Big Rivers to eliminate the uncertainty as to recovery of the Smelter Loss Mitigation Regulatory Assets;
- by authorizing Big Rivers to increase the amortization of Smelter Loss Mitigation Regulatory Assets in years in which its times interest earned

ratio ("TIER") exceeds 1.30, Big Rivers will more quickly decrease its high regulatory asset balance which has been a significant concern to the credit rating agencies;

- by authorizing Big Rivers to automatically reduce amortization expenses of the Smelter Loss Mitigation Regulatory Assets in years in which its TIER would not otherwise equal 1.30, the Settlement Agreement ensures that Big Rivers will maintain the financial metrics it needs to be viewed attractively by potential lenders; and
- a Commission order granting Big Rivers the relief proposed in the Settlement Agreement will signal to the credit rating agencies that Big Rivers continues to operate in a credit supportive regulatory environment.

II. <u>OVERVIEW OF COOPERATIVE CREDIT RATINGS</u>

Q. Why are strong credit ratings important to cooperatives?

A. Both the short term and long term capital markets are very competitive. Lenders have many choices on how they deploy their available funds. For example, lenders such as insurance companies (a favorite lender to cooperatives) allocate available funds based on credit strength. As such, cooperatives with strong credit (rating in the "A" category) qualify for a larger "pot" of funds than cooperatives at the "BBB" credit ratings. In some situations, capital is either not available for cooperatives with low ratings or is, alternatively, very expensive. Having a strong credit rating allows cooperatives to obtain capital at a lower interest rate, meaning those cooperatives with strong credit are able to save money on interest expenses.

Q. Are there any other reasons strong credit ratings are important to cooperatives?

A. Yes. The capital markets have become an important source of capital for G&T cooperatives. However, cooperatives generally have considerably less "market liquidity" than Investor Owned Utilities ("IOUs"). IOUs issue billions of dollars in the capital market while cooperatives by comparison issue very little debt in the capital markets. Consequently, commercial bankers and bondholders devote much more of their attention to IOUs than to cooperatives. Because of this, cooperatives compete against each other for what little liquidity is available to them in the capital market. Only those cooperatives with strong credit profiles are able to obtain financing in the capital market at a reasonable cost. Conversely, market dynamics dictate that cooperatives with less than investment grade profiles face significantly fewer options and significantly higher costs. In other words, cooperatives have to work much harder than IOUs to ensure they can attract capital.

Q. How does a G&T cooperative position itself to attract capital?

A. First and foremost, a cooperative must maintain a solid credit profile. In the case of state regulated G&T cooperatives like Big Rivers, they must also earn adequate margins to ensure not only the ability to cover the cost of capital, but also a moderate cushion to ensure a measure of stability and resistance against unforeseen negative circumstances. Against that background, Big Rivers' proposed New TIER Credit is likely to be viewed positively by the credit ratings agencies.

Q. What are Big Rivers' current credit ratings?

A. Big Rivers is currently rated BBB- by Fitch, BB+ by S&P, and Ba1 positive by Moody's.

Q. What is the significance of these ratings to Big Rivers?

A. These ratings are the lowest ratings for a G&T cooperative in the industry, to my knowledge. I am unaware of any other G&T that does not have investment grade credit ratings, nor am I am aware of any other G&T that has issued debt in the capital market with these ratings. Thus, it is imperative that Big Rivers continue to take steps, such as the relief requested in this proceeding, to regain its investment grade credit ratings so that Big Rivers may reasonably access the capital market.

Q. Since your testimony in Big Rivers' last base rate case, have there been any changes in the G&T industry as it relates to the credit market?

A. Yes, there have been many important changes in how G&T's obtain credit. First, the TIERs earned by G&T's have generally improved across the board. In the 2013 Rate Case, the average TIER earned by G&Ts with similar a risk profile to Big Rivers based on 2012 data was a 1.61x. Based upon a current analysis of the most recently published data for G&T cooperatives, the average earned TIER has increased to 1.63x. So, TIERs in the G&T world are increasing.

Second, the credit ratings of G&T cooperatives have also improved across the board. I believe this is a result of G&T cooperatives realizing how beneficial the capital markets are to a G&T's ability to serve the best interests of its members.

Finally, G&T's participation in the capital market has increased considerably since the 2013 Rate Case. In the last four years alone, G&Ts have issued 23 different tranches of new debt amounting to almost $4 billion. Considering there is not currently a boom in new construction among G&Ts, this is an astounding figure; however, it signals the fundamental understanding from G&Ts that the capital market can offer advantages over a traditional loan financing even for routine capital expenditures.

Q. Have you prepared an analysis similar to what was provided in the 2013 Rate Case?

A. Yes. Similar to the 2013 Rate Case, my analysis shows the financial profile of 25 G&Ts that either have, or could, finance with reasonable interest rates and terms and conditions in the capital markets. The 25 G&Ts included in the analysis have investment grade credit ratings and have the financial profile to compete successfully in the capital markets for funds under general financial market conditions.[1]

Q. In your analysis, there are several G&Ts with TIER/MFIR at or below the 1.30 level. Can you explain why you believe these G&Ts can issue debt in the capital market?

A. As with any analysis, there are exceptions to the general rule. For example, many G&Ts calculate both TIER and MFIR. In most cases, the results of the calculation is very close, but in some case the numbers can be very different. When the TIER and MFIR varied, I used the lower number. For example, Corn Belt Power Cooperative ("Corn Belt") has a 2.43 TIER and a 1.30 MFIR. The rating agencies and potential bondholders would look at both calculations. Moreover, Corn Belt has a high equity percentage, which supports its investment grade credit ratings.

[1] Exhibit Walker-1, G&T Financial Analysis.

As will be discussed in detail later, Old Dominion Electric Cooperative ("Old Dominion") has investment grade credit ratings which, at first blush, seems out of line with other cooperatives, considering Old Dominion has an almost non-competitive TIER/MFIR of 1.20. However, even though Old Dominion is regulated by FERC (rather than the Virginia State Corporation Commission), Old Dominion has the ability to automatically adjust its rates to maintain its 1.20 TIER at any time (indeed, rates could be adjusted every day, if necessary).

Q. Is Big Rivers one of the 25 G&T cooperatives included in your list of G&T cooperatives that can reasonably access the capital market?

A. No. While Big Rivers' financial recovery since the 2013 Rate Case has been tremendous, Big Rivers has not yet regained its investment grade credit ratings. It needs to continue to improve its credit profile to successfully compete in the capital markets. Approval of the relief requested in this proceeding will be a huge step towards allowing Big Rivers to compete in the credit market.

III. BIG RIVERS' PROPOSED RELIEF

Q. Do you believe any portion of Big Rivers' proposed relief will affect its credit ratings?

A. Yes. The authorization to begin recovering the Smelter Loss Mitigation Regulatory Assets and the operation of the New TIER Credit is very likely to be viewed as a *credit positive* by the credit rating agencies.

Q. Can you briefly describe the New TIER Credit?

A. Yes. It is my understanding that the New TIER Credit will operate as follows. For years in which Big Rivers TIER exceeds 1.30 (which is the TIER approved by the Commission in Big Rivers last base rate case), Big Rivers will return 50% of its net margins above a 1.30 TIER to its Members in the form of a bill credit. The remaining 50% of net margins above a 1.30 TIER will be utilized to further decrease the balance of the Smelter Loss Mitigation Regulatory Assets.

For years in which Big Rivers' TIER is below 1.30, Big Rivers will be authorized to automatically decrease the amount by which it amortizes the Smelter Loss Mitigation Regulatory Assets so that its TIER equals 1.30.

Q. Have you ever seen a cooperative propose a similar mechanism?

A. Yes. When I was the CFO at Old Dominion, Old Dominion was planning to build a large coal-fired generation plant. It applied for an RUS loan, as Old Dominion had customarily done. After considering the loan application for almost two years, RUS presented terms and conditions to Old Dominion that were next to impossible to achieve. Old Dominion believed the construction of the plant was in the best interest of its members and determined that financing construction in the capital market was the best path forward.

Q. What credit challenges did Old Dominion face in the capital market?

A. Old Dominion had to replace its RUS mortgage, improve its financial profile, obtain good credit ratings, establish a positive regulatory framework, and finance almost a billion dollars of new and replacement debt.

Q. How did Old Dominion overcome those challenges?

A. While there were many steps taken to overcome Old Dominion's credit challenges, instrumental in that process was the development of a rate mechanism that would ensure Old Dominion could achieve stable net margins and TIER *every year* without having to request a rate order from FERC. Old Dominion's automatic rate feature was built around a 1.20 TIER, which was low even 30 years ago when first developed. Old Dominion considered the 1.20 TIER low, but believed achieving a 1.20 TIER every year would be sufficient to achieve Old Dominion's credit goals. Every year since the early 1990s, Old Dominion has achieved a TIER of at least 1.20, leading to favorable credit ratings.

Q. How did the credit rating agencies react to the implementation of that mechanism?

A. Very positively. The automatic nature of Old Dominion's rate tariff is the key factor that allowed Old Dominion to achieve an A+ debt rating and go to the capital markets for the first time to refinance its nuclear plant and build a new coal-fired power plant. Since that initial financing in the capital market, Old Dominion has continued to build millions of dollars of generation while still maintaining debt ratings in the A range. This has allowed Old Dominion to achieve favorable interest rates and terms and conditions in the capital markets.

Q. Why was the automatic nature of the rate mechanism so important?

A. The automatic nature of the rate mechanism was vital to Old Dominion achieving strong credit ratings because it ensured that Old Dominion could timely take the steps necessary to maintain strong financial metrics. In short, if Old Dominion were required to make an administrative filing prior to adjusting its rates, it likely would have been too late, and Old Dominion would have risked being in default. Thus, the credit rating agencies viewed the relief very positively because FERC authorized a mechanism that allowed Old Dominion to make the adjustment prior to closing its books for that year, and the possibility of default could be avoided.

Q. If implemented today, do you believe the credit rating agencies would respond as positively to the rate mechanism being built around a 1.20 TIER?

A. No. When developed almost thirty years ago, a 1.20 TIER was already considered a little low. However, Old Dominion was willing to accept a lower TIER due to the automatic nature of the rate mechanism. As discussed earlier, even since Big Rivers' 2013 Rate Case, the average TIER of G&T cooperatives has continued to increase, and a 1.20 TIER today is low.

Further, when Old Dominion developed its mechanism almost thirty years ago, there were only two cooperatives rated by the rating agencies and participating in the capital markets. As a result, the only data available for analysis by the rating agencies and potential bondholders was provided by Old Dominion, and Old Dominion was able to set the standards. Today, S&P alone rates forty G&T and distribution cooperatives. Thus, not only have the expected earned TIERs increased over the last thirty years, but there is simply more information from more cooperatives for the credit analysts to review and compare the financial performance of cooperatives across the country.

Accordingly, if Old Dominion were implementing its automatic rate mechanism today, it likely would have needed to base that mechanism on a slightly higher TIER to account for the fact that the TIER of the average G&T cooperative is much higher today than it was thirty years ago.

Q. If the average earned TIER has continued to increase, how can Old Dominion continue to be rated on the A level while only maintaining a 1.20 TIER?

A. Unlike other cooperatives, Old Dominion accessed the capital markets early and has had the benefit of its automatic rate mechanism being in place for almost thirty years. Thus, unlike other cooperatives, such as Big Rivers, Old Dominion's automatic rate mechanism has provided it with consistent financial performance for thirty years, and the risk of poor financial performance has been reduced. Accordingly, Old Dominion's relatively low risk has allowed it to maintain its high credit rating, despite its relatively low TIER.

Q. Do you believe Big Rivers' proposal presents similar advantages?

A. Yes. By designing the proposal so that Big Rivers can automatically reduce the amount by which Big Rivers amortizes the Smelter Loss Mitigation Regulatory Assets, without the need for additional Commission order, so that Big Rivers earns a 1.30 TIER, the proposal is likely to viewed extremely positively by the credit rating agencies.

Q. Do you believe Big Rivers could achieve the same results if the New TIER Credit were based on a lower metric?

A. No. The credit rating agencies would not view a lower metric, such as a 1.10 TIER or MFIR, as positively as the 1.30 TIER agreed upon by the parties to this proceeding. First, setting the New TIER Credit at a lower metric would effectively negate what is an already modest cushion for a G&T cooperative. A 1.30 TIER is already well-below the average TIER in the current G&T landscape, and a further reduction in Big Rivers' allowed TIER would make lending to or investing in Big Rivers much less desirable. Rather, investing in an IOU or cooperative with a higher return would be viewed as a much better investment.

Moreover, a Commission-ordered decrease in Big Rivers' net margins is likely to be viewed as a negative by the credit rating agencies due to the decrease in cash flow and retained equity. This would leave Big Rivers ill-equipped to effectively handle any unforeseen expenses. Further complicating matters, failing to maintain an adequate amount of capital would also make Big Rivers a riskier borrower in the eyes of the credit markets, thereby driving up the cost of borrowing.

Second, even if you were to ignore the negative effects a lower metric would have when compared to other G&T cooperatives, the credit rating agencies are likely to view a lower metric negatively even when viewing Big Rivers' credit profile in isolation. In the last base rate case, the Commission set rates to authorize net margins based on a 1.30 TIER. If in this proceeding the Commission were to reduce the New TIER Credit, there is a substantial risk the credit rating agencies will believe that Big Rivers has lost the credit supportive regulatory environment that is vital to Big Rivers' regaining its investment grade credit ratings.

Q. Would a lower metric impact any of Big Rivers' financial metrics, other than TIER?

A. Yes. By decreasing the amount of margins Big Rivers is authorized to retain, Big Rivers' debt service coverage would also be affected, which is often an even more important metric than TIER in the eyes of the credit rating agencies. Additionally, if Big Rivers' net margins decreased, its equity level would be lower than would otherwise have been achieved with higher net margins, which would be another credit negative event.

Q. Are there are any additional reasons the New TIER Credit should not be based on a lower metric?

A. Yes. In the 2013 Rate Case, several witnesses suggested that the Commission set Big Rivers' TIER at 1.10. In its order, the Commission rejected those suggestions and instead set the TIER at 1.30. While Big Rivers' approved 1.30 TIER may be less than the average TIER earned by G&T cooperatives across the country, the rating agencies felt the Commission's action was a step in the right direction and provided Big Rivers the regulatory support to start repairing its credit. In other words, the Commission's action in Big Rivers' 2013 Rate Case has become the foundation of its improved credit profile. Any retreat from the 1.30 TIER will be a "credit negative" for Big Rivers' credit profile and a "body blow" to Big Rivers' efforts to repair its credit.

Big Rivers has added to the foundation set by the Commission through its Load Mitigation Plan, new power contracts, right-sizing its generation footprint, beginning to systematically amortize its regulatory assets, and adding the TIER credit to the MRSM tariff. These "building blocks," coupled with the relief in this proceeding, will work together to continue to strengthen Big Rivers' credit profile.

Q. Have Big Rivers' "building blocks" made a difference with the rating agencies?

A. Yes. It always takes time to demonstrate to the rating agencies that even the best plans will work and achieve the desired objectives. Based upon the steps taken by Big Rivers, its credit ratings have been consistently moving up. In 2019, S&P upgraded Big Rivers' credit rating from "BB" to "BB+." In 2018, Fitch upgraded its rating of Big Rivers from "BB" to "BBB-." I believe upward movement in the ratings is a strong signal from the rating agencies that they are encouraged by Big Rivers' actions, and if Big Rivers continues to implement its mitigation efforts, such as by implementing the relief requested in this proceeding, the rating agencies will recognize the stronger credit position with higher ratings.

Q. Why is maintaining a credit supportive regulatory environment an important component of Big Rivers' regaining investment grade credit ratings?

A. Big Rivers is one of only four G&T cooperatives in the country (including East Kentucky Power Cooperative) that is base rate regulated by a state commission. Thus, when compared to its peers, the credit market already views Big Rivers less favorably because it is typically much more difficult to increase rates to ensure strong financial metrics are maintained. Thus, for those G&T cooperatives that are rate regulated by a state commission, the credit rating agencies review whether the regulatory environment is supportive of the G&T's credit metrics.

As is indicated throughout the credit rating opinions I have reviewed from each of the three credit rating agencies, and as is apparent in the Commission's approval of a 1.30 TIER in Big Rivers' last base rate case, the Commission has been very supportive of Big Rivers' financial recovery since the loss of the smelter load, and the credit rating agencies have reacted positively to the credit supportive regulatory environment created by the Commission.

For this reason alone, approval of the New TIER Credit based upon a 1.30 TIER, which would reaffirm the Commission's prior approval of a 1.30 TIER for Big Rivers, is vital to Big Rivers' regaining its investment grade credit ratings. Since the Commission approved a 1.30 TIER in Big Rivers' 2013 base rate case, the average TIER of G&T cooperatives has – as I noted previously – generally been on an upward trend, and a 1.30 TIER is very modest in today's environment. As of 2018, the average TIER for a G&T cooperative was 1.63, and the median TIER is 1.58. A 1.30 TIER is, therefore, already on the low end of return for G&T cooperatives across the country. Thus, the Commission's approval of the New TIER Credit based on a 1.30 TIER, rather than a lower metric, is important to Big Rivers' regaining its investment grade ratings so that the credit rating agencies continue to view the regulatory environment as credit supportive.

Q. How do you believe the credit rating agencies would view the proposal if 50% of net margins in excess of a 1.30 TIER were accrued in a regulatory liability account to be utilized by Big Rivers at a later date when approved by the Commission, rather than being automatically used to increase the amount by which Big Rivers decreases the balance of the Smelter Loss Mitigation Regulatory Assets in years that net margins exceed a 1.30 TIER?

A. I do not believe the credit rating agencies would view such a proposal as favorably. Based on my review of Big Rivers' most recent credit ratings opinions, Big Rivers' high regulatory asset balance has been consistently noted as a credit negative by the credit rating agencies.[2] From the credit rating agency viewpoint, the most credit positive outcome is for Big Rivers to eliminate its regulatory asset balance as quickly as possible. Thus, carrying a regulatory liability account on Big Rivers' books year-over-year will not have the same credit impact as utilizing those amounts to immediately reduce the balance of Big Rivers' regulatory assets. Thus, utilizing 50% net margins in excess of a 1.30 TIER to more quickly decrease Big Rivers' regulatory asset balance is likely to have a more positive credit impact than retaining those margins in a regulatory liability account.

Moreover, because Commission approval would be needed prior to utilizing the funds in the regulatory liability account to further reduce the regulatory asset balance, the credit rating agencies are not likely to view a regulatory liability account as favorably because of the uncertainty that would be created as to the future use of those excess margins, as well as the timing challenges of addressing it.

[2] Exhibit Walker-2, Fitch's July 5, 2018 Press Release; Exhibit Walker-3, Moody's July 17, 2018 Credit Opinion; Exhibit Walker-4, S&P January 16, 2019 Credit Report; Exhibit Walker-5, Moody's November 13, 2019 Credit Opinion; Exhibit Walker-6, Fitch's December 4, 2019 Press Release; Exhibit Walker-7, S&P's April 1, 2020 Credit Report; *see also* Supplemental Direct Testimony of Paul G. Smith.

Q. Are there any other considerations that favor an adjustment to the amortization expenses, rather than establishing a regulatory liability?

A. Yes. In the 2013 Rate Case, based upon my analysis of 2012 data, I concluded that a G&T should set rates to earn, on a consistent basis, a TIER in the range of 1.40x to 1.60x in order to achieve an investment grade credit rating. However, the 2018 data suggests that the range today may be higher at the top end. Indeed, today, I believe a more appropriate range would be 1.40x to 1.70x. While the Commission's order in Case No. 2013-00199 authorizing Big Rivers' to set rates based upon a 1.30 TIER created a credit supportive regulatory environment that was beneficial to Big Rivers under the unusual circumstances it faced with the smelter departures, Big Rivers' TIER is still much lower than most G&T cooperatives in the industry, including East Kentucky Power Cooperative.

Thus, implementing the New TIER Credit with a mechanism that allows Big Rivers to automatically adjust its amortization expenses to earn a 1.30 TIER each year would allow Big Rivers to be more competitive in the capital market when compared to G&T cooperatives that have set rates based on a much higher TIER, but do not have a similar mechanism in place.

Q. Is timing a critical issue for Big Rivers?

A. Most definitely. As an operating electric utility, Big Rivers faces challenges daily. In the near future, Big Rivers must refinance several maturing debt instruments. It must also finance ongoing capital expenditures. Being able to address these issues with investment grade credit ratings would further advance Big Rivers' efforts to lower its costs to its Members and ensure consistent operations. The rating agencies have a tendency to act when they have evidence to change their ratings. I believe a Commission order approving the Settlement Agreement would provide ample evidence to convince the agencies to upgrade Big Rivers' credit position.

IV. <u>CONCLUSION</u>

Q. Would you summarize your recommendations?

A. Yes. I recommend that the Commission approve the recovery of the Smelter Loss Mitigation Regulatory Assets and the New TIER Credit as proposed in the Settlement Agreement. The recovery of the Smelter Loss Mitigation Regulatory Assets and the New TIER Credit are designed to address the primary concerns of the credit rating agencies, and implement a mechanism – adjusted amortization expenses to ensure a 1.30 TIER is achieved each year – that has historically been viewed very positively by the credit rating agencies. Accordingly, I believe that the Commission's approval of the Settlement Agreement will lead to the credit rating agencies determining that Big Rivers has a stronger credit profile, and will help Big Rivers regain its investment grade credit ratings.

Q. Does this complete your testimony?

A. Yes.

APPLICATION OF BIG RIVERS ELECTRIC CORPORATION FOR APPROVAL TO MODIFY ITS MRSM TARIFF, CEASE DEFERRING DEPRECIATION EXPENSES, ESTABLISH REGULATORY ASSETS, AMORTIZE REGULATORY ASSETS, AND OTHER APPROPRIATE RELIEF

CASE NO. 2020-00064

VERIFICATION

I, Daniel M. Walker, verify, state, and affirm that I prepared or supervised the preparation of the Direct Testimony filed with this Verification and that Direct Testimony is true and accurate to the best of my knowledge, information, and belief formed after a reasonable inquiry.

Daniel M. Walker
Daniel M. Walker

COMMONWEALTH OF VIRGINIA)
COUNTY OF HENRICO)

SUBSCRIBED AND SWORN TO before me by Daniel M. Walker on this the 28th day of May, 2020.

Laneka Vernell Sledge
Notary Public
Commonwealth of Virginia
My Commission Expires: 1/31/2023

LANEKA VERNELL SLEDGE
NOTARY PUBLIC
COMMONWEALTH OF VIRGINIA
MY COMMISSION EXPIRES JAN. 31, 2023
COMMISSION # 7809352

CASE NO. 2020-00064

EXHIBIT WALKER-1

G&T Financial Analysis

G&T Financial Indicators-2018

G&Ts That Are Capital Markets Compliant

G&T	S&P	Fitch/Other	Moody's	x TIER/MFI	x DSC	% EQUITY
Golden Spread	AA-	A	A2	2.51	1.88	43.62
Arkansas	AA-	AA-	Aa3	2.23	2.01	38.4
Rayburn	A-	NR	NR	2.13	1.56	38.77
Central Iowa	A+	A	NR	2.07	2.07	35.52
Arizona	A	A	NR	1.92	1.23	37.33
Basin	A	A	A3	1.92	NA	NA
Wolverine	NR	NR	NR	1.89	1.45	32.68
Central Electric-SC	A+	NR	NR	1.78	1.1	20
Buckeye	A	A	A2	1.77	1.38	29.42
South Texas	A	A+	NR	1.75	1.4	24.46
Associated	AA-	AA-	Aa3	1.66	1.37	26.1
Brazos	A	A+	NR	1.59	1.2	28.72
Cooperative Eng.	NR	A	A2	*1.58*	1.61	31.8
Hoosier	A+	NR	A2	1.51	1.39	22.83
NCEMC	A-	A	NR	1.5	1.22	15.2
Dairyland	A+	NR	A3	1.42	1.29	26.54
Western Farmers	A-	A-	NR	1.4	1.26	28.75
Seminole	A-	NR	A3	1.37	1.22	25.34
East Kentucky	A	BBB+	NR	1.35	1.26	18.53
Minnkota	A-	NR	Baa2	1.31	1.28	15.77
Corn Belt	A	A	NR	1.3	1.44	39.04
Chugach	A	A	NR	1.24	1.33	31.15
Power South	BBB+	BBB+	A3	1.21	1.23	23.4
Old Dominion	A+	A	A2	1.2	1.32	26.3
Oglethorpe	BBB+	BBB+	Baa1	1.14	NA	9.2
Average				**1.63**	1.41	27.87
Median				**1.58**		
Big Rivers	BB+	BBB-	Ba1	**1.32**		

CASE NO. 2020-00064

EXHIBIT WALKER-2

Fitch's July 5, 2018 Press Release

FITCH UPGRADES BIG RIVERS ELECTRIC CORP. TO 'BBB-'; OUTLOOK REVISED TO STABLE

Fitch Ratings-New York-05 July 2018: Fitch Ratings has upgraded the following bonds issued by Big Rivers Electric Corporation (BREC) to 'BBB-' from 'BB':

--$83 million County of Ohio pollution control revenue bonds, series 2010A.

The Rating Outlook is revised to Stable from Positive.

SECURITY

The bonds are secured by a mortgage lien on substantially all of BREC's owned tangible assets, which include the revenue generated from the wholesale sale and transmission of electricity.

KEY RATING DRIVERS

IMPROVED, SUSTAINABLE FINANCES: The rating upgrade to 'BBB-' reflects the solid financial results achieved in fiscal 2017, which included higher liquidity and lower leverage, and expectations for sustained improvement over the near term. BREC's improved performance is largely attributable to the full implementation of the cooperative's risk mitigation strategy and approved rate plan.

MANAGING POWER SUPPLY: The upgrade also reflects BREC's ongoing and successful management of its long resource position with reduced exposure to short term market sales over the next few years. Roughly 90% of BREC's capacity will be committed to serving its members and contracted load by 2020 as a result of existing and announced contracts with regional public power utilities and the closure of marginal generating capacity.

DECLINING LEVERAGE: BREC's leverage profile improved in 2017 as a result of better financial margins than in previous years. Fitch-calculated leverage improved to 9.9x in 2017, and Fitch expects this trend will continue with sustained pro forma financial margins and scheduled debt amortization expected to outpace new debt.

REGULATED UTILITY, SUPPORTIVE REGULATION: BREC and its three member systems are regulated by the Kentucky Public Service Commission (KPSC). However, supportive regulatory policies and successful rate recovery efforts point to a constructive regulatory environment. BREC's last rate order, received in 2014, approved rates at levels that allow it to cover total fixed costs on a self-sustaining basis. On the member level rates are set for full cost recovery.

ADEQUATE LIQUIDITY TO IMPROVE: Unrestricted cash and short-term investments totaled $65 million at fiscal end 2017, or about 70 days cash on hand. Cash balances are expected to improve with forecasts showing greater financial margins by 2019. A $100 million senior secured credit agreement provides added liquidity.

RATING SENSITIVITIES

IMPROVED MARGIN AND REVENUE STABILITY: The failure of Big Rivers Electric Cooperative to sustain its improved revenue profile and margins, as well as its reduced reliance on short-term market sales could result in ratings pressure over time.

REDUCED LEVERAGE: Fitch would view positively greater than anticipated reductions in system debt and leverage over time.

CREDIT PROFILE

BREC, a non-profit generation and transmission (G&T) cooperative formed in 1961, provides all-requirements wholesale electric and transmission service to three electric distribution cooperatives pursuant to all-requirements contracts through Dec. 31, 2043. These distribution members provide service to a total of approximately 116,000 retail customers located in 22 western Kentucky counties. Financial performance of the three distribution systems is satisfactory and provides sufficient support for the rating.

IMPROVED FINANCIAL MARGINS

BREC filed a rate case with the Kentucky Public Service Commission (KPSC) in 2013 requesting an increase in rates to levels that would provide full cost recovery of system obligations. The KPSC granted the new rates in 2014, but the full effect of the increases were not realized until fiscal 2017, as previously set aside reserves were used to reduce rates paid by Members over several previous years.

Financial results improved in fiscal 2017 with Fitch-calculated debt service coverage totaling 1.30x, and coverage of full obligations of 1.19x. Margins were aided by short-term market sales, but such sales comprised a limited portion of total margin and the ratios do not include the small amount of remaining mitigation reserve funds that were still available in fiscal 2017. Liquidity remained near historical levels at 71 days cash.

Member rates have been set to allow for full cost recovery, which is an important rating factor and basis for the investment grade rating. However, despite the ramp-up of newly contracted sales over the next few years, Fitch believes the stronger financial margins are sustainable over the intermediate to longer term.

WELL MANAGED SUPPLY

BREC has historically provided capacity and energy to its members through a combination of multiple owned generation stations, one leased plant and power purchases for a total resource base of 1,352 MW in 2017. After the loss of load attributable to the two large aluminum smelters leaving the system, system peak demand has declined to around 650 MWs, or roughly half of historical demand. BREC implemented a mitigation plan with the goal of achieving financial savings and benefits that would help lower member rates including aggressively marketing the excess power under intermediate-term contracts and through spot sales in MISO.

Existing customer growth coupled with the signing of contracts with Kentucky Municipal Energy Agency (KyMEA, A/Stable), a consortium of Nebraska based utilities, and the recently announced full requirements contracted sales to the city of Owensboro, KY (for 165 MW beginning in 2020) significantly increases intermediate-term contracted sales. In addition, BREC idled the 443 MW coal-fired Coleman Station and terminated the lease/contract with the city of Henderson, KY (187 MW as of June 1, 2018), reducing its total capacity to a manageable 10% of total expected peak demand by 2020.

The Nebraska wholesale customers began receiving energy in 2018, but full requirements capacity and energy (85 MW) will phase in over time. The KyMEA contract begins in mid-2019 for 100MW of firm purchase, which is followed by the city of Owensboro's agreement to purchase full requirements from BREC in mid-2020.

IMPROVING LEVERAGE, MANAGEABLE CAPEX

BREC's leverage profile is elevated but improving. At Dec. 31, 2017, BREC had approximately $820 million of total debt outstanding, including $20 million in outstanding lines of credit. All of the outstanding debt consists of fixed rate bonds and loans, maturing no later than 2032 and includes a bullet maturity of $246 million due in 2023. BREC expects to refinance this large payment with long-term, fully amortizing bonds.

Debt has been on a slow decline since 2012. However, Fitch-calculated leverage ratios, which exclude transferred reserve funds from revenue, remained high through 2016. Leverage, as measured by net adjusted debt to adjusted FADS, peaked at over 20.0x in 2015. As reliance on reserve transfers declined through 2017, leverage was a more manageable 9.9x.

While total debt is not expected to decline much over the intermediate term, a sustained improvement in financial margins should allow for a continued decline in leverage over time. Equity to capitalization approximated 37% in 2017. Anticipated capital spending through 2022 is estimated to total $174 million and will be funded with a combination of new debt and internal sources.

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A January 2018 district court ruling that dismissed claims regarding payment of Puerto Rico Highways and Transportation Authority debt has raised questions about the scope of protections provided by Chapter 9 of the U.S. bankruptcy code to bonds secured by pledged special revenues. Fitch's rating criteria treat special revenue obligations as independent from the related municipality's general credit quality. The outcome of the litigation could result in modifications to Fitch's approach. For more information, see "What Investors Want to Know: The Impact of the Puerto Rico Ruling on Special Revenue Debt" available at www.fitchratings.com.

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Additional information is available on www.fitchratings.com

Applicable Criteria

Rating Criteria for Public-Sector, Revenue-Supported Debt (pub. 26 Feb 2018)
https://www.fitchratings.com/site/re/10020113
U.S. Public Power Rating Criteria (pub. 18 May 2015)
https://www.fitchratings.com/site/re/864007

CASE NO. 2020-00064

EXHIBIT WALKER-3

Moody's July 17, 2018 Credit Opinion

CREDIT OPINION
27 July 2018

Update

Rate this Research

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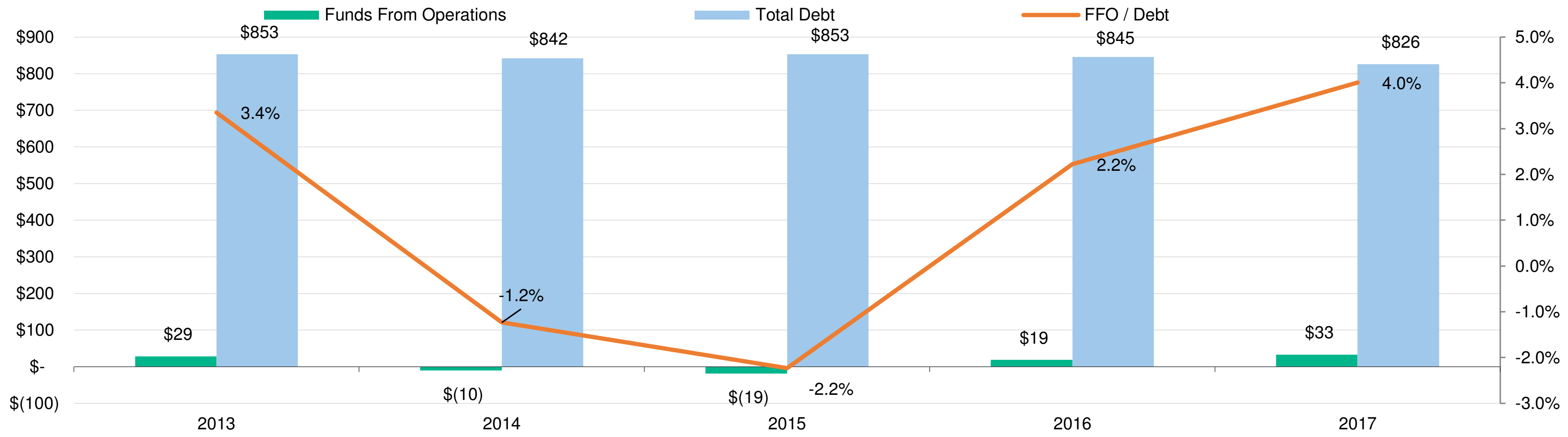
Big Rivers Electric Corporation

Update following rating upgrade

Summary

Big Rivers Electric Corporation's credit profile reflects a supportive regulatory environment and prospects for sustaining stronger financial metrics which are necessary to help balance business and financial risks owing to its substantial excess generation capacity and increasing regulatory assets, both of which could pose potential cost recovery and write-off challenges. Since 2013, progress in addressing excess generation capacity has included idling a 443 megawatt coal plant and signing medium-term contracts for the sale of excess capacity. Sizable rate increases approved by the Kentucky Public Service Commission (KPSC) and cost saving initiatives are helping to maintain viable financial performance. With regulatory support prevailing and sales of excess capacity phasing in, funds from operations (FFO) coverage of interest and debt are likely to strengthen further after improving in FY 2017 to 1.8x and 4%, respectively, from 1.5x and 2.2%, respectively, for FY 2016. Big Rivers is likely to be free cash flow positive for the next three years, while also maintaining ample liquidity.

Exhibit 1
Historical FFO, Total Debt and FFO to Total Debt
($ in millions)



Source: Moody's Financial Metrics

Credit Strengths

» Contracted sales of excess capacity to be phased in over several years began in January 2018

» The likelihood of sustaining sound net margins, no patronage capital returns to members and routine capital spending should drive free cash flow and contribute to debt reduction

» Timely and substantial recovery of costs of service owing to regulatory support for base rate increases, a variable cost adjustment mechanism and an environmental cost surcharge bode well for improving financial metrics

» Long term wholesale power contracts with three member owners through 2043 produce a steady and predictable revenue stream from electricity sold to rural residential and other non-smelter industrial customers

» Ownership of generally competitive coal-fired generation plants

Credit Challenges

» Avoiding customer backlash as bill credits have expired and the full impact of increases to the members' wholesale power rate has increased retail rates for members' customers

» Increasing regulatory assets resulting from deferral of depreciation for certain coal-fired generation assets and other expenses poses potential cost recovery and write-off risks

» Significant excess of mostly coal-fired, carbon-emitting, owned generation capacity, including idled capacity, while awaiting more clarity on future environmental regulations

» Sizable debt maturities beyond the term of certain existing power sales agreements with replacement loads following termination of contracts with the two aluminum smelters

» Finding additional long-term market opportunities to sell significant excess capacity beyond the term of existing contracts that are phasing in over the next few years

» Local economic dependence on industrial activity, including two aluminum smelters

Rating Outlook

The stable rating outlook reflects a prevailing supportive regulatory environment and the likelihood that Big Rivers can sustain its financial metrics at the stronger levels attained in FY 2017 while continuing to achieve better than expected progress in reducing its significant excess capacity through off-system capacity and energy sales in the Midcontinent Independent System Operator (MISO) and other markets at favorable margins. The stable outlook also considers Big Rivers having free cash flow to reduce debt during the next three years, and incorporates our view that the smelters will continue to operate, thereby providing support for the local economy, including employment levels. The stable outlook further expects that Big Rivers will continue to pursue additional long-term contracts for the sale of its excess capacity for terms beyond those already in place.

Factors that Could Lead to an Upgrade

» A rating upgrade is possible if credit supportive regulatory treatment remains intact and there is future support for cost recovery of the increasing regulatory asset account which would avoid potential write-offs while maintaining reasonably competitive rates

» Achieving further successful financial results through ongoing strategies to mitigate a long capacity position

» Achieving stronger metrics to balance its unique business and financial risks; for example, FFO coverage of interest and debt improving to 2.4x and in a range of 6%-7%, respectively, with the debt service coverage (DSC) ratio tracking at close to 1.2x or better on a sustained basis

Factors that Could Lead to a Downgrade

- We could take a negative rating action if there was a shift to a less credit supportive regulatory environment and if liquidity unexpectedly deteriorates
- The pressure for a negative rating action would increase if substantial and timely recovery of environmental compliance costs and increasing regulatory assets do not occur as anticipated under the KPSC approved environmental cost recovery mechanism and future rate proceedings, especially if such amounts increase beyond currently anticipated levels
- A scenario under which either or both of the smelters discontinued operations would be credit negative owing to the potential residual negative effects on the local economy
- In terms of metrics, FFO to debt and DSC ratios below 4% and 1.2x, respectively, for a sustained period would pressure the rating

Key Indicators

Exhibit 2
Big Rivers Electric Corporation

	2013	2014	2015	2016	2017
Times Interest Earned Ratio (TIER)	1.5x	1.6x	1.3x	1.1x	1.3x
DSC (Debt Service Coverage)	0.8x	1.5x	1.2x	1.2x	1.2x
FFO / Debt	3.4%	-1.2%	-2.2%	2.2%	4.0%
(FFO + Interest Expense) / Interest Expense	1.7x	0.8x	0.5x	1.5x	1.8x
Equity / Total Capitalization	33.1%	34.9%	35.3%	36.2%	37.2%

Source: Moody's Investors Service

Obligor Profile

Big Rivers is an electric generation and transmission cooperative headquartered in Henderson, Kentucky and owned by its three member system distribution cooperatives -- Jackson Purchase Energy Corporation; Kenergy Corp; and Meade County Rural Electric Cooperative Corporation. These member system cooperatives provide retail electric power and energy to more than 116,000 residential, commercial, and industrial customers in 22 Western Kentucky counties. In aggregate, Big Rivers owns 1,444 net MW of coal-fired generating capacity at four stations, including Robert D. Green (454 MW), Robert A. Reid ((130 MW), D.B. Wilson (417 MW) and Kenneth C. Coleman (443 MW), which has been idled since May 2014. Including its rights to about 197 MW of coal-fired capacity from Henderson Municipal Power and Light (HMPL) Station Two and about 178 MW of contracted hydro capacity from the Southeastern Power Administration (SEPA) its total power capacity is 1,819 MW. Big Rivers' owned transmission system includes 1,299 miles of transmission lines and 24 substations. The cooperative also has about 25 transmission interconnections to link its system with several surrounding utilities. Unlike most of its peers, Big Rivers is subject to rate regulation by the KPSC.

Detailed Credit Considerations

Good progress on strategies to mitigate credit challenges resulting from sizable excess capacity following loss of aluminum smelters' load

Big Rivers has been making good progress towards replacing the roughly two-thirds of its annual energy sales, just under 60% of its system demand and in excess of 60% of its annual revenues previously derived from the contracts it had with two aluminum smelters. While initial worst case expectations contemplated the prospect that both smelters would cease operations upon expiration of their respective power contracts, regulatory approvals of the smelters' definitive agreements with Big Rivers and Kenergy enable the continued operations of both smelters with energy demands met by open market purchases of electricity. That said, in the absence of both smelters' load, Big Rivers remains long on generation. The progress in addressing the excess capacity is attributable to both supply-side and demand-side strategies, as well as reducing staff and controlling other expenses where feasible and without compromising reliability.

Supply-side strategies continue to unfold

Big Rivers supply-side initiatives included idling its 443-MW Coleman plant and it is taking steps to terminate its longstanding operating agreement with HMPL. The latter strategy, if successful, will reduce its excess capacity by eliminating its rights to about 197 MW of competitively challenged coal-fired capacity from the HMPL Station Two plant no later than May 2019. The latter strategy is the subject of a KPSC regulatory filing, through which Big Rivers has asked the KPSC to address its request to end the operating agreement with HMPL on an expedited basis during 2018. Big Rivers is also requesting regulatory asset treatment for its approximately $90 million of net book value relating to its past investments in Station Two as part of the operating agreement, with an intent to seek recovery in the next rate case. Meanwhile, Big Rivers continues to honor the operating agreement with a desire to terminate by May 31, 2019 at the latest. If HMPL is successful in finding adequate replacement resources to meet its full requirements, Big Rivers and HMPL would terminate the operating agreement sooner than May 31, 2019.

Although the Coleman plant was idled in May 2014, it is being maintained to permit restart should market conditions become economically feasible. By idling the Coleman plant, Big Rivers achieved overall cost savings of about $26 million annually. Big Rivers is reporting internal load growth and additional longer term opportunities may also arise for sales of electricity, depending on economic development activity in its service territory. For example, Big Rivers has an industrial customer utilizing the cooperative's economic development incentive rate in its business expansion, which will contribute significant growth to the cooperative's load. Meanwhile, Big Rivers is also considering the transfer of some environmental control equipment at the Coleman plant to its Wilson plant. If this strategy is successfully implemented, it is likely to reduce the financial impact of a potential writeoff if management elects to permanently shutter the Coleman plant in the future. The current net book value of the Coleman plant, including deferred depreciation, is estimated at $181 million. The net book value includes approximately $73 million of investments in scrubbers. The remaining amounts of net investment in both the Coleman and Station Two plants loom as potential write-off risks to Big Rivers' common equity if the cooperative is not able to recover the remaining costs from its customers as a regulatory asset.

Demand-side strategies progressing well

Big Rivers' demand-side strategies include securing medium-term contracts for the sale of capacity and energy from its fleet to load serving municipal-distribution entities in Nebraska and Kentucky, making short-term off system sales and participating in the capacity markets.

In that regard, Big Rivers currently has three nine-year contracts to sell capacity and energy to three Nebraska entities which will grow to about 85 MW to the Nebraska entities. Power being provided under this contract began flowing this year and is scheduled to reach full output in 2022. Big Rivers also has executed a 10-year contract to transmit as much as 100 MW from its coal-fired Wilson Station to Kentucky Municipal Energy Agency (KyMEA), beginning in 2019, with the potential to increase the contract for sale of capacity by another 50 MW starting in 2022. Moreover, in June 2018, the City of Owensboro awarded its full-requirements contract, approximating 180 MW to Big Rivers, which together with other supply-side efforts, helps to further balance Big Rivers' generation capacity and load requirement. The contract with the City of Owensboro covers a term of June 2020 through December 2026 to provide the municipal utility's full annual energy requirements estimated at 825,000 megawatt hours and annual peak load of about 155 MW (net of its 25 MW SEPA contract).

These contracts are credit positive for Big Rivers because they lock up some of its substantial excess capacity and energy with load-serving municipal-distribution entities for multiple year periods, helping the cooperative replenish the smelter load lost during 2013-2014. The contracts are likely to prove beneficial for Big Rivers' long-term financial performance and provide a reliable source of recovery for Big Rivers' fixed and variable costs and contribute to its overall competitiveness through better rates for its members. Moreover, the contracts allow Big Rivers to become less dependent on the currently depressed wholesale power market for incremental revenues and helps diversify the cooperative's revenue stream, which historically was heavily dependent on the aluminum industry, to one that is less volatile and more predictable.

Setting aside the still idled Coleman capacity and assuming successful termination of the operating agreement with HMPL which eliminates rights to a portion of capacity at the Station Two plant, Big Rivers would have just under 1,200 MW of capacity available beginning in 2020. This level of capacity compares with average member peak load of 650 MW, plus additional aforementioned contracted capacity sales of about 350 MW phasing in during 2018-20 and allocating about 150 MW for an approximate 15% reserve margin, leaves Big Rivers very close to supply and demand balance. That said, overhang risks associated with the ultimate recovery of the idled Coleman and Station Two investments remain, which together remain a rating constraint within the speculative grade rating category.

Smelters continue to operate, with increased production levels at the Hawesville smelter

Since canceling their respective contracts, both of the smelters continue to operate. We understand that the Hawesville smelter has been operating at about 40% of its capacity during recent years; however, with some economic aid and improved commodity pricing for aluminum, the Hawesville smelter is now operating at about 60% of its capacity with expectations to increase to 100% in 2019. The Sebree smelter has been operating for the most part at full production for several years. When compared with the alternative scenario of having both smelters permanently shut down, this outcome is acceptable particularly since Big Rivers and Kenergy are being reimbursed for any incremental costs to their members of the smelters' continued operation and there are residual benefits to the local economy.

More specifically, following regulatory approvals from the KPSC in 2013 and 2014, Century Aluminum of Kentucky (a subsidiary of Century Aluminum Company) continues to operate its Hawesville and Sebree smelters by purchasing electricity on the open market. Under an agreement that Big Rivers and Kenergy have with Century, Kenergy arranges with a third party for the energy purchases at wholesale market prices and Century pays the market price and additional amounts to cover any incremental costs incurred by Big Rivers and Kenergy to accommodate Century's desire to purchase energy on the market for the two smelters.

Rate case decisions and ongoing cost recovery mechanisms are credit positive factors serving as mitigants to credit challenges

In addition to the challenges facing Big Rivers in securing asset recovery for Coleman and Station Two in a credit benign manner, Big Rivers also remains exposed to incremental execution risk in securing extensions of the aforementioned medium term contractual arrangements with economically similar or better terms as Big Rivers' debt profile has sizable maturities extending beyond the tenor of the existing power sales contracts. Notwithstanding these credit challenges, Big Rivers' profile benefits from credit supportive rate case decisions rendered by the KPSC in October 2013 and April 2014, which resulted in approval of a combined wholesale power rate increase of about $90.4 million. Moreover, as part of these decisions, residual cash, set aside in restricted accounts, provided a mitigant to Big Rivers' liquidity after the loss of the smelter load. Specifically, cash in the restricted accounts was used to provide bill credits during 2014-16, which temporarily minimized the rate shock to ratepayers until September 2015 for large industrial/business (non-smelter) customers and until August 2016 for rural (residential) customers.

With the expiration of bill credits in 2016, the full effects of the wholesale power rate increases are now being fully borne by Big Rivers' members and, in turn, the members' retail customers. The rate increases are credit positive for Big Rivers because the incremental amounts are estimated to result in about 90% of Big Rivers' total gross margins coming from its members that have all requirements contracts in place through 2043. The current wholesale power rates are likely to support steady financial performance at recently improved levels, ensure a degree of cushion for compliance with financial covenants and should allow for Big Rivers to further advance its strategies.

While Big Rivers faces ongoing challenges, our view of the credit profile acknowledges credit supportive actions and comments from the KPSC in the latest rate orders about prudent mitigation steps taken by Big Rivers as well as the commission's clear intention to ensure that electric rates are sufficient to maintain Big Rivers' financial integrity. In that regard, the KPSC rates approved in the April 2014 rate order are designed to enable Big Rivers to achieve a 1.3x times interest earned ratio (TIER), a level that is 20 basis points higher than the 1.1x margins for interest (MFI), essentially the equivalent of TIER, required as defined under Big Rivers' indenture. The additional revenue amounts to support Big Rivers' TIER at 1.3x is credit positive because the amounts help to partially offset certain other cost items not covered by the approved rate increases, the most significant of which relate to deferrals of any recovery of depreciation costs relating to the Coleman and Wilson plants. In addition to the predictable revenue stream provided by the contracts, entering the long term contracts for the sale of excess power also bodes well for Big Rivers' regulatory relationship with the KPSC, since the regulators established an action plan in 2013 that called for the pursuit of such supply contracts.

Maintaining supportive regulatory relationships remains an important credit factor for Big Rivers since its rate-setting is subject to regulation, which is atypical for an electric generation and transmission cooperative. Rate regulation can potentially introduce uncertainty around the timeliness and extent of future cost recovery, making that uncertainty an especially important credit risk factor for Big Rivers as its regulatory asset balance is increasing. With existing contracts in place as described above, we understand that Big

Rivers will likely seek regulatory approval for recovery of the regulatory asset balance tied to the Wilson plant depreciation deferrals beginning in 2021.

In addition to the 2013 and 2014 rate increases approved by the KPSC, the existence of certain fuel and purchased power cost adjustment mechanisms and the existence of an environmental cost surcharge in rates are favorable to Big Rivers' credit profile since they can temper risk of cost recovery shortfalls if there is a mismatch relative to existing rate levels.

Overall credit positive impact from KPSC mandated independent management audit

As required by the KPSC in its April 2014 rate order, an independent consultant conducted a comprehensive management audit, with a particular focus on Big Rivers' load mitigation strategies, and a final action plan was issued in December 2015. The action plan is a credit positive since it incorporates a combination of many supportive or neutral findings about Big Rivers' past decisions and future plans, as well as five specific, seemingly manageable, recommendations. Of those five recommendations, four were already in process as of the report date, including those relating to increasing expertise regarding the MISO market, pursuing new energy sales and analyzing the best use of the currently idled Coleman plant. Two of the five action items have been closed by the KPSC, including an agreement that the recommendation of adding a new board member with energy expertise is not warranted and that Big Rivers was sufficiently pursuing new energy sales.

Big Rivers has added staff resources focused on enhancing internal expertise in production cost and financial modeling to further leverage its association as a member of ACES and has executed amendments to its debt documents to address restrictions around the sale or early retirement of the Coleman plant. The advanced stage of action plans relating to these two items makes it likely that the items can be closed by the KPSC in the near term, perhaps as soon as October 2018.

With respect to the action item focusing on sale, retirement or redevelopment of the Coleman plant, Big Rivers is still studying its options and may opt to relocate a scrubber from the Coleman plant to its Wilson plant. This action item is expected to continue as an ongoing issue at least during the remainder of 2018. As Big Rivers moves forward in addressing the still open audit recommendations, it is currently required to report to the KPSC annually if necessary. Big Rivers has provided four reports to this point and anticipates filing its next report with the KPSC in October.

Reasonably competitive position maintained

Although Big Rivers' rates have increased following the loss of the smelter loads and KPSC approved rate increases, the economics of power produced from Big Rivers' generation sources have enabled it to still maintain a reasonable competitive position in the Southeast and even more so when compared to other regions around the country. The capacity factors and efficient operations of the assets resulted in a 2017 average member rate per MWh for rural members and large industrial members of \$85.14 and \$63.37, respectively, compared to \$82.21 and \$63.96, respectively, for 2016, \$82.35 and \$63.20, respectively, for 2015, \$81.79 and \$63.56, respectively, for 2014 and \$57.74 and \$47.00, respectively, for 2013 (in all instances, excluding the benefits of member rate stability mechanism).

Wholesale power contracts support Big Rivers' credit profile

The revenues derived under Big Rivers' long-term wholesale contracts with its members for sales to non-smelter customers are continuing as the contracts are in effect through December 31, 2043. The underlying favorable economics of power produced by Big Rivers' generation assets and bill credits provided during 2014-16 appear to have tempered any expressed or latent member disenchantment now that members are feeling the full impact of significant rate increases. Despite a relatively competitive starting point in 2013 and other price mitigating strategies, it remains possible that member unrest will surface, especially if further substantial rate increases become necessary to recover an increasing regulatory asset balance or if environmental compliance and other operating cost pressures surface unexpectedly. We understand that there was some decline in member satisfaction surveys for 2017, at least partially attributable to expiration of the rate stability mechanism.

Improved financial performance following base rate increases and other strategic initiatives

Big Rivers' financial performance is being supported by the outcomes in its last two rate cases and other mitigation strategies. Big Rivers' financial performance in fiscal year (FY) December 31, 2017 was reasonably consistent with its budget expectations and very much in line with FY 2016, including net margins of \$13.0 million, which supported a 1.32x TIER, a contractual MFI ratio of 1.32x and a DSC ratio of 1.22x, all as defined in the cooperative's debt documents. Although the net margins in fiscal years 2015-2017 were far below the net margins of $32.7 million achieved in FY 2014, financial performance during 2014 was aided by the positive weather effects of the polar vortex which added more than $25 million on a non-reoccurring basis to Big Rivers' off-system margins that year.

For fiscal years 2015-2017 (including Moody's standard adjustments), Big Rivers' FFO coverage of interest, FFO to debt and DSC ratios averaged in the "Ba", "B" and "A" rating categories, respectively, for the ratios covered under the Rating Methodology for U.S. Electric G&T Cooperatives. For example, Big Rivers' three year average FFO coverage of interest, FFO to Debt, and DSC for 2015-2017 were 1.27x, 1.3%, and 1.2x, respectively. Although the average scores for two of these three metrics are at weak levels under the rating methodology, the ratio of FFO to interest and FFO to debt metrics during FY 2014 and to a lesser degree in FY 2015 are negatively affected by the accounting effects of noncash member rate mitigation revenue. The 2013 and 2014 rate case decisions firmly established the necessary revenue requirements and rate levels to maintain Big Rivers' financial viability and have restored these metrics to stronger levels in FY 2017 now that the economic reserve, rural economic reserve and transmission revenue economic reserve accounts have been utilized. The A category ranking for the average DSC ratio for the same period primarily reflects the absence of any large principal payments during the period. Big Rivers has some non-amortizing debt issues in its capital structure which can pressure the DSC ratio in years when large principal repayments are required. We expect that the DSC ratio can be sustained near 1.2x for the near term, with the next sizable bullet maturity of about $240 million not until FY 2023.

For the same 2015-2017 period, the TIER averaged 1.2x (in the "A" category range) primarily reflecting supportive regulatory decisions which support net margins, and equity to total capitalization averaged 36.1% (in the "Aa" category range) as the metric is benefitting from debt reduction and full retention of net margins. With about $181 million of net book value relating to the idled Coleman plant, Big Rivers could experience some pressure in complying with a minimum equity level as described in the liquidity section if it decides to shutter the plant permanently and has to take a write-off.

As noted in our summary above, Big Rivers' FFO coverage of interest and debt ratios strengthened in FY 2017 and prospectively are likely to be sustained to support the cooperative's credit quality as power sales agreements with entities in Nebraska and Kentucky help compensate for the substantial overcapacity at Big Rivers. Still, Big Rivers faces regulatory and execution risks as it eventually needs to seek recovery of increasing regulatory asset balances and decide on a final strategy to best address the idled Coleman plant.

Liquidity

We expect that Big Rivers will maintain ample liquidity over the next 12-18 months and will generate positive cash flow each year for the next several years.

Big Rivers supplements its existing cash on hand and internally generated cash flow with a multi-year $100 million syndicated senior secured credit agreement with five financial institutions, led by National Rural Utilities Cooperative Finance Corporation (NRUCFC), which expires September 18, 2020. As of June 30, 2018, Big Rivers had a cash and temporary investments balance of about $60.4 million and $92.3 million available under the NRUCFC credit agreement. Big Rivers has manageable debt maturities over the next eight quarters, which are largely comprised of scheduled amortizations of long-term debt to be paid at roughly $6.5 million per quarter. Terms of the NRUCFC credit agreement provide a good quality source of alternate liquidity in the form of a syndicated credit agreement which benefits from a multi-year tenor and the absence of any onerous financial covenants largely consistent with the financial covenants in existing debt documents. The syndicated agreement does, however, separately require Big Rivers to maintain a minimum equity balance at each fiscal quarter-end and year-end of $375 million plus 50% of the cooperative's cumulative positive net margins for each of the preceding fiscal years, beginning with the fiscal year ended December 31, 2015. Big Rivers is comfortably in compliance with those covenants. Additionally, the credit agreement benefits from no ongoing material adverse change (MAC) clause. The syndicated credit agreement does not have any rating triggers, just a pricing grid based on Big Rivers' rating.

During 2017, Big Rivers also expanded its bank relationships by negotiating a $15 million term loan with Federal Agricultural Mortgage Corporation, proceeds from which it pre-paid a portion of the existing series A loan from the Rural Utilities Service (RUS) to achieve interest cost savings. The note currently has an outstanding balance of $14.3 million and a final maturity of October 23, 2020. More recently, in April 2018 Big Rivers received about $46.1 million of funding from the RUS in the form of amortizing first mortgage bonds, with $25.6 million maturing in 2033 and $20.5 million maturing in 2043. Proceeds from these RUS loans and existing cash were used to repay in full the remaining balance of the RUS series A loan, thereby achieving interest cost savings, minimizing debt maturities for 2020 and 2021 and re-establishing access to low-cost RUS financing.

Debt Structure

As part of the unwinding of various transactions completed in 2009, Big Rivers replaced the previously existing RUS mortgage with a senior secured indenture. Under the senior secured indenture RUS and all senior secured debt holders, including the $83.3 million of County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7), are on equal footing in terms of priority of claim and lien on assets. The current senior secured indenture provides Big Rivers with the flexibility to access public debt markets without first obtaining a case specific RUS lien accommodation, while retaining the right to request approval from the RUS for additional direct borrowings under the RUS loan program, if they choose to do so. Given persistent questions about the availability of funds under the federally subsidized RUS loan program, the added flexibility of the current senior secured indenture is credit positive.

Other Considerations

Big Rivers' mapping under Moody's U.S. Electric Generation & Transmission Cooperative Rating Methodology grid below is based on historical data through December 31, 2017. The grid indicated rating for Big Rivers' senior most obligations under the Methodology is currently Baa3. However, Big Rivers' actual senior secured rating of Ba1 reflects several of the unique risks at Big Rivers and the challenges facing the cooperative in mitigating these risks, including further implementation of its load mitigation strategies following the smelter contract terminations and addressing issues surrounding its increasing regulatory asset accounts and idled Coleman plant.

Methodology

Exhibit 3
U.S. Electric Generation & Transmission Cooperative Rating Methodology

Rating Factors				
Big Rivers Electric Corporation, KY				
U.S. Electric Generation & Transmission Cooperatives [1][2]	Current FY 12/31/2017		Moody's 12-18 Month Forward View As of Published Date [3]	
Factor 1 : Wholesale Power Contracts and Regulatory Status (20%)	Measure	Score	Measure	Score
a) % Member Load Served and Regulatory Status	Ba	Ba	Ba	Ba
Factor 2 : Rate Flexibility (20%)				
a) Board Involvement / Rate Adjustment Mechanism	Baa	Baa	Baa	Baa
b) Purchased Power / Sales (%)	32.5%	Baa	25%-35%	Baa
c) New Build Capex (% of Net PP&E)	Aa	Aa	Aa	Aa
d) Rate Shock Exposure	B	B	B	B
Factor 3 : Member / Owner Profile (10%)				
a) Residential Sales / Total Sales	29.8%	Ba	25%-35%	Ba
b) Members' Consolidated Equity / Capitalization	38.8%	Baa	38%-40%	Baa
Factor 4 : 3-Year Average G&T Financial Metrics (40%)				
a) Times Interest Earned Ratio (TIER)	1.2x	A	1.2x-1.4x	A
b) Debt Service Coverage Ratio (DSC)	1.2x	A	1.2x	A
c) FFO / Debt	1.3%	B	4%-6%	Baa
d) (FFO + Interest) / Interest Expense (3 Year Avg)	1.3x	Ba	1.8x-2x	Baa
e) Equity/Total Adjusted Capitalization	36.1%	Aa	36% - 39%	Aa
Factor 5 : G&T Size (10%)				
a) MWh Sales	7.4	Baa	7-10	Baa
b) Net PP&E	$1.0	A	$1 - $1.1	A
Rating:				
Indicated Rating from Grid		Baa3		Baa2
Actual Rating Assigned (Senior Secured)		Ba1		Ba1

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 12/31/2016; Source: Moody's Financial Metrics™
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.

Source: Moody's Investors Service

RATINGS

BIG RIVERS ELECTRIC CORPORATION, KY	
Rating: County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7)	Ba1
Outlook	Stable

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moodys.com for the most updated credit rating action information and rating history.

REPORT NUMBER 1130318

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Moody's
INVESTORS SERVICE

CASE NO. 2020-00064

EXHIBIT WALKER-4

S&P January 16, 2019 Credit Opinion

S&P Global
Ratings

RatingsDirect®

Summary:

Big Rivers Electric Corp., Kentucky; Rural Electric Coop

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Table Of Contents

Summary:

Big Rivers Electric Corp., Kentucky; Rural Electric Coop

Credit Profile		
Big Rivers Electric Corp. ICR		
Long Term Rating	BB+/Stable	Upgraded
Ohio Cnty, Kentucky		
Big Rivers Electric Corp., Kentucky		
Ohio Cnty (Big Rivers Electric Corp.) RURELCCOO		
Long Term Rating	BB+/Stable	Upgraded

Rationale

S&P Global Ratings raised its issuer credit rating on Big Rivers Electric Corp. (BREC), Ky. to 'BB+' from 'BB'. At the same time, S&P Global Ratings raised its rating on Ohio County, Ky.'s $83.3 million pollution control refunding revenue bonds, series 2010A (Big Rivers Electric Corp. Project), issued for BREC, to 'BB+' from 'BB'. The outlook is stable.

The upgrade reflects our view of the following factors:

- The cooperative utility has entered into five contracts with nonmember public power utilities for the sale of the output from surplus portions of its generation capacity. Excess generation capacity followed the loss of two aluminum smelters that represented its members' two principal industrial customers.
- We believe the nonmember contracts, together with the idling of the utility's uneconomical Coleman power plant, and the cessation of the utility's obligation to purchase output from a Henderson Municipal Power And Light power plant, should better align BREC's 1,200 megawatts (MW) of generation resources with load through 2026. These developments should also add more predictability to the revenue stream and mitigate the utility's and its lenders' vulnerability to default.
- Although the nonmember contract purchasers will not reach their peak requirements until 2022, Big Rivers projects that adding the portfolio of about 340 MW of nonmember contracts will reduce its exposure to market revenues from 37% in 2017 to 9% in 2022. The utility also projects that its gross margins will increase as it migrates from market sales to contracted sales.
- The utility reports that the association representing its members' industrial electric customers has agreed to support the utility's plans to apply to the Kentucky Public Service Commission in late 2020 for the recovery of investments in retired generation assets.
- The utility projects debt balances will remain relatively stable through 2022 as it pursues about $250 million of capital investments.
- In 2017 and 2018, BREC reduced market access risk by retiring with cash, $80 million of debt maturing in 2019-2021. It plans to use cash to retire about 40% of a $245 million 2023 bullet maturity and refinance the balance

of that bullet. The utility is exploring options for its $83 million 2031 bullet maturity.

The ratings also reflect our opinion of these exposures:

- The tenor of the contracts with nonmembers provides only near-term revenue stream security and predictability, which constrains the ratings. The contracts expire in 2026 and 2029 and if they are not renewed or replaced, their expiration will expose about one-third of the utility's generation capacity to competitive markets. Therefore, we continue to consider long-term financial performance as vulnerable because 240 MW of the contracted capacity will roll off in 2026 and another 100 MW in 2029.
- BREC is a price-taker when it sells its power plants' output in competitive markets. The utility's 2017 energy production was almost exclusively from aging coal units that face emissions remediation issues. Self-production accounted for about two-thirds of BREC's 2017 energy sales.
- Members' residential revenues accounted for only one-third of members' 2017 revenues. Large commercial and industrial revenues accounted for half of their revenues. We consider residential revenues as generally representing the most stable and predictable revenue stream,
- Because 40% of BREC's debt does not amortize before maturity, the deferred principal amortization skews debt service coverage (DSC) metrics upward relative to those of other cooperative utilities with amortizing debt. Accrual DSC levels were essentially stable in 2015 and 2016 at nearly 1.2x. Accrual DSC declined to 1.0x in 2017, but cash from operations coverage was nearly 1.6x. That year's diverging cash and accrual coverage reflects, in part, timing differences relating to the recording of interest expense.
- BREC's average revenue per megawatt-hour from nonmember sales were anemic at $32 in 2016, $34 in 2017, and an estimated $30 in 2018.
- In 2017, the member distribution cooperatives' residential customers' retail rates were 12%-16% higher than the state average. Moreover, each of the members' residential rates in 2017 were at least 69% higher than in 2011, because the utility allocated costs from the lost smelter loads to its remaining customers. The sharp increases, the rate disparity relative to state average, and the low income levels might limit financial flexibility.
- We believe BREC's few vintage, coal-fired generation assets present operational exposures that can affect financial performance.

Henderson, Ky.-based BREC is a generation and transmission cooperative that produces and procures electricity for sale to its three distribution cooperative members--Kenergy Corp., Jackson Purchase Energy, and Meade County Rural Electric Cooperative--and their approximately 117,000 retail customers. The members serve in 22 counties. The state's median household income levels are nearly 20% below that of the nation, which could limit ratemaking flexibility. The utility reported $804 million of debt as of Dec. 31, 2017. In April, BREC reduced its debt balances by retiring a $65 million 2021 bullet maturity. BREC's 63% debt-to-capitalization ratio is favorable for a generation-owning, cooperative utility.

The Kentucky Public Service Commission must approve the utility's rate adjustment requests and those of its member distribution cooperatives, which distinguishes these utilities from many other cooperative utilities that have autonomous ratemaking authority. Although the regulator has provided rate adjustments that support adequate financial performance, we consider the financial margins to be weak relative to the magnitude of the utility's exposure to industrial loads and the vicissitudes of competitive wholesale markets where the utility cannot exert price-setting authority over its customers. The commission allows the utility to use a fuel adjustment clause to capture changes in variable costs, which we view as a positive factor. We believe this tool helps reduce financial volatility. Contracts with new loads should contribute to stable financial performance for a number of years, but the specter of volatility remains because substantial debt will remain after the contracts expire.

The utility's generation portfolio provides little fuel diversity. It includes the idled 443-MW, coal-fired Coleman power plant; the 417-MW, coal-fired Wilson plant; the 454-MW, coal-fired Green station; and 130 MWs from multiple units at the coal- and gas-fired Reid station. The cooperative also has an allocation of 178 MWs of Southeastern Power Administration hydroelectric power. Coal represents the dominant energy source and we believe that BREC's concentration in coal resources exposes the utility to the potential financial and operational effects of regulations governing power plant emissions and coal combustion residuals.

BREC's Coleman station has been idle since the loss of the smelter loads in 2014. The Reid plant's coal capacity can only operate if the utility remediates the plant's emissions.

Ohio County sold $83.3 million of bonds in 2010 for the benefit of BREC, which used bond proceeds to refund auction-rate securities. The bonds do not amortize and have a 2031 bullet maturity. We understand that the financing structure obligates the utility to unconditionally pay the county's bonds' debt service. BREC issued a note to the county that provides it with a security interest in the utility's assets under its mortgage indenture. The security interest on the county's bonds is on par with that on BREC's senior secured debt.

Outlook

The stable outlook reflects improved prospects for stable financial performance through the term of the contracts to sell surplus power to nonmember public power utilities. We view the contracts as reducing the revenue stream's exposure to competitive market forces during the life of the contracts.

Upside scenario

We do not expect to raise the ratings within our two-year outlook horizon without prospects for a more secure long-term revenue stream that aligns predictable revenues with debt maturities. We view several additional exposures as constraining the ratings. These include recent years' sharp rate increases relative to low income levels, an almost exclusively coal-fired generation portfolio and its potential exposure to more stringent emissions regulations, DSC levels that are only adequate relative to these exposures, and the presence of nonamortizing debt, which we believe distorts DSC coverage levels relative to utilities with greater percentages of amortizing debt.

Downside scenario

We could lower the ratings if the utility cannot sustain sound financial performance because of poor prospects for renewing or replacing nonmember contracts, weak market conditions, or poor plant performance. Similarly, if the financial profiles of BREC's members erode, we could lower the ratings.

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria.

Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

CASE NO. 2020-00064

EXHIBIT WALKER-5

Moody's November 13, 2019 Credit Opinion

MOODY'S
INVESTORS SERVICE

CREDIT OPINION
13 November 2019

Update

Rate this Research

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Japan	81-3-5408-4100
EMEA	44-20-7772-5454

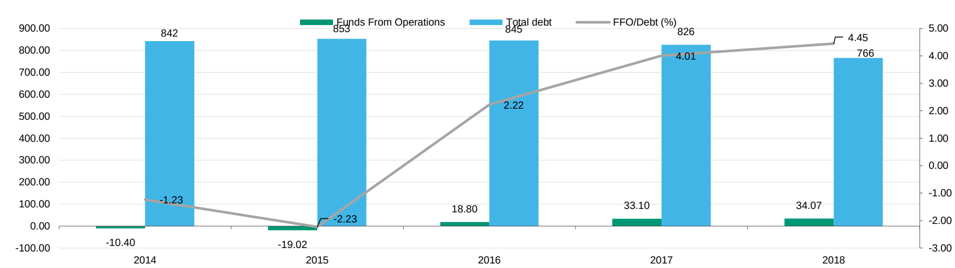
Big Rivers Electric Corporation

Update following outlook change to positive

Summary

Big Rivers Electric Corporation's (Ba1 positive) credit profile reflects improving prospects for mitigating the challenges posed by its ownership of a significant excess of mostly coal-fired generation capacity, some of which is idled, and its increasing regulatory asset balances. Big Rivers' credit profile considers the fact that it is a rate regulated electric generation and transmission cooperative as compared to its peers, but this consideration is balanced by a series of credit supportive decisions from the Kentucky Public Service Commission (KPSC) which has underpinned its strengthened financial metrics for 2016-18. Big Rivers' credit profile benefits from the ability to secure steadily increasing replacement loads following the termination of contracts with two aluminum smelters, including contracts that will continue to be phased in through 2022. Additionally, the cooperative is undertaking strategies to mitigate future refinancing risk relating to two long-term debt issues with bullet maturities due in 2023 and 2031 and to seek assurances for cost recovery relating to its increasing regulatory assets in a rate neutral manner through regulatory filings with the KPSC.

Exhibit 1
Historical FFO, Total Debt and FFO to Total Debt
($ in millions)



Source: Moody's Financial Metrics

Credit Strengths

» Contracted sales of excess capacity are being phased in over the next several years, including sales to a prospective steel plate manufacturing plant to be built by Nucor Corporation

» Limited new debt financing needs to support a moderate capital program, reliable net margins and no patronage capital returns to members support a strong balance sheet

» Regulatory support for timely and substantial recovery of existing costs of service bodes well for sustaining stronger financial metrics

- Long term wholesale power contracts with three member owners through 2043 produce a steady and predictable revenue stream from electricity sold to rural residential and other non-smelter industrial customers

Credit Challenges

- Maintaining customer satisfaction as bill credits have expired and the full impact of increases to the members' wholesale power rate has increased retail rates for members' customers
- Increasing regulatory assets pose potential cost recovery and write-off risks if not adequately addressed as expected through regulatory proceedings
- Elevated carbon transition risk because of significant dependence on mostly coal-fired, carbon-emitting, owned generation capacity, including idled capacity
- Executing strategies to address refinancing risk relating to two bullet maturities of long-term debt and sizable debt maturities beyond the term of certain existing power sales agreements with replacement loads following termination of contracts with the two aluminum smelters
- Local economic dependence on industrial activity, including two operating aluminum smelters and the prospective steel plate manufacturing plant to be built by Nucor

Rating Outlook

The positive rating outlook reflects a prevailing credit supportive regulatory environment and Big Rivers' improving prospects for sustaining its financial metrics at the stronger levels attained during 2016-18 while continuing to achieve better than expected progress in reducing its significant excess capacity created by the lost smelters load several years ago. The positive outlook also considers the cooperative's good prospects for reducing refinancing risk and limited new debt financing needs during the next three years, and incorporates the likelihood that the smelters will continue to operate and that the Nucor load will materialize, thus providing support for the local economy, including employment levels.

Factors that Could Lead to an Upgrade

- A rating upgrade is possible if credit supportive regulatory treatment remains intact and there is future regulatory support for cost recovery of the increasing regulatory asset account which would avoid potential future write-offs while maintaining reasonably competitive rates
- Achieving further successful financial results through ongoing strategies to mitigate refinancing risk and to better align the cooperative's capacity supply and load profile on a sustainable basis could also contribute to upward rating pressure
- Achieving stronger metrics to balance unique business and financial risks; for example, funds from operations (FFO) coverage of interest and debt improving to 2.4x and in a range of 6%-7%, respectively, with the debt service coverage (DSC) ratio tracking at close to 1.2x or better on a sustained basis

Factors that Could Lead to a Downgrade

- A negative rating action is unlikely in the next two years because of the positive outlook; However, a negative rating action could result if there was a shift to a less credit supportive regulatory environment or if liquidity unexpectedly deteriorates
- The pressure for a negative rating action would also increase if substantial and timely assurance for recovery of environmental compliance costs and increasing regulatory assets over time do not occur as expected under the KPSC approved environmental cost recovery mechanism and future KPSC regulatory proceedings

» A scenario under which either or both of the smelters discontinued operations or if the Nucor Corporation load does not materialize would be credit negative because of the potential residual negative effects on the local economy

» In terms of metrics, FFO to debt and DSC ratios below 4% and 1.2x, respectively, for a sustained period would pressure the rating

Key Indicators

Exhibit 2
Big Rivers Electric Corporation
Key Indicators

	2014	2015	2016	2017	2018
Times Interest Earned Ratio (TIER)	1.6x	1.3x	1.1x	1.3x	1.4x
DSC (Debt Service Coverage)	1.5x	1.2x	1.2x	1.2x	1.2x
FFO / Debt	-1.2%	-2.2%	2.2%	4.0%	4.4%
(FFO + Interest Expense) / Interest Expense	0.7x	0.5x	1.5x	1.8x	1.9x
Equity / Total Capitalization	34.9%	35.3%	36.0%	37.2%	39.6%

Source: Moody's Financial Metrics

Obligor Profile

Big Rivers is an electric generation and transmission cooperative headquartered in Henderson, Kentucky and owned by its three member system distribution cooperatives -- Jackson Purchase Energy Corporation; Kenergy Corp (Kenergy); and Meade County Rural Electric Cooperative Corporation (Meade County). These member system cooperatives provide retail electric power and energy to more than 116,000 residential, commercial, and industrial customers in 22 Western Kentucky counties.

In aggregate, Big Rivers owns 1,444 net MWs of coal-fired generating capacity at four stations, including Robert D. Green (454 MWs), Robert A. Reid ((130 MWs), D.B. Wilson (417 MWs) and Kenneth C. Coleman (443 MWs), which has been idled since May 2014. Including about 178 MWs of contracted hydro capacity from the Southeastern Power Administration (SEPA) and taking into account the decision to cease operations at the Henderson Municipal Power and Light (HMPL) Station Two plant thus eliminating its rights to about 187 MWs of coal-fired capacity from that plant, the cooperative's total power capacity is 1,622 MWs.

Big Rivers' owned transmission system includes 1,298 miles of transmission lines and 24 substations. The cooperative also has about 25 transmission interconnections to link its system with several surrounding utilities. Unlike most of its peers, Big Rivers is subject to rate regulation by the KPSC.

Detailed Credit Considerations

Good progress on mitigating credit challenges resulting from loss of aluminum smelters' load

Big Rivers has been making good progress towards replacing the roughly two-thirds of its annual energy sales from two aluminum smelters. While initial worst case expectations contemplated the prospect that both smelters would cease operations upon the expiration of their respective power contracts, regulatory approvals of the smelters' definitive agreements with Big Rivers and Kenergy enable the continued operations of both smelters with energy demands met by open market purchases of electricity. Big Rivers is addressing the long generation capacity position created by the absence of both smelters' load through both supply-side and demand-side strategies, as well as by reducing staff and controlling other expenses where feasible without compromising reliability.

Supply-side strategies taken to another level during 2018-2019

Big Rivers' supply-side initiatives included idling its 443-MWs Coleman plant in May 2014 and terminating its operating agreement with HMPL during 2018, which led to the closure of the HMPL Station Two plant on January 31, 2019. The latter steps reduced the cooperative's excess capacity by eliminating its rights to about 187 MWs of competitively challenged coal-fired capacity from the HMPL Station Two plant.

The settlement agreement to end the operating agreement with HMPL, which was approved by the KPSC on an expedited basis during 2018, provides Big Rivers the ability to apply regulatory asset treatment for its approximately $90 million of net book value relating to its past investments in the Station Two plant as part of the operating agreement. The settlement also established a times interest earned ratio (TIER) credit, which allows Big Rivers to apply any 2019 and 2020 margins in excess of a 1.45 TIER as an initial amortization of its regulatory asset balance. It is management's intent to seek recovery of the regulatory assets in regulatory proceedings likely to be filed at the KPSC no later than early 2020.

Although the Coleman plant was idled in May 2014, it is being maintained to permit restart should market conditions become economically feasible. By idling the Coleman plant, Big Rivers achieved overall cost savings of about $26 million annually. Big Rivers is reporting internal load growth and longer term opportunities are arising for sales of electricity, resulting from economic development activity in its service territory. For example, Big Rivers has an industrial customer utilizing the cooperative's economic development incentive rate in its business expansion, which will contribute significant growth to the cooperative's load. Also, in March 2019 Nucor Corporation (Baa1 stable) announced it plans to construct a steel plate manufacturing mill in Meade County's service territory. More recently, in September 2019 Meade County, Big Rivers and Nucor all signed a long-term power purchase agreement that will add about 200 MWs of load by 2022 to be served by Big Rivers, effectively establishing Nucor as one of Meade County's members. The Nucor plant will also provide additional economic stimulus within the service territory.

Also, Big Rivers is considering the transfer of some environmental control equipment at the Coleman plant to its Wilson plant. If this strategy is successfully implemented, it is likely to reduce the financial impact of a potential write-off or the need for regulatory asset recovery if management elects to permanently shutter the Coleman plant in the future. The current net book value of the Coleman plant, including deferred depreciation, is estimated at $181 million. The net book value includes approximately $73 million of investments in scrubbers. The remaining amounts of net investment in both the Coleman and Station Two plants represent potential write-off risks to Big Rivers' common equity if the cooperative is not able to recover the remaining costs from its customers as a regulatory asset.

The fact that the HMPL Station Two settlement was unanimously supported by the Attorney General (AG) and the Kentucky Industrial Utility Customers (KIUC) is a credit positive. In doing so, the AG and KIUC agreed to support recovery of Station Two and Wilson Station regulatory assets in Big Rivers' next base rate case, with the AG's support contingent on any proposed rate impact being 0% or less. Also, the KIUC has agreed to support recovery of the Coleman Station regulatory asset, while the AG indicated neither support nor opposition to such recovery.

Demand-side strategies are phasing in according to plans and are enhanced by the signing of the contract with Nucor

Big Rivers' demand-side strategies include securing medium-term contracts for the sale of capacity and energy to load serving municipal-distribution entities in Nebraska and Kentucky, making short-term off system sales and participating in the capacity markets.

In addition, the Nucor contract, which is still subject to various regulatory approvals, would add to the three nine-year contracts that the cooperative already has in place to sell capacity and energy to three Nebraska entities which will grow to about 85 MWs. Power being provided under the contract with the Nebraska entities began flowing in 2018 and is scheduled to reach full output in 2022. Also, Big Rivers has executed a 10-year contract to transmit as much as 100 MWs from its coal-fired Wilson Station to Kentucky Municipal Energy Agency (KyMEA) and sales to KyMEA began in May 2019. Also, in June 2018, the City of Owensboro awarded its full-requirements contract, approximating 180 MWs to Big Rivers, which together with other supply-side efforts, helps to further balance Big Rivers' generation capacity and load requirement. The contract with the City of Owensboro covers a term of June 2020 through December 2026 to provide the municipal utility's full annual energy requirements estimated at 825,000 megawatt hours and annual peak load of about 155 MWs, net of its 25 MWs provided through a contract with the Southeast Power Administration.

These contracts are credit positive for Big Rivers because they lock up some of its substantial excess capacity and energy with load-serving municipal-distribution entities for multiple year periods, helping the cooperative replenish the smelter load lost during 2013-14. The contracts are likely to prove beneficial for Big Rivers' long-term financial performance and provide a reliable source of recovery for Big Rivers' fixed and variable costs and contribute to its overall competitiveness through better rates for its members. Also, the contracts allow Big Rivers to become less dependent on the wholesale power market for incremental revenues and helps diversify the cooperative's revenue stream, which historically was heavily dependent on the aluminum industry, to one that is less volatile and more predictable.

Setting aside the still idled Coleman capacity and considering the effects of terminating the operating agreement with HMPL, BREC has just under 1,200 MWs of capacity and awaits the outcome of its RFP for up to 250 MWs of solar capacity. This level of capacity compares with average member peak load of 650 MWs and when combined with additional aforementioned contracted capacity sales of about 550 MWs phasing in through 2022 and allocating about 150 MWs for an approximate 15% reserve margin, moves Big Rivers very close to achieving supply and demand balance.

Smelters continue to operate and the Hawesville smelter moves closer to operating at full capacity

Since canceling their respective contracts, both of the smelters continue to operate. We understand that the Hawesville smelter has gradually ramped up operations in recent years because of some economic aid and improved commodity pricing for aluminum and currently is operating at about 80% of its capacity with four of its five pot lines operating. Also, the Hawesville smelter is continuing work during 2019 to get the fifth pot line operational. The Sebree smelter has been operating at near full production capacity for several years. When compared to the alternative scenario of having both smelters permanently shut down, this outcome is positive particularly since Big Rivers and Kenergy are being reimbursed for any incremental costs to their members of the smelters' continued operation and there are residual benefits to the local economy.

Rate case decisions and ongoing cost recovery mechanisms remain credit positive factors

Big Rivers has approval from the US Department of Agriculture's Rural Utilities Service (RUS) for loans to be funded no later than December 2023 which would provide reimbursement for certain transmission asset investments already made and to refinance half of its Series B Note which has a $245.5 million balloon payment due in December 2023, while it intends to repay the other half of the Series B Note with cash. Additional refinancing strategies are likely to include a reoffering of its $83.3 million of County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project) in July 2020 to achieve an estimated net present value of $20 million interest expense savings. The pollution control bonds have a July 2020 call date.

Also, Big Rivers' credit profile benefits from credit supportive rate case decisions rendered by the KPSC in October 2013 and April 2014, which resulted in approval of a combined wholesale power rate increase of about $90.4 million. As part of these decisions, residual cash, set aside in restricted accounts, was supportive to Big Rivers' liquidity after the loss of the smelter load. Specifically, cash in the restricted accounts was used to provide bill credits during 2014-16, which minimized the rate shock to ratepayers until September 2015 for large industrial/business (non-smelter) customers and until August 2016 for rural (residential) customers. With the expiration of bill credits in 2016, the full effects of the wholesale power rate increases are now being fully borne by Big Rivers' members and, in turn, the members' retail customers.

Overall credit positive impact from KPSC mandated independent management audit

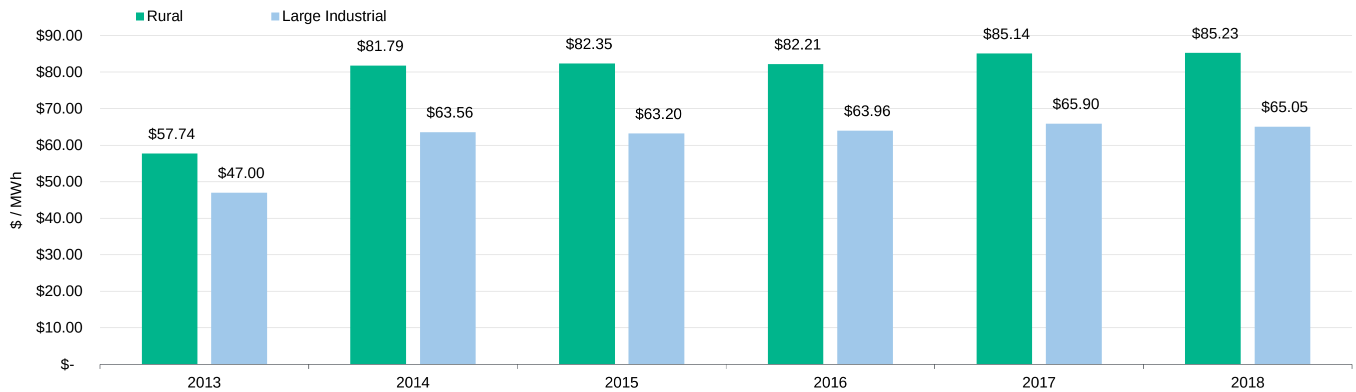
The KPSC ordered independent consultant's comprehensive management audit is credit positive for Big Rivers since it incorporates a combination of many supportive or neutral findings about Big Rivers' past decisions and future plans, as well as five specific, seemingly manageable, recommendations. Of those five recommendations, four were already in process as of the report date, including those relating to increasing expertise regarding the MISO market, pursuing new energy sales and analyzing the best use of the currently idled Coleman plant. Three of the five action items have been closed by the KPSC, including an agreement that the recommendation of adding a new board member with energy expertise is not warranted, that Big Rivers was sufficiently pursuing new energy sales, and that Big Rivers has sufficiently added staff resources focusing on enhancing internal expertise in production cost and financial modeling to further leverage its association as a member of ACES.

The remaining two items yet to be closed by the KPSC relate to: (1) the executed amendments made to Big Rivers' debt documents to address restrictions around the sale or early retirement of the Coleman plant, and (2) completion of the study of the sale, retirement or redevelopment of the Coleman plant.

Reasonably competitive position maintained

As depicted in exhibit three below, although Big Rivers' rates have increased following the loss of the smelter loads, the economics of power produced from Big Rivers' generation sources have enabled it to still maintain a reasonable competitive position in the region.

Exhibit 3
Historical Average Member Rates



Source: Big Rivers Electric Corporation

Base rate increases from 2013 and 2014 and other strategic initiatives are driving improved financial performance and this trend is likely to be sustained

The outcomes in Big Rivers' last two rate cases and other mitigation strategies have supported steady margins for the past three fiscal years in a range of approximately $12.9 - $15.2 million. The net margin for fiscal year ended December 31, 2018 was $15.2 million, representing modest improvement over the prior two years and produced a 1.39x TIER, a contractual margins for interest (MFI) ratio of 1.39x and a DSC ratio of 1.22x, all as defined in the cooperative's debt documents.

Despite mild weather and soft wholesale market pricing, Big Rivers margins for the six months ended June 30, 2019 were $18.9 million compared to $15.6 million in the same period of 2018, primarily reflecting the cost savings from the January 31, 2019 closure of the Station Two plant. Net margin and cash flow benefits from the Station Two plant closure are likely to continue throughout fiscal year 2019 and beyond.

For fiscal years 2016-18 (including Moody's standard adjustments), Big Rivers' FFO coverage of interest, FFO to debt and DSC ratios averaged in the “Baa”, “Baa” and “A” rating categories, respectively, for the ratios covered under the Rating Methodology for U.S. Electric G&T Cooperatives. For example, Big Rivers' three year average FFO coverage of interest, FFO to Debt, and DSC for 2016-18 were 1.7x, 3.5%, and 1.2x, respectively.

Big Rivers' FFO coverage of interest and debt ratios strengthened during fiscal years 2016-18 and prospectively are likely to be sustained to support the cooperative's credit quality as power sales agreements with entities in Nebraska and Kentucky and the recent long-term contract with Nucor help compensate for the substantial overcapacity at Big Rivers.

Liquidity

We expect that Big Rivers will maintain ample liquidity over the next 12-18 months.

Big Rivers supplements its existing cash on hand and internally generated cash flow with a multi-year $100 million syndicated senior secured credit agreement with five financial institutions, led by National Rural Utilities Cooperative Finance Corporation (NRUCFC), which expires September 18, 2020. Big Rivers plans to negotiate prior to the expiration date for either an amend and extend agreement or a new facility for at least the same amount and under similar terms and conditions for at least a three-year term.

As of June 30, 2019, Big Rivers had a cash and temporary investments balance of about $48.8 million and $92.3 million available under the NRUCFC credit agreement. Big Rivers is likely to have very limited need for new debt financing for the next eight quarters because of a modest capital spending program for maintenance of existing infrastructure and manageable debt maturities over the period. The debt maturities are largely comprised of scheduled amortizations of long-term debt to be paid at roughly $8 million - $10 million per quarter for the next eight quarters.

Terms of the NRUCFC credit agreement provide a good quality source of alternate liquidity in the form of a syndicated credit agreement. The facility does not have any onerous financial covenants, which are largely consistent with the financial covenants in existing debt documents. The syndicated agreement does, however, separately require Big Rivers to maintain a minimum equity balance at each fiscal quarter-end and year-end of $375 million plus 50% of the cooperative's cumulative positive net margins for each of the preceding fiscal years, beginning with the fiscal year ended December 31, 2015. Big Rivers is comfortably in compliance with those covenants. Additionally, the credit agreement benefits from no ongoing material adverse change (MAC) clause. The syndicated credit agreement does not have any rating triggers, just a pricing grid based on Big Rivers' rating.

Debt Structure

As part of the unwinding of various transactions completed in 2009, Big Rivers replaced the previously existing RUS mortgage with a senior secured indenture. Under the senior secured indenture RUS and all senior secured debt holders, including the $83.3 million of County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7), are on equal footing in terms of priority of claim and lien on assets. The current senior secured indenture provides Big Rivers with the flexibility to access public debt markets without first obtaining a case specific RUS lien accommodation, while retaining the right to request approval from the RUS for additional direct borrowings under the RUS loan program, if they choose to do so. Given persistent questions about the availability of funds under the federally subsidized RUS loan program, the added flexibility of the current senior secured indenture is credit positive.

Other Considerations

Big Rivers' mapping under Moody's U.S. Electric Generation & Transmission Cooperative Rating Methodology scorecard below is based on historical data through December 31, 2018.

The scorecard-indicated outcome for Big Rivers' senior most obligations under the Methodology is currently Baa2. However, Big Rivers' actual senior secured rating of Ba1 reflects several of the unique risks at Big Rivers and the challenges facing the cooperative in mitigating these risks, including further implementation of its load mitigation strategies following the smelter contract terminations and addressing issues surrounding its increasing regulatory asset accounts and idled Coleman plant. The differential between the scorecard indicated outcome and the actual Ba1 senior secured rating is also reflected in the recent revision to a positive outlook to incorporate progress in addressing these challenges.

Methodology

Exhibit 4

Big Rivers Electric Corporation

Big Rivers Electric Corporation, KY -Private

U.S. Electric Generation & Transmission Cooperatives Industry Scorecard [1][2]	Current FY 12/31/2018		Moody's 12-18 Month Forward View As of Publication Date [3]	
Factor 1: Long-Term Wholesale Power Supply Contracts and Regulatory Status (20.0%)	**Measure**	**Score**	**Measure**	**Score**
a) % Member Load Served under Regulatory Status	Ba	Ba	Ba	Ba
Factor 2: Rate Flexibility (20.0%)				
a) Board Involvement / Variable Cost Adjustment Mechanisms	Baa	Baa	Baa	Baa
b) Purchased Power / Total MWh Sales (%)	17.9%	Aa	20% - 30%	A
c) New Build Exposure (% Net PP&E)	A	A	A	A
d) Potential for Rate Shock Exposure	B	B	B	B
Factor 3: Member / Owner Profile (10.0%)				
a) Residential Sales / Total Sales (%)	36.9%	Ba	25% - 35%	Ba
b) Members' Consolidated Equity / Capitalization (%)	37.8%	Baa	37% - 40%	Baa
Factor 4: 3-Year Average G&T Financial Metrics (40.0%)				
a) TIER (3 Year Avg)	1.3x	A	1.3x - 1.5x	Aa
b) DSC (3 Year Avg)	1.2x	A	1.2x - 1.5x	A
c) FFO / Debt (3 Year Avg)	3.5%	Baa	4% - 7%	Baa
d) (FFO + Interest) / Interest Expense (3 Year Avg)	1.7x	Baa	2x - 2.5x	A
e) Equity / Total Capitalization (3 Year Avg)	37.6%	Aa	37% - 41%	Aa
Factor 5: G&T Size (10.0%)				
a) Megawatt hour sales (Millions of MWhs)	6.4	Baa	7 - 10	Baa
b) Net PP&E (USD Billions)	$1.0	A	$0.9	Baa
Rating:				
a) Indicated Outcome from Scorecard		Baa2		Baa1
b) Actual Rating Assigned (Senior Secured)		Ba1		Ba1

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 12/31/2018; Source: Moody's Financial Metrics™
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures.
Source: Moody's Investor Service

RATINGS

BIG RIVERS ELECTRIC CORPORATION, KY

Rating: County of Ohio, Kentucky Pollution Control Refunding Revenue Bonds (Big Rivers Electric Corporation Project; cusip number 677288AG7)	Ba1
Outlook	Positive

REPORT NUMBER 1198918

CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

Moody's
INVESTORS SERVICE

CASE NO. 2020-00064

EXHIBIT WALKER-6

Fitch's December 4, 2019 Press Release

FitchRatings

Fitch Affirms Big Rivers Electric Corp. at 'BBB-'; Outlook Stable

Fitch Ratings - New York - 04 December 2019:

Fitch Ratings has affirmed the ratings on the following bonds issued by Big Rivers Electric Corporation (BREC) at 'BBB-':

--$83 million County of Ohio pollution control revenue bonds, series 2010A.

--Issuer Default Rating (IDR).

ANALYTICAL CONCLUSION

The 'BBB-' rating and IDR on Big Rivers Electric Corporation reflects the corporation's elevated but improving leverage profile in relation to its midrange revenue defensibility and strong operating risk profile. Fitch assesses Big River's three members to have midrange credit quality, which coupled with the absence of independent rate-setting authority, constrains the corporation's overall revenue defensibility.

The rating also reflects the corporation's consistently low operating cost burden and supportive regulatory regime. Lastly, Fitch views favorably the re-balancing of Big River's previously long resource position through a combination of greater contracted non-member sales and the retiring and/or idling of existing capacity, which should allow financial margins to remain stable and operating costs low. If margins remain strong and leverage declines further, upward rating movement is possible.

CREDIT PROFILE

Big Rivers Electric Corporation, a non-profit generation and transmission (G&T) cooperative formed in 1961, provides all-requirements wholesale electric and transmission service to three electric distribution cooperatives pursuant to all-requirements contracts through Dec. 31, 2043. The three members provide service to a total of approximately 117,000 retail customers located in 22 western Kentucky counties. Financial performance of the three distribution systems is satisfactory and provides sufficient support for the rating.

KEY RATING DRIVERS

Revenue Defensibility:: 'bbb'

Strong Contractual Framework, Midrange Member Credit Quality

Revenue defensibility is midrange despite otherwise very strong revenue source characteristics provided by all-requirements contracts. The midrange assessment principally reflects the credit quality of the three member utilities along with the regulatory framework within which Big Rivers and its customers operate. While the regulatory regime has been constructive historically, neither Big Rivers nor its three customers have autonomy over rate-setting.

Operating Risk:: 'a'

Coal-Dominated Resource Base, Low Cost Burden

The strong operating risk assessment begins with a low operating cost burden that has averaged 4.85 cents/KWh over the past five years. Operating cost flexibility assessment is neutral as Big River's has idled or retired 695 MWs of coal capacity over the past few years. As a result, reliance on coal-fired capacity is lower than historical amounts and sits just below Fitch's threshold for a neutral assessment. Management expects to add some renewable (solar) capacity over the next several years, which will further diversify the resource base.

Financial Profile:: 'bbb'

Improved Margins, Leverage to Decline

Big River's midrange financial profile reflects elevated but improving leverage ratios. The solid financial results achieved in fiscals 2017 and 2018 are expected to continue as Big Rivers provides contracted energy and capacity to Kentucky Municipal Energy Agency and the city of Owensboro, KY in 2019 and 2020, respectively. In addition, Fitch anticipates lower operating expenses from the reduction in capacity over the past few years coupled with higher non-cash expenses (depreciation) will lead to a further improvement in leverage over the next few years.

Asymmetric Additional Risk Considerations

There are no additional asymmetric risks affecting the rating.

RATING SENSITIVITIES

Improved Leverage: Big Rivers Electric Corporation's ratings and IDR could be upgraded if the financial profile is sustained and leverage continues its positive trend downward over time.

Member Credit Quality: The rating is also sensitive to changes in the credit quality of its three member customers. A shift in member credit quality in either direction could result in a change in Fitch's assessment of revenue defensibility and could lead to a change in the rating.

SECURITY

The bonds are secured by a mortgage lien on substantially all of the Big Rivers' owned tangible assets, which include the revenue generated from the wholesale sale or transmission of electricity.

Revenue Defensibility

Strong Contractual Framework

Revenue source characteristics are very strong. All three of Big Rivers' customers are signed to long-term, all-requirements, take-and-pay power contracts. All costs associated with the delivery of power and energy/services, including debt service on the bonds, are billed to the customers on a monthly basis. There are no step-up provisions in the contracts for non-payment. However, given there are only three members, the rating on the bonds is heavily correlated to the credit quality of all three customers.

Rates are Regulated

The Kentucky Public Service Commission (KPSC) is charged with approving the wholesale and retail rates of Big Rivers' and its members. Wholesale rates charged to the members consist of a demand charge and an energy charge per kWh consumed as approved by KPSC. Big Rivers has certain approved riders including a fuel adjustment clause and an environmental surcharge, which helps provide timely pass-through of variable charges. Supportive regulatory policies and successful rate recovery efforts historically point to a constructive regulatory environment.

Big Rivers' last rate order, received in 2014, approved rates at levels that allowed it to cover total fixed costs on a self-sustaining basis. On the member level, rates are set for full cost recovery. However, while the regulatory environment for rate recovery has been supportive, approval of rate cases by an outside entity could result in delayed revenue recovery, potentially higher revenue variability and weaker overall revenue defensibility compared to non-regulated entities, and thus limits rate flexibility in Fitch's view.

Beginning in 2018, member rates have been set to allow Big Rivers to fully recover its costs from the members (i.e., there are no longer any deferred revenues), which is an important rating factor that underpins the investment grade rating. Fitch believes the stronger margins are sustainable over the intermediate term as Big Rivers begins to benefit for newly contracted sales. The average wholesale power cost to members declined in 2018 to $71/MWh from about $76/MWh the previous year. The member rate for 2019 is up to $72.50 and is forecast to rise again in 2020 to just over $73.00 but remain at this level for the next few years.

Midrange Purchaser Credit Quality

Revenue defensibility primarily reflects the member (purchaser) credit quality as evaluated using Fitch's purchaser credit index (PCI), which reflects the weighted average credit quality of the relevant obligors. Fitch's PCI score of 3.05 is based on an evaluation of all three member cooperatives; Meade County Rural Cooperative Corporation (Meade), KY comprising 16% of Big River's revenues; Kenergy Corporation, KY (Kenergy, 63% of revenues); and Jackson Purchase Energy Corporation, KY (Jackson, 21% of revenues). The overall scoring for each cooperative ranged from relatively strong to relatively weak.

The PCI takes into account the strength of the member's service area, retail rate competitiveness and ability to absorb rate increases through an analysis of its service area, as well as 2018 financial performance. Fitch assessed the service area characteristics for the two largest members to be midrange based on the relatively low median household income (MHI) and average to above average unemployment rates.

Contributing to Kenergy's midrange score are its proportionally low amount of revenues derived from residential users (23% of total coop revenues) and MHI that is just 84% of the US average. In addition, 2018 financial performance was weak. On the positive side, Kenergy's customer base is slowly growing and retail rates are very affordable. The weak score for Jackson is rooted in its even lower MHI (74% of the U.S. average), relatively high unemployment rate of 6.1%, high retail rates, and very weak 2018 margin and cash cushion. Meade's score was assessed to be the highest of the three, although as the smallest of Big Rivers' members, its strong overall credit profile factors less into the overall PCI.

The three member cooperatives serve small to mid-sized cities and counties, and are geographically located on Kentucky's western border. Economic activity throughout the state is relatively diverse but weighted more heavily in manufacturing and natural resources. Locally, growth in the population and customer base has been steady and the unemployment levels for the communities, while varied, are mostly moderate ranging from 4.4% to as high as 6.1%. A fairly robust transportation network provides access to larger metropolitan areas including Nashville, TN (to the south) and Louisville, KY as well as to St. Louis, MO (northwest) and Indianapolis, IN (north).

Operating Risk

Big River's strong operating risk assessment reflects a consistently low operating cost burden of about 5 cents/KWh since at least 2014. Operating costs are anticipated to remain low as resource capacity is expected to remain sufficient to meet existing member and newly added customer load and capital needs are manageable. In addition, power is supplied mainly by low-cost vintage generating units and contracted purchases, all of which is further supported by access to the MISO market.

Operating Cost Flexibility

Fitch assesses Big River's operating cost flexibility as neutral as its past reliance on coal-fired generation has declined. The assessment takes into account the corporation's current resource base that includes four owned generating facilities (all coal) as well as contracted hydroelectric capacity. In 2019, approximately 78% of total capacity is coal-fired, followed by hydro capacity at 16% and a small amount of natural gas.

Big Rivers currently owns and operates 1,000 MWs of net generating capacity consisting of the following coal-fired facilities: Green generating station, a two-unit 454 MW facility that has the ability to burn high Sulphur, low cost coal; Wilson generating station, a 417 MW single unit facility; and the smallest of BR's generating assets - Reid Station (130 MW). In addition, Big Rivers also receives power through contract with Southeastern Power

Administration (SEPA) for 178 MWs of hydroelectric capacity, bringing total current capacity to over 1,100 MWs. Big Rivers' 2017 decision to idle the 443 MW three-unit Coleman Station has helped improve its resource mix.

Not included in the assessment cost flexibility assessment is the capacity from the coal-fired plant owned by the city of Henderson, KY. Pursuant to a long-standing agreement with Henderson, Big Rivers received the surplus energy from the plant after Henderson's own retail needs were met, which had been roughly equivalent to 180MW-190MW per year. The Henderson plant was no longer capable of providing economical, continuous and reliable operation, leading both parties to agree to de-commission it in early 2019. The retirement of the Henderson plant, which was approved by regulators in late 2018, resulted in the elimination of a net operating loss on the asset of roughly $13 million annually.

Environmental Considerations

The Commonwealth of Kentucky does not currently have a renewable portfolio standard. However, Big Rivers issued a request for proposal to add up to 150 MWs of solar capacity. The expectation is to enter into a 20 year purchase power agreement at a fixed price. A short list of respondents and potential projects is currently being evaluated. The additional capacity is not expected to be available for at least several years. However, once available, capacity from coal resources will decline to around 70%.

Capital Planning and Management

Capital planning and management are assessed to be midrange. Big Rivers has an exceptionally high, Fitch-calculated average age of plant of 49 years in 2018, which indicates high life-cycle needs. This is somewhat offset by capital spending that has averaged 131% of annual depreciation over the past five years and an anticipated acceleration in annual depreciation expense and approval to treat several of its generating facilities as regulatory assets is received over the near term.

The regulatory asset designation will allow Big Rivers to include a larger proportion of the depreciation of these assets in its rating case with regulators for enhanced future cost recovery. Management anticipates capital spending for 2019-2023 to total a fairly sizeable $355 million, which continues a recent trend of sound capital reinvestment undertaken over the past few years. Roughly $250 million in additional debt is expected to be issued to fund the proposed capital spending.

Reduction in Long Generation Portfolio Position

Big Rivers historically provided capacity and energy to its members through a combination of multiple owned generation stations, including a leased facility (Henderson Station 2) and power purchases. After the loss of load attributable to the two large aluminum smelters, system peak demand declined to around 650 MWs, or roughly half of historical demand, leading to a very long resource position. To address this, Big Rivers implemented a mitigation plan with the goal of achieving financial savings and benefits that would help lower member rates. The plan included aggressively marketing the excess power under intermediate-term contracts and through spot sales in MISO.

More recently, growth in the existing customer base coupled with the signing of bi-lateral contracts with Kentucky Municipal Energy Agency (KyMEA, A/Stable), a consortium of Nebraska-based utilities, and full requirements sales to the city of Owensboro, KY (beginning in 2020) significantly increases contracted (non-member) sales and lowers reliance on short-term markets. In addition, the idling of the capacity at Coleman station and de-commissioning of the Henderson plant reduces total capacity to a manageable reserve of around 10% of total expected peak demand by 2020 (1,179 MW of capacity vs 1,026 MW of peak demand).

Operations at the Coleman plant (443 MW) were initially idled in 2014. Coleman is expected to be retired in the near term.

The wholesale customers in Nebraska began receiving energy in 2018, but full requirements capacity and energy totaling 85 MWs will phase in over time. KYMEA's 100 MW of firm purchases began May 1, 2019 and is followed by the city of Owensboro's agreement to purchase full requirements (165 MW) from Big Rivers beginning in mid-2020. The inclusion of these intermediate term contracts brings some predictability to the revenue base, which coupled with the idling and retiring of certain generating assets right-sizes the total resource needs relative to member and contracted demand. Big Rivers is expected to add up to 150 MW of solar in the coming years, 100 MW of which will be used to meet the expected 200 MWs of new demand from Nucor Steel.

Financial Profile

Improved Financial Results

Big Rivers filed a rate case with the Kentucky Public Service Commission (KPSC) in 2013 requesting an increase in rates to levels that would provide full cost recovery of system obligations. The KPSC granted the new rates in 2014, but the full effect of the increases were not realized until fiscal 2017, as previously set aside reserves were used to keep member rates low over several years leading up to 2017.

Fitch-calculated debt service coverage improved to 1.30x in fiscal 2017 (and to 1.36x in 2018) from very weak levels previously, and coverage of full obligations improved to 1.28x by 2018. Audited fiscal year Sept. 30, 2019 results are not expected to be available for several months, but are anticipated to be sound once again. The improved performance over the past few years is largely attributable to the full implementation of the cooperative's risk mitigation strategy and approved rate plan.

However, the mitigation reserves have been fully utilized and Fitch believes the improved leverage ratios that have resulted from a steady decline in net debt and rise in funds available for debt service (FADS) over the past few years is likely to continue. Cash remains near historical norms and at 57 days cash on hand is considered neutral to the financial profile assessment. A $100 million senior secured credit agreement provides added liquidity.

Fitch Analytical Stress Test (FAST) Base and Rating Case Analysis

Fitch's base case is based on Big River's financial pro forma for fiscal years 2019 - 2023, which conservatively incorporates a slight decline in energy and revenues followed by limited growth through the forecast and annual spending for capital improvements totaling $356 million through 2023. The base case assumes $294 million of outstanding principal will be retired (including cash defeasances) although a portion of the capital plan will be funded with additional debt.

The Fitch base case aligns with Big Rivers' forecasted margins, which includes a decline in operating expenses related to the closure of Station 2 in 2019, and regulatory approval to treat station 2 as a regulatory asset, a rise in annual depreciation beginning in 2019, and an expected increase in sales related to Owensboro, KY and the expected opening of a new facility by Nucor Steel in 2022. The base case shows a decline in leverage in year one (2019) to 6.9x followed by a further modest decline in the leverage ratio throughout the remainder of the forward look.

For the rating case, the FAST incorporates a stress in sales in the first two years aggregating to 16% before a return to sales growth in years three through five. The previously mentioned base case assumptions are also applied. The result of the stress is an increase in the leverage ratio to 9.1x in year two before an expected return of sales growth and presumed rate increases that would allow the utility to maintain at least a minimal amount of cash in subsequent years. Fitch believes the above stress-induced leverage ratio would remain fully supportive of the current rating. However, if actual leverage declines as projected in the base case, a higher rating could be warranted.

Debt Profile

The debt profile is neutral to the rating. Big Rivers had approximately $760 million in total outstanding debt as of fiscal year-end 2018. All of the outstanding debt is fixed rate maturing no later than 2032 and includes a large bullet maturity of $245 million due in 2023. Management expects to cash-fund roughly half of this payment and refinance the rest with long-term, fully amortizing bonds.

In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by information from Lumesis.

ESG Considerations

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of 3 - ESG issues are credit neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity.

For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

RATING ACTIONS

ENTITY/DEBT	RATING		PRIOR
Big Rivers Electric Corporation (KY)	LT IDR BBB- Affirmed		BBB-
Big Rivers Electric Corporation (KY) /Senior Secured Obligation/1 LT	LT BBB- Affirmed		BBB-

Additional information is available on www.fitchratings.com

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Applicable Criteria

U.S. Public Power Rating Criteria (pub. 03 Apr 2019)
Public Sector, Revenue-Supported Entities Rating Criteria (pub. 07 Nov 2019)

Additional Disclosures

Dodd-Frank Rating Information Disclosure Form
Solicitation Status
Endorsement Policy

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CASE NO. 2020-00064

EXHIBIT WALKER-7

S&P April 1, 2020 Credit Opinion

S&P Global
Ratings

RatingsDirect®

Big Rivers Electric Corp., Kentucky Ohio County; Rural Electric Coop

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Table Of Contents

Big Rivers Electric Corp., Kentucky Ohio County; Rural Electric Coop

Credit Profile		
Big Rivers Electric Corp. ICR		
Long Term Rating	BB+/Stable	Affirmed
Ohio Cnty, Kentucky		
Big Rivers Electric Corp., Kentucky		
Ohio Cnty (Big Rivers Electric Corp.) RURELCCOO		
Long Term Rating	BB+/Stable	Affirmed

Rating Action

S&P Global Ratings affirmed its 'BB+' issuer credit rating on Big Rivers Electric Corp. (BREC), Ky. At the same time, S&P Global Ratings affirmed its 'BB+' rating on Ohio County, Ky.'s $83.3 million pollution control refunding revenue bonds, series 2010A (Big Rivers Electric Corp. Project), issued for BREC. The outlook on all ratings is stable.

Credit overview

BREC is a generation and transmission cooperative serving three member distribution cooperatives. Key rating drivers include:

- The wholesale utility's reliance on significant, but declining, market sales where the utility is a price-taker;
- The short tenor of five wholesale power contracts with nonmembers that will help displace market sales;
- The meaningful contributions of industrial customers to its member distribution cooperatives' revenues, which we view as an exposure because of illness related to the coronavirus and measures taken to limit the outbreak, which are taking a toll on economic activity; and
- The utility's almost exclusive reliance on coal-fired generation assets for the electricity it produces, tempered by market purchases that are produced with other fuels.

Moreover, we believe that although projected debt service coverage (DSC) ratios of at least 1.4x in 2020-2021 are robust, they do not fully compensate for the exposures the utility faces. We also take into consideration nonamortizing debt representing 35% of the utility's debt portfolio, which enhances the DSC ratios by approximately 30 basis points compared with a fully amortizing scenario.

Members provided 72% of 2018's operating revenues and revenues from the sale of surplus energy production in competitive wholesale markets provided nearly 30%. BREC projects market revenues will decline to less than 4% by 2023 as its members add steel manufacturer Nucor Corp. as a customer and multi-year contracts between BREC and municipal utility systems begin. Although Energy Information Administration (EIA) data shows that members' energy sales to industrial customers account for 75% of energy sales, BREC reports that it transmits power others produce to two smelter customers and that those sales should be excluded from member energy sales. This adjustment halves members' energy sales to industrial customers. Adding Nucor will raise industrial concentration to about 50% of member energy sales. The industrial concentration is mitigated by plans to not earn a margin on half of the energy it sells to Nucor. BREC projects that once Nucor opens a new facility within the service territory of distribution member Meade County Rural Electric Cooperative Corp., which it plans to do in 2022, it will help absorb surplus capacity and increase member sales revenues by more than 20%. Although BREC projects the Nucor facility will add a 200-megawatt (MW) load, at the same time, adding the company will expand the customer base's industrial concentration. We view the Nucor load as providing a cushion that can help mitigate any nonrenewals by the municipal contract customers.

BREC has added contracts with municipal utilities that are providing greater and more stable revenues than market sales. These contracts and the Nucor addition will almost eliminate exposure to market sales by 2022. However, because of their tenor, the nonmember contracts will provide only medium-term revenue stream security and predictability. The municipal contracts expire in 2026 and 2029, with 240 MW of the contracted capacity rolling off in 2026 and another 100 MW in 2029. Nucor's 200 MW load should help temper the possibility that BREC is unable to renew the municipal contracts. BREC reports nearly 1,200 MW of generation capacity.

Unlike many other cooperative utilities, BREC does not have autonomous rate-setting authority. Rather, the Kentucky Public Service Commission establishes the cooperative's wholesale rates and its members' retail rates. Tempering the absence of rate-setting autonomy is a history of supportive regulatory decisions and utility projections that assume that BREC will not need rate increases through 2027.

Environmental, social and governance factors

We believe BREC's generation fleet presents meaningful environmental exposures as the national focus on reducing greenhouse gas emissions advances, which could jeopardize generator dispatch and financial performance. The utility's use of coal to produce electricity represented nearly 100% of the utility's self-generation in 2019 and 80% of the electricity BREC sold that year.

Although EIA data show that the residential rates BREC's members charge their customers were 13%-18% higher than the state average in 2018, BREC reports that the EIA data does not reflect member bill credits tied to the use of its rate stabilization fund, which reduce rates by about 5%. Applying this discount, we nevertheless believe the utility presents social risk that could limit financial flexibility, especially in light of income levels and the negative economic pressures of directives to limit the spread of coronavirus. The rate disparities reflect BREC's allocation to remaining customers, and costs from smelter loads lost in 2013. Before their departure, the smelters accounted for about two-thirds of BREC's energy sales. Although the duration of the recently negotiated nonmember contracts is relatively short, we believe that management is mitigating governance risk through efforts to secure purchasers for the surplus capacity that customer departures created. The utility also benefits from a proactive regulator that in addition to overseeing the utility's rates, has demonstrated a commitment to monitoring management and board actions.

Stable Two-Year Outlook

The stable outlook reflects improved prospects for stable financial performance with the anticipated addition of the Nucor load and the medium-term municipal contracts to sell surplus power to nonmember public power utilities. We view these developments as sharply reducing BREC's exposure to market prices for energy sales, at least through the life of the contracts.

Downside scenario

We could lower the ratings if the utility cannot sustain sound financial performance because of poor prospects for renewing or replacing nonmember contracts, weak market conditions, or poor plant performance. Similarly, if the financial profiles of BREC's members erode, we could lower the ratings. We could also lower the ratings if declining economic activity attributable to the outbreak of coronavirus or measures limiting the spread of COVID-19 negatively affect financial margins.

Upside scenario

We do not expect to raise the ratings within our two-year outlook horizon without prospects for a more secure long-term revenue stream that aligns predictable revenues with debt maturities. We view several additional exposures as constraining the ratings. These include rates we consider high relative to low income levels; an almost exclusively coal-fired generation portfolio and its exposure to more stringent emissions regulations; the presence of nonamortizing debt, which we believe distorts DSC levels relative to utilities with greater percentages of amortizing debt; meaningful industrial loads in a declining economy; and DSC levels that do not compensate fully for these exposures.

Credit Opinion

BREC reported $733 million of debt as of Dec. 31, 2019. About 35% of its debt will not amortize before maturity, which contributes to more robust DSC ratios, relative to utilities with a greater percentage of amortizing debt. The cooperative projects adding 26% more debt through 2021, bringing debt balances up to $921 million. Nevertheless, the utility projects maintaining a favorable debt-to-capitalization ratio for a cooperative utility of 67% in 2021. The aging generation units help reduce the debt to capitalization ratios. With the debt additions, the utility projects robust DSC metrics of at least 1.4x through 2022. We performed a scenario analysis that suggests that coverage would be about 30 basis points lower if the cooperative had a fully amortizing debt portfolio.

Although we view coverage levels and liquidity as providing resilience, our rating conclusions assign significant weight to the relative brevity of the municipal power sales agreements. If BREC is unable to renew these contracts and must rely on market sales for margins, we believe the utility could be vulnerable to earning comparatively thin margins in competitive markets, compared with those it earns under the municipal contracts. At the same time, we view favorably the addition of Nucor as a members' customer, as helping reduce market exposure. Additional factors we view as constraining the rating include the industrial concentration among members' customers, and members' high retail rates that can limit financial flexibility when viewed through the lens of the state's low income levels.

We view external liquidity facilities as providing an added measure of lender protection. External facilities increase balance-sheet liquidity from a weak 40 days' operating expenses to about four months' operating expenses.